ADNOC spearheads major developments

See us at the shows



FOR THE NEXT 30 YEARS

Stand no: 12392, Hall 12

SAOGE 2014

Stand no: 034

GAS



ADIPEC focuses on the

- opportunities for the next
- → Addressing the region's
- → Cyber security making your industrial network
- Driving innovation in the oil and gas sector
- → What the future holds for oil and gas fields
- → Addressing Corrosion **Under Pipe Supports**



Increasing efforts are being made to encourage young people to consider a career in the oil and gas industry.

Serving the regional oil & gas sector since 1997



High performance. On demand.

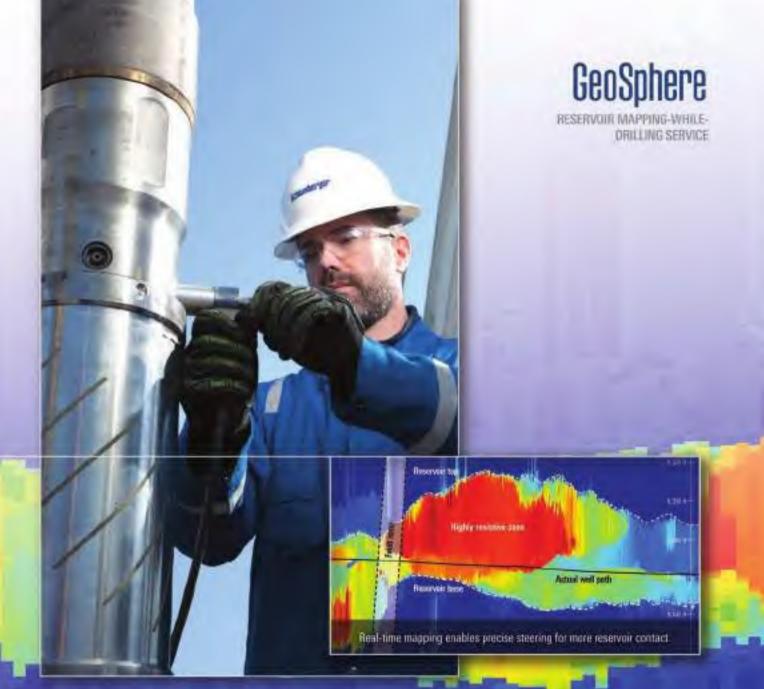
Saga specializes in customized Reamer Shoes, Liner Hanger equipment, Centralizers and Float Equipment for conventional and difficult wells. Our precision engineering produces durable tools built to our client's specifications and our superior logistics ensures on-time delivery no matter the location. We know time is money and the job needs to be done right, the first time.



Saga-PCE Pte. Ltd. Singapore - Indonesia - Mexico - UAE - Brazil - USA

Main Office: 7 Temasek Boulevard, #19-04, Suntec City Tower One, Singapore 038987

Tel: (65) 6336-7378 - Fax: (65) 6336-7379 - Email: sales@sagapce.com - Website: www.sagapce.com



Define reservoir and fluid boundaries with an unprecedented depth of investigation while drilling.

GeoSphere* reservoir mapping-white-drilling service reveals subsurface layers and fluid contacts with a radial depth of investigation in excess of 100 ft. This service has been used in more than 150 wells worldwide to optimize landing, maximize reservoir exposure, and increase production potential.

Find out more at slb.com/GeoSphere

Schlumberger

→ Editor's note

IT'S THAT BUSY time of year again, with ADIPEC, SAOGE, Basra Oil & Gas and OSEA all taking place in the coming month. The drop in the oil price certainly does not seem to have dampened the enthusiasm for participation in ADIPEC, which is set to be bigger and better than ever and where a plethora of new products and technologies can be expected to be unveiled. Also taking place in November is our HR Forum: Oil & Gas, which will provide a valuable opportunity to debate the region's HR challenges; a recurring theme is the need to encourage young people to consider a careeer in the oil and gas industry and to raise awareness of the diverse range of opportunities available to them in this sector.

As always we bring you news of the latest oil and gas developments as well as features and analysis on topical issues. Please do get in touch with your feedback, and any suggestions for topics you would like to see covered.

→ Contents

Calendar

Executives' calendar and event

Exploration & Production

A round-up of the latest E&P news from around the region

Gas

26 An up-date of the latest developments in the region

Analysis

- Efficient open-hole logging of the horizontal wells
- Leading in technological development
- **ADNOC Review** 40
- **Exploring new production options**

Petrochemicals

- 48 Residue upgrading
- 52 All the latest petrochemicals developments in the region

Recruitment & Retention

Addressing the region's HR challenges

Technology

- 64 Compressors
- 66 Oil spill management
- 70 The demand for on-site power
- Addressing the issue of CUPS

ADIPEC Preview - all the show and exhibitor news

- **ADIPEC Awards**
- 98 Interview - Wood Group Intetech
- **ADIPEC Young Ambassador**
- 132 Interview AlMansoori Specialized **Engineering**
- 144 Interview Safa Telecom
- 146 Interview Unique Maritime Group

Innovations

164 All the latest industry developments

HSE

- 194 Breaking the mould of safety footwear
- 198 Fighting fire with FR

- 200 Seismic developments
- Adapting advanced software solutions in oil and gas
- 208 Making your industrial network

Rig Count / Project Databank

213 UAE projects

Arabic

217 News /Analysis

Arabic front cover courtesy of DHL

il Review



Serving the world of business

Editor: Louise Waters - Iouise.waters@alaincharles.com

Editorial and Design team: Bob Adams Prashant AP Hiriyti Bairu, Sindhuia Balaii, Andrew Croft, Thomas Davies, Ranganath GS, Rhonita Patnaik, Louise Quick, Prasad Shankarappa, Zsa Tebbit, Lee Telot and Ben Watts

Publisher: Nick Fordham

Publishing Director: Pallavi Pandev Magazine Sales Manager: Camilla Capece □ camilla.capece@alaincharles.com

International Representatives

Ying Mathieson China

India Tanmay Mishra

) (91) 80 65684483 **(91) 80 40600791**

□ tanmay.mishra@alaincharles.com

Bola Olowo Nigeria 1 (234) 8034349299

South Africa Annabel Marx

) (27) 218519017 **(27)** 46 624 5931 □ annahel marx@alaincharles.com

Steve Thomas

 $\ oxdots$ stephen.thomas@alaincharles.com

Michael Tomashefsky

曷 (1) 203 226 7447 1(1) 203 226 2882

Head Office:

Alain Charles Publishing Ltd

University House, 11-13 Lower Grosvenor Place, London SW1W 0FX, United Kingdom

Middle East Regional Office:

Alain Charles Middle East FZ-LLC

Office 215, Loft 2A, P.O. Box 502207, Dubai Media City, UAE **)** +971 4 448 9260, 🚇 +971 4 448 9261

Production: Nikitha Jain, Nathanielle Kumar Donatella Moranelli, Nick Salt and Sophia White -□ production@alaincharles.com

Subscriptions: ⊠ circulation@alaincharles.com

Chairman: Derek Fordham Printed by: Buxton Press.

© Oil Review Middle East ISSN: 1464-9314



www.oilreview.me email: oil@alaincharles.com





Next generation Epoxy Passive Fire Protection

Jotachar

JF750 mesh free

Saves time. Saves money.

- Reduces installation cost
- · No cost of mesh
- No cost for installing mesh
- Reduced labour costs
- Faster project completion
- Potential single coat application
- Fewer installation days
- Less man hours

JOTUN

Visit the Jotachar JF750 team at Adipec 2014 in the Norwegian Pavilion, Hall 9 – Stand Number 9210

Oil prices fall for third straight month

OIL PRICES CONTINUED to fall in September 2014, the third month in a row, with Brent breaking below US\$90 bbl in October, Brent prices have fallen by over 20 per cent since June - when turmoil in Iraq lifted prices to US\$116 bbl - on abundant supply, slowing demand growth and a strong US dollar, according to the International Energy Agency (IEA) in its latest monthly report.

Higher exports from Libya and Iraq combined with booming US output have weighed on spot markets and depressed global benchmarks. Growing competition in the core Asian market prompted top OPEC producer Saudi Arabia to make sharp cuts to monthly formula prices for a fourth month in a row. The UAE, Iran and Iraq followed Saudi's lead and cut official selling prices.

Global supply rose by almost 910,000 bpd in September to 93.8mn bpd, on higher OPEC and non-OPEC output. Compared with a year earlier, total supply stood 2.8mn bod higher, as OPEC supply swung back to growth and amplified robust non-OPEC supply gains of 2.1mn bpd. OPEC crude oil output surged to a 13-month high in September, led by Libya's continued recovery and higher Iraqi flows.

But September may turn out to be a high water mark for supply for reasons unrelated to prices. Annual growth in non-OPEC supply is forecast to slow in the fourth quarter on expected dips in Russia and China. As to OPEC growth, it is led by Libya and Iraq, where political risk remains exceptionally high.

At the same time, the sell-off is putting a spotlight on weaker-than-expected demand as a leading factor behind the drops. This may go some way to explain why concerns

about the sustainability of non-OPEC supply growth has not kept speculators from turning bearish: non-commercial participants in the ICE futures market swung for the first time to net short Brent positions.

The forecast of global oil demand for 2014 has been revised 0.2 mb/d lower since the IEA's previous monthly report, to 92.4mn bpd. on reduced expectations of economic growth and the weak recent trend. Annual demand growth is now projected at 0.7mn bpd in 2014, rising tentatively to 1.1mn bpd in 2015, as the macroeconomic backdrop improves.



Oil prices have continued to fall for the third successive month

OPEC Crude Production

			Imition travels b	The state of the s		
	Jul 2014 Supply	Aug 2014 Supply	Sep 2014 Supply	Production Capacity ¹	Spare Capacity vs Sep 2914 Supply	Jan-Sep Average
Algeria	1.16	1.15	1.13	1.17	0.04	1.12
Angolo	1.73	1.71	1.72	1.80	0.08	1:64
Ecuador	0.56	0.56	0.06	0.57	0.01	0.55
men	2.70	2.80	2.75	2.90	0.15	2.41
raq.	3,15	2:11	3.31	2.40	0.00	3,27
Kongt	2.80	2.85	2.67	2.85	-0,02	2.41
Libys	0.42	0.53	0.78	0.85	0.07	0.39
Ngeria	1,86	1.84	1,85	2.00	0.15	1.90
Quiar	0.73	0.73	0.71	0.73	0.02	0.72
Saudi Anabia ⁵	19.01	9.88	9,73	12.40	2.67	9.75
UAE	2.60	2.62	2.78	2.90	0.12	2.76
Venezueio ¹	2,40	2.45	2.46	160	0.12	2.47
Total OPEC	30,46	30.24	30.66	84.17	3.51	20.07
(Norchasting Irang, 7	Agenta, Libya are	d Arriety			3.65	

- 1. Capacity levels can be resolved within 30 days and sustained for 50 days.
- 2 Includes half of Neutral Zone workschool
- 3 Includes appracted Cranoco extra-heavy oil assumed at 440 kt/ld in September

Global Oil Demand (2013-2015)

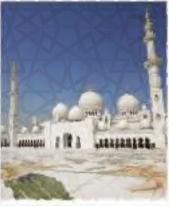
(million barrels per day)

	1Q13	2Q13	3Q13	4Q13	2013	1Q14	2Q14	3Q14	4Q14	2014	1Q15	2Q15	3Q15	4Q15	2015
Africa	3.9	3.9	3.7	3.8	3.8	3.9	4.0	3.9	4.0	3.9	4.1	4.1	4.0	4.2	4.1
Americas	30.2	30.5	31.1	31.1	30.7	30.4	30.4	31.2	31.3	30.8	30.6	30.8	31.3	31.5	31.0
Asia/Pacific	30.7	29.8	29.7	30.9	30.3	31.1	30.1	29.9	31.3	30.6	31.6	30.6	30.6	31.8	31.1
Europe	13.8	14.5	14.7	14.2	14.3	13.7	14.1	14.5	14.2	14.1	13.7	14.1	14.4	14.1	14.1
FSU	4.5	4.6	4.9	4.9	4.7	4.6	4.8	5.0	4.9	4.8	4.6	4.8	5.0	5.0	4.8
Middle East	7.5	7.9	8.4	7.7	7.9	7.8	8.2	8.5	7.9	8.1	7.9	8.4	8.8	8.2	8.3
World	90.5	91.2	92.5	92.7	91.7	91.6	91.5	93.0	93.5	92.4	92.6	92.7	94.2	94.6	93.5
Annual Chg (%)	1.2	1.6	1.6	0.8	1.3	1.1	0.4	0.5	0.8	0.7	1.1	1.3	1.3	1.2	1.2
Annual Chg (mb/d)	1.1	1.4	1.5	0.8	1.2	1.0	0.3	0.5	0.8	0.7	1.0	1.2	1.2	1.1	1.1
Changes from last OMR (mb/d)	0.05	0.04	0.01	0.04	0.03	-0.01	-0.10	-0.35	-0.39	-0.21	-0.19	-0.26	-0.41	-0.36	-0.30

Source: IEA













There's more to meetings and incentives in Abu Dhabi!

Here's six of our best:

Best-in-class pricing. Teambuilding with a difference. Exceptional facilities. Slick support services. Compelling destination support. Cultural engagement.

There's never been a better time to spend team time with us.







Mixed picture of contracting activity in Q3

THE LATEST EIC Monitor report paints a mixed picture of activity across the global upstream, midstream and downstream sectors in Q3 2014, with a large decline in upstream activity balanced out by a similar percentage rise in downstream activity. The midstream sector remained steady, with a very small decline in the number of major contract awards made since the previous quarter.

The global oil and gas industry has followed a gentle downward trajectory of project contracting activity in the last quarter, with 139 contracts, a seven per cent fall compared to 149 in O2 2014, and a significant 22 per cent decline on the 178 contracts awarded in Q3 2013, according to the EIC Monitor quarterly report from the UK's Energy Industries Council.

In the third quarter, a total of 40 major contracts were awarded across 35 upstream developments, a significant decline of 41 per cent from 68 awards in Q2 2014, and a 49 per cent fall on Q3 2013 figures. The decline reflects the slowdown in global upstream project activity, largely due to rising costs. A total of 22 EPC contracts, 12 FEED contracts and six Subsea/SURF contracts were awarded in O3 2014

In the Middle East, EPC activity has been dominated by projects in Abu Dhabi, where National Petroleum Construction Company (NPCC) and Hyundai Heavy Industries were both awarded EPC packages on the US\$3.5bn Nasr offshore oil field development. A consortium of Technip and NPCC also landed the contract to upgrade gas facilities at the US\$350mn Umm Shaif Super Complex. In neighbouring Saudi Arabia, Essar Group has been appointed to carry out the EPC work for the US\$54mn Abgaig Crude Stabilisation Plant upgrade in Shavbah.

Projects in the MENA region have accounted for a further four FEED contracts: Foster Wheeler secured a five-year contract for the US\$3bn Empty Quarter, South Ghawar and Jafurah tight gas



Foster Wheeler secured a contract for the Empty Quarter, South Ghawar and Jafurah tight gas development

development; Tecon Engineering was appointed as FEED contractor for DNO's US\$150mn expansion at the Tawke and Khanke oil fields in Irag: CB&I are to carry out design work for the US\$1.5bn Ain Tsila project, onshore Algeria; and a consortium of Foster Wheeler and Taknia Libya Engineering secured a contract for the US\$900mn Area 47 Ghadames Basin onshore development in north-western Libya.

In northern Kuwait, three EPC contracts have been awarded for the construction of large crude oil gathering centres and associated facilities in order to increase crude production to 3.65 MMbbl/d by 2020. Also, China Petroleum Pipeline Bureau landed a contract to build 29 storage tanks at the Nassiriya and Bin Umar Oil Storage Depots in southern Iraq.

EMEA oil and gas majors continue to dominate Platts Top 250 Global Energy Company Rankings

EUROPE'S INTEGRATED OIL and gas (IOG) companies again claimed leaderboard positions in the Platts Top 250 Global Energy Company Rankings, comprising half of the top 10 positions and nearly half of the lead 50.

The Rankings, in their 13th year and unveiled in October at the ninth annual Platts Top 250 Asia Awards Dinner in Singapore, reflect the financial performance of publicly traded energy companies with assets greater than US\$5bn and based on a combination of assets, revenues, profits and return on invested capital (ROIC) for the prior fiscal year (2013).

"While the composition of companies within the Platts Top 250 roster has evolved since its launch, European oil and gas majors continue to enjoy a strong role in the global energy markets,

2014 Platts Top 10 Energy Companies in EMEA							
2014 Platts Top 10 in EMEA	Company Name	2014 Platts Global Top 250 Rank					
1	BP p.l.c.	2					
2	Gazprom	4					
3	Royal Dutch Shell plc	5					
4	Rosneft Oil Co	6					
5	Total SA	8					
6	LUKOIL Oil Co	11					
7	Statoil ASA	16					
8	Eni SpA	17					
9	Surgutneftegas	18					
10	AK Transneft	29					

underpinned by Russia's key position as regional energy supplier," said Robert Perkins, Platts Europe Middle East and Africa (EMEA) oil news senior writer and co-author with Henry Edwardes-Evans. Platts Power in Europe associate editorial director, of a special analysis of the Top 250 Rankings, which can be views in full at http://top250.platts.com/Highlights.

Leading the EMEA companies in the Platts Top 250 roster was UK-based BP p.l.c., which bounced back into the top 10 at second place after recovering from the 2010 Gulf of Mexico oil spill. Russia's Gazprom and Rosneft also represented the region well, snagging fourth and sixth places, respectively. Although Anglo-Dutch major Royal Dutch Shell plc and France's Total S.A. both dropped two places from year-ago rankings, Shell retained its top five position in the global ranking, at fifth place, and took third position in the regional EMEA roster, while Total held only to the top 10 at eighth place, having last been in the lead five in 2011.

Slipping out of the top 10 in the latest rankings are Russia's LUKOIL in 11th place - having held the seventh position in 2013 - and Norway's Statoil ASA at rung 16, down from fifth place a year ago.

Despite the dominance of European IOGs in the leaderboard positions, EMEA energy companies fielded 65 positions on the overall Top 250 roster, five fewer than in 2013.

"Many of Europe's refiners struggled to remain in profit as a capacity glut overshadowed plant closures," said Edwardes-Evans. "Meanwhile, the region's electric and natural gas utilities faced similar strong headwinds due to significant overcapacity in generation."

However, EMEA had three companies among the 19 that rose more than 50 places and one that entered the ranks for the first time.



Piping materials from stock:

pipes, tubes, fittings and flanges in stainless steel, duplex, superduplex, superaustenitics and nickel alloys

and from our production:

butt weld fittings in stainless steel and duplex, superduplex and 6Mo according to NORSOK M-650 Ed. 4 requirements





Petrochemicals producers urged to do more for sustainability

WITH THE WORLD'S population growing faster than resources can be regenerated. contributing to the global sustainability agenda will be crucial for survival, said speakers at the second Gulf Petrochemicals and Chemicals Association's (GPCA) Sustainability Conference in Dubai.

"The United Nations expects worldwide populations to reach 9.6bn people by 2050." said BASF's Margaret Suckale, an executive board member, in her keynote speech. "BASF is involved by translating global megatrends into products that contribute to sustainability needs."

Dr. Abdulrahman Al Jawahery, President of GPIC. Bahrain and a GPCA board member, hailed the growth of the petrochemical industry in the Gulf region, stating that the sector has grown into a 100mn ton business in 30 years, and capacity is expected to grow to 170mn tons in the next five years. "This is a lot of products," continued Al Jawahery. GCC petrochemical producers have already taken important steps toward contributing to the global sustainability agenda, although its



Speakers at the recent GPCA Sustainability Conference in Dubai

educational institutions have not kept up with industry growth. Aside from SABIC. which has 13 R&D centres, they are not investing enough in R&D, he added.

"Growth is a process. We will need to learn from companies through collaboration with international partners. We need to do

According to the GPCA's inaugural Sustainability Report, petrochemical producers in the Gulf have made great strides in improving their sustainability performance. For example, GCC chemical

producers have reduced energy consumption per ton by eight per cent over the past two years through technical innovations.

"In the GCC, sustainability has evolved from a concept to a business imperative," said Dr. Abdulwahab Al- Sadoun, the GPCA's Secretary General, "However, sustainability will require a buy-in not only from the company's leadership, but also from company stakeholders, governing bodies, employees and the general public, making it challenging to 'sell' this concept both within and outside the production facilities. This is a long journey and there is good news - we are already well on our way to achieving respectable results."

Held fo the second time, the GPCA Sustainability Conference hosted over 200 delegates from 17 countries over two days in October. Presentations from industry experts at SABIC. Borouge and AT Kearney focused on opportunities for petrochemicals companies to develop in a way that is responsible to the environment, economy and society.







In 60 different countries of the world, gas is stored by ISISAN



→ Executives' Calendar 2014/2015

NOVEMBER 2014								
10-13	ADIPEC	ABU DHABI	www.adipec.com					
12-13	FPSO Vessel Summit	HOUSTON	www.wplgroup.com					
23-24	GPCA Forum	DUBAI	www.gpcaforum.net					
23-25	HR Forum: Oil & Gas	DUBAI	www.hrforumoilandgas.com					
24-26	SAOGE	DAMMAM	www.saoge.org					
DECEM	BER 2014							
2-5	OSEA 2014	SINGAPORE	www.osea-asia.com					
3-4	Digital Oilfields Summit	LONDON	www.digitaloilfieldsevent.com					
4-7	Basra Oil & Gas	BASRA	www.basraoilgas.com					
9-11	Mediterranean Offshore	ALEXANDRIA	www.moc-egypt.com					
16–18	Kurdistan-Iraq Oil & Gas Conference	LONDON	www.cwckiog.com					
JANUARY 2015								
13-15	Gas Arabia Summit	DUBAI	www.theenergyexchange.co.uk					
19-22	World Future Energy Summit	ABU DHABI	www.worldfutureenergysummit.com					
FEBRUARY 2015								
17-18	ME-TECH 2015	DUBAI	www.me-tech.biz					
19-20	International Gas Technology Conference	DUBAI	www.europetro.com					
MARCH 2015								
8-11	MEOS	MANAMA	www.meos2015.com					
16-18	Oman Refining and Petrochemical Exhibition	MUSCAT	www.downstream-oman.com					
APRIL 2015								
21-23	Arab Oil & Gas	DUBAI	www.ogsonline.com					
22-25	Erbil Oil & Gas	ERBIL	www.erbiloilgas.com					

Readers should verify dates and location with sponsoring organisations, as this information is sometimes subject to change.

Gas technology event to move to Dubai venue in 2015

IN 2015, THE International Gas Technology Conference (IGTC) - a global platform for professionals in the downstream gas industry will take place with an extended programme in Dubai.

Organised by Euro Petroleum Consultants (EPC), the technical programme for the sixth edition of technology conference will focus on gas processing and monetisation and feature seminars on topics ranging from gas separation and processing, GTL and mini-GTL technology developments, and gas processing and petrochemicals integration.

The latest NGL recovery trends will be revealed at the conference, which will also feature markets outlook on the sector, as well as information on the most significant recent

projects worldwide.

The event will be held at the same venue as and in parallel with the fifth Russia and CIS Oil and Gas Executive Summit, providing attendees



The Madinat Jumeirah will host the International Gas Technology Conference and the Russia and CIS Oil and Gas Executive Summit in February 2015 (Photo: Poco a poco)

further networking opportunities, with breaks and social functions jointly held between the two conferences.

Delegates set to attend the co-located summit will include high-level strategists and industry leaders from Russia and the wider CIS region, who will be on hand to exchange experiences within international downstream oil and gas decision makers and benefit from two days of informative presentations and quality networking opportunities.

Other conference highlights will include presentations on the US shale boom and its impact on European, Middle Eastern and Russian and CIS markets.

IGTC will take place at the Madinat Jumeirah in Dubai from 19-20 February 2015.



One microscopic change is about to transform the entire onshore pipe coating industry

Introducing SureBond** – advanced molecular bonding for superior pipe protection and joint integrity

Look very closely and you can see the end of coating failures. SureBond, the latest development from Bredero Shaw, is a completely new and superior class of line pipe coating that meets or exceeds 3LPE specs. It uses a proprietary



Visit us of Booth 2310 or Holf 2

interlocking molecular structure that solves the challenges typical to 3-layer approaches. SureBond forms on unmatched bond with both the anti-corrosion layer and with field joint coalings. It performs across temperatures from -70°C to 100°C, including exceptional low-temp bending, and eliminates thermal cycling failures. Your pipelines are protected, your field joints are rock solid, your project succeeds. For something microscopic, that's huge. Contact us to find out more.





Changing behaviours and dealing with difficult people

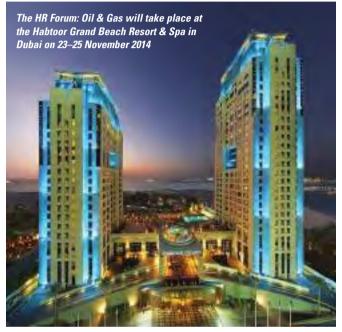
ONE OF THE most interesting and challenging aspects of working in the oil and gas industry is the diversity of people that are involved. People from different cultural backgrounds, different educational attainments and different ages add to the complexity of a workforce - from field service technicians to petroleum engineers to rig managers.

By the very nature of their roles, HR professionals have to deal with majority if not all of them. For HR professionals. success in dealing with people often revolves around their ability to communicate across cultural and generational barriers.

Good speaking and listening skills maybe obvious prerequisites for an effective HR manager, but understanding the subtleties of changing behaviours to deal with problematic people could enhance their "people skills".

HR professionals often find themselves trying to broker peace between people from different technical disciplines or cultural backgrounds. How they react to these situations calls for an understanding of the people involved, their personalities, their needs and wants and even their personal conditions at home.





But how can an HR manager understand and learn these subtle skills? Recent research by Oil Review Middle East has given rise to two training workshops that address these specific issues.

In one of the interactive workshops, designed and facilitated by Kuwait Energy, delegates will have an

> opportunity to build upon their skills for handling those situations where they are faced with difficult people. In the second workshop, designed and facilitated by Saudi Aramco, delegates will be able to assess how their own behaviour style plays a large role in how they communicate with their colleagues.

> The two workshops are part of the HR Forum: Oil & Gas, which will take place at the Habtoor Grand Beach Resort & Spa in Dubai on 23-25 November 2014. The timely workshops will be a new opportunity for HR and talent management professionals to come together, share knowledge, network with their peer group and walk away with effective and practical solutions.

For additional information, please

www.hrforumoilandgas.com

Digital Oilfields Summit to return for third edition

RETURNING FOR ITS third year, the Digital Oilfields Summit will bring together international oil and gas operators to discuss strategies for utilising digital oilfields technologies in order to help improve the operational capabilities of their assets.

The summit, set to take place in London from 3-4 December 2014, will focus on integrating technology and information to reduce costs and increase asset integrity and production. It will provide delegates a host of networking opportunities and feature workshops that will provide information on the key challenge of securing operational buy-in for digital oilfield technologies.

The event will also look at recent

Technological advances utilised by oil and gas operators and the integration of data will be among the topics explored at the Digital Oilfields Summit in December 2014 (Photo: Nial Farrell)



technological advances that oil and gas operators have been utilising, enabling the integration of data and other asset information that provides insights into day-to-day operations.

A pre-conference workshop, led by Ayman Al-Issa, advisor for digital oil fields cyber security at ADMA-OPCO, will focus on the evolving nature of industrial cyber threats and the implementation of industrial cyber security by design.

During the following two days, panel session, case studies and presentation will feature speakers from a host of companies, including Kuwait Oil Company, OMV Group, Sonatrach, BG Group, Tullow Oil and Schlumberger Production Management.

Case studies at the event will include presentations on major early adopters DOF technologies, bringing together IT and operations functions, and the interoperability of technologies across company locations.



WE'LL TAKE IT FROM HERE.

From wellhead to market-we have the resources to handle your production the right way.

Exterran's gas processing and treating solutions and global compression fleet ensure your operation is better managed from the ground up. And with over 50 years of tackling the cillield's infrastructure challenges, you're not handing your project to just anybody. You're counting on a legacy of success.

- Gas Compression
 Gas Processing
- Produced Water Treatment
- . Aftermarket Parts & Services
- Integrated Projects



Kuwait Energy announces oil discovery in Egypt

OIL AND GAS company. Kuwait Energy, who has assets across the MENA region, has announced that the operated exploration well ASA-1 st3 on the Abu Sennan license, onshore Egypt, discovered hydrocarbons in the Abu Roash E and Abu Roash C formations.

The ASA-1 st3 licensees are Kuwait Energy (50 per cent operator), Dover (28 per cent) and Beach Energy (22

The well was tested over the Abu Roash E and Abu Roash C reservoirs with flow rates measuring 1,602 bpd and 2,164 bpd, the company revealed.



Sara Akbar, CEO of Kuwait Energy

"I am delighted to announce yet another discovery for Kuwait Energy at Abu Sennan, stated Sara Akbar, CEO of Kuwait Energy. "Egypt continues to be a flourishing region for us and this exploration success has the potential to add to our reserves and daily production levels."











MEET US AT ADIPEC Hall 13, Stand 13655

EXPANSION JOINT SOLUTIONS

Globally recognised designer and manufacturer of expansion joints in sizes DN 15-12000 in all materials and all design codes and all typesincluding:

- FCCU expansion joints
- Expansion joints for LNG/LPG (incl. type approvals)



IS oil production is worth US\$800mn per year

CURRENT OIL PRODUCTION by the Islamic State (IS) is set to total US\$800mn per year equivalent to more than US\$2mn per day, according to new figures from IHS.

The terrorist group, formerly referred to as the Islamic State in Iraq and the Levant (ISIL), is able to earn huge profits by producing a small amount of the pre-war oil capacity of the territory it controls and selling the oil it produces on the black market.

"Oil fuels IS's war machine, notably including the military vehicles vital to its movements and fighting capabilities," a recent IHS Energy analysis revealed.

"Oil directly finances IS's myriad activities and encourages the activities of middlemen who sell, transport and export the oil and thus have a vested interest in IS," added the report.

IS currently holds around 350,000 bpd in pre-war capacity in Iraq and Syria, according to IHS Energy.

The oil that IS sells on the black market, mainly trafficked via trucks on the Turkish border is sold at prices ranging from US\$25-US\$60 per barrel. This is compared to around US\$85 per barrel recently for Dated Brent, the global price benchmark.

Bhushan Bahree, one of the authors who helped compile the IHS report, said that IS also sells to middlemen who traffic oil to Jordan and other areas of Iraq that are not monitored by the militants. Once the oil has been trafficked out of IS territory it is often blended with other oil and sold off to buyers unaware of the situation.

"It is very hard to intercept," said Bahree.

"There has been smuggling of all sorts of things in this place for thousands of years," added Bahree.

Oil revenue growth for IS in the coming years remains to be seen and will be heavily affected by territories gained, IHS reported. At a time of US-led airstrikes against IS, it is also unclear if the terrorist group has enough refining capacity, which currently contains mainly simple mobile refineries that can be loaded and transported by truck, to meet its own needs, IHS energy said.

"IS is trying to establish a state, and these types of revenues are important for the state's formation because it makes up a significant chunk of their revenue," said Theodore Karasik, director of research and consultancy at the Institute for Near East and Gulf Military Analysis.

"They can take over eastern Syria without oil revenue, but seizing these types of fields are part of an ongoing plan to develop their own economic system," added Karasik.

The IHS report shows that IS is making profits of US\$2mn per day from oil production, however, Robin Mills, a Dubai-based energy analyst, said that the militants could eventually earn up to US\$3mn per day. The IHS report also noted that the future of IS's oil profits will be dependent on the what territories are retained and lost in the next few months.



www.belman.dk

KANON LOADING EQUIPMENT

your partner in high quality loading, unloading and safety systems for over 30 years











KANON MARINE LOADING ARMS
Symmetric Design, Excellent Performance

Loading equipment for marine, road and rail tankers



... the customer care company

All auxiliary equipment out of one hand

Air-cooled heat exchanger (Fin Fan)

Oil consoles

Enhanced surface element cooler

Surface condenser systems

Shell and tube

Dry seal gas panel

Finned tubes

www.adipec.com

We are exhibiting: booth # 1020 www.oeltechnik.com

Saipem awarded E&C and drilling contracts

SAIPEM HAS BEEN awarded a new engineering and construction contract in Saudi Arabia and new drilling contracts in the Middle East and in Latin America totalling around US\$2bn.

Saudi Aramco has awarded Saipem an EPC contract following the extension of the onshore production centres at the Khurais.



Saipem has been awarded an EPC contract by Saudi Aramco

Mazajili and Abu Jifan fields, the company revealed.

The new facilities will enable an extra 300,000 bpd to be produced from the Khurais field, while the set-up of new satellite facilities will restart production of 200,000 bpd from the Abu Jifan and Mazalij fields, Saipem said. The Khurais field is located around 150,000 metres northeast of Rivadh and measures 127,000 metres long, covering an area of 2,89mn sgm.

This new contract is the result of our successful project delivery in Saudi Arabia and strengthens our relationship with Saudi Aramco, a key client," said Umberto Vergine, CEO of Saipem.

Furthermore, Saipem revealed it has entered a new contract for Perro Negro 7 jack-up, operating offshore in the Middle East. beginning November 2015 and running through to the end of 2018.

DME and INE to join forces on energy

THE SHANGHAI INTERNATIONAL Energy Exchange Corporation (INE), a global energy exchange set-up in China, and DME, a commodities exchange in the Middle East, have entered a Memorandum of Understanding (MoU) to reinforce their cooperation in promoting the development of crude oil.

Under the new contract, INE and DME will assess several areas of cooperation, such as joint education activities and collaboration to encourage crude oil benchmarks in the Middle East and Asia-Pacific, the companies stated.

> "This is another step towards INE's objectives, which are to provide a market platform for energy derivatives that

objectively reflects the

energy supply-demand balance in Asia-Pacific



development of crude oil in the Middle East

said Chu Juehai, chief executive of INE.

and to improve the efficiency of price discovery, risk management and asset management for The new MoU is expected to promote the the oil industry and global participants," Also commenting on the new partnership, Christopher Fix, chief

executive officer of DME, stated "This MoU with INE reflects DME's determination to build a tighter relationship with our Asian customer base and to support the development of energy trading benchmarks within Asia.'



Competitive Solutions for Complex Projects











Lamprell, a leading provider of diversified engineering and contracting services has played a prominent role in the development of the energy industry in the Middle East for over 35 years and has established leading market positions in the construction of shallow-water drilling jackup rigs, liftboats, land rigs and rig refurbishment, as well as an international reputation for complex process modules and topsides.

Lamprell Delivers

- First Class Safety
- Highly Skilled Workforce
- Client Satisfaction
- World Class Quality
- Schedule Certainty



Visit us in Halls 7, 8 & 13

50 Oilfield Magnetics Acreon Alemne LLC Alloy & Stainless Fasteners Amcham - Abu Dhabi Amega West Services American Completion Tools American Jeren Int. Corp. American Petroleum Inst AMETEK Solidstate Controls Amphenol Middle East/FZE Apolio Valves ASME ASTM International ATA New York, Inc. Band-It Company Ltd. Bench Tree Big Red Engineering Bradley Corporation Bulwark Protective Apparel C & J Energy Service: Cannig Drilling Tech Ltd. Cargir Corporation CDI Circor Energy Click Bond Inc Detroit Inc. DiscFlo Corporation Distribution NOW DrawWorks LP. Dynamic How Computers Firetrace litternational FlexSteel Pipeline Tech Forum Energy Technologies Freemyer Indistrial Pressure Gas Measurement Ins (GMI) Gates Engineering & Sevices GSB-Gulf Strategic Partners Global Tubing LLC Graph Instrument Gulf Strategic Partners WILL HandyTube Corporation Hardbanding Soles/ Postle Himan Ballets

Lamons Laversab, Inc. McFarland-Tritan LLC Membrane Tech & Rarch Metal Samples Multiphase Engineering Murphy/Engyation Courts Nati Cilwell Varco UAE New Tech Systems OCV Control Valves Oldhair Ovivo USA LLC Oxfree Global LLC Pason Systems Inc. PCC Energy Group Pem-Tech, Inc. Plisico - Pipe Line Dev PM Loser Clanding LLC ProSep Pyramid E&C FZE Radco, USA RathGibsen/PCC Eng Grp Reif Lion Controls, Inc. Respord Corporation Richards Industries Rollmet-PCC Energy Grp Roper Pump Company Rupture Pin/Taylor Valve Saga-PCE Pto, Ltd Schramm, Inc. Simtronica Southern California Value Southwest Oilfield Prods Special Metals Corp. Sprung Instant Structum Stewart & Stevenson Streamlight Inc. SulfaTrep LLC Summit Electrical Supply TC Communications Tecgen Tees Turbe Machinery (Imberland:PRO Timet PCC Energy Graup Total Equip & Service Trenton Corporation U.S. Commercial Service Obraflote USA Wire & Cable, Inc. Worldwide Offid Machine

Kaliman Worldwide Inc. . www.kaliman.com

UPCOMING OIL & GAS SHOWS

OMC . Mor 2015 . Ravenna, Italy Brasil Offshore - Jun 2015 - Rig de Janeiro, Brazil OTC Brasil • Oct. 2015 • Rio de Jameiro, Brazil ADIPEC . Nov. 2015 . Abo Dhabit UAE OTC Asia • Mar 2036 • Kuala Liampur, Malaysia Santes Offshore + Apr. 2016 + Santes 58 Brazil Rio Oil & Gas * Sep 2016 * Rio de laneiro, Braza

FOR MORE INFORMATION.

Honeywell inti Middle East

Phyteratic flod Pumps, Iral

Sanace Consulting Corp.

HBPL

Hydro, Inc. Ice Qube inc

ST Group

Saudi Arabia increases oil ouput

SAUDI ARABIA PRODUCED 9.7mn bpd in September, a rise from 9.6mn barrels per day (bpd) in August, an industry representative revealed

The quantity of crude oil, however, it produced for global export markets saw a drop in the same month. Saudi supplied 9.36mn bpd to



Saudi Arabia's oil output reached 9.7mn bpd in September

the oil market in September, falling from 9.69mn bpd in August, according to the representative.

The number of barrels being kept in storage is one of the reasons that could explain the different numbers, although up until now the Kingdom has not commented on its production for September

Benchmark Brent crude prices have dropped since June around 25 per cent to their current level around US\$80 a barrel mark.

Analysts have forecasted the Saudis will request an OPEC-wide production cut in the forthcoming OPEC meeting taking place 27 November in Vienna, however officials from the Kingdom have not revealed that Riyadh will seek to reduce output.

Saudi Arabia and Kuwait put a stop to production at an oil field run jointly with Kuwait due to environmental concerns.

Oman's oil production set to rise next year

OMAN'S OIL PRODUCTION is set to reach 960,000-980,000 bpd in 2015, according to Salim al Aufi.

The National Centre for Statistics and Information revealed Oman produced 945,000 bpd during the first seven months of 2014. Oil output in the Harweel field is expected to rise next year once repair works come to an end.

Reporting on the current fall in oil prices, Al Aufi stated that most of their projects are on estimates of oil prices at US\$65-US\$70 barrels (bbl), while the current spot price of Oman Crude is around US\$84 bbl.

Under the management of MOG, HE Aufi stated that the drop in revenues will not impact on projects currently taking place, however may affect the roll out of future ones.

Although Al Aufi did acknowledge that those who provide services to the oil and gas industry will be affected by the fall in price. "We expect, with reduced oil prices, the services will be reduced," Al Aufi said.

"If oil prices go down, everything that serves the oil and gas industry in order to continue serving, will have to come down," added Al Aufi.





enables us to offer you more than a complete range of cables and cabling systems: dedicated teams, our unique supply chain flexibility and the high quality of our products. Planning, project management, installation and maintenance... At every stage, our expertise is accompanied by a world-class service to achieve your performance.

Irag's oil exports on the rise

IRAQ'S OIL EXPORTS have seen rapid growth in October 2014, with Kurdish shipments rising and fighting failing to derail an expansion of supplies from OPEC's second biggest producer.

Following four months after an advance by Islamic State into the Kurdistan Region of Iraq, which led to oil prices of US\$115 a barrel, the conflict has not affected Irag's exports from the south, the centre of its crude oil shipments.

Shipping statistics for the first 23 days of October tracked by Reuters showed exports from Irag's southern terminals have cost 2.55mn barrels per day (bpd).

According to Reuters, oil has fallen sharply from June records to a four-year low of US\$82.60 a barrel this month on ample supplies, reducing OPEC members' income from their primary export.

"So far, no country has said it is willing to cut." said Carsten Fritsch, an analyst at Commerzbank in Frankfurt. "So it will be difficult for OPEC to find an agreement overall"

Exports have been delivered successfully



Southern Iraa is the centre of the country's world oil exports

despite delays to shipments and loadings due to bad weather, making the achievement all the more impressive, oil industry representatives said.

Data from Reuters revealed that southern Iragi exports so far in October are higher from the average of 2.54mn bpd during all of September and are within sight of May's average of 2.58 mn bpd.

Iraq has increased oil production in the south since a number of service contracts were drawn up by Western companies in Baghdad in 2010, boosting export capacity.

Export figures from Irag's northern and southern ports reached 2.80mn bpd in February. Northern exports of Kirkuk crude, however, have been closed since 2 March following attacks on a pipeline to Turkey, keeping total exports lower than expected.

Kirkuk exports, however, were stopped and are unlikely to return soon, the Kurdistan Region of Iraq has been exporting a rising amount of oil independently of Baghdad through Turkey's Ceyhan port.

These reached 180,000 bpd in September, according to the International Energy Agency, and may have reached 200,000 bpd in October, an industry source who tracks the shipments said.

Iragi oil is partly being sold by Islamic State militants, who took hold of some oilfields in northern Irag in June, with output of around 28,000 bpd.

As well as oilfields it controls in Syria, the militant group was producing about 50,000 to 60,000 bpd before recent US-conflict, research company IHS reported.





Visit us at ADIPEC 2014 Hall No. 12

Booth Number: 12255G





Spare Pak Multi Joint



Spare Pak Ball Joint



Spare Pak Slip Joint



Dual Pak Underground Slip Joint

Best Quality, Performance, Product Engineering System

- UL Listed Products
- Packing Injection tool is applied maintenance without pipe operation shut-down
- Large amount of displacement absorption
- Conducted 100,000 times of Steam Cycle Test (same as pipe life-span)

Genel Energy discovers oil offshore Morocco

OIL HAS BEEN discovered near Sidi Ifni, offshore Morocco, according to Morocco's National Office of Hydrocarbons and Minerals.

According to a statement the office released, this discovery was made with the support of three oil companies -Genel Energy, Serica Energy and San Leon. The oil was found in October 2014 and is said to be located 59 km off the coast of Sidi Ifni. The bureau also stated that a number of tests will be carried out on the quality of this petroleum in a bid to establish how valuable it is.



Genel Energy has reported that it discovered oil at a southern Moroccan offshore well

Genel Energy reported it had

discovered oil which was more than 3,000 metres deep in the Atlantic Ocean near Sidi Moussa, a city near Salé in southern Morocco.

Abdelkadir Amara, the minister of energy, mines, water and the environment in Morocco, said that the government was close to discovering important oil reserves within the next two years. Amara stated that they will accelerate the drilling process in 2015 with the aim of drilling lots of wells in 2016.

"We are at a very early stage and the presence of hydrocarbons in this frontier block will require further evaluation," stated Tony Craven Walker, CEO of Serica.

Also commenting on the discovery, a Reuters analysts said, "While these initial results are encouraging...much uncertainty still exists on the commercialisation of the discovery both in respect of size of the discovery and ability to flow well at commercial rates."

Lukoil to increase oil production in Iraq

DUBAI-BASED LUKOIL OVERSEAS began production at West Qurna-2 this year with 120,000 bpd.

"The current production at the field exceeds 300,000 bpd and we are expecting it to increase to 400,000 bpd," said Fedor Krimklin, a Lukoil Overseas representative.



Current oil production at West Qurna-2



Iran crude oil output to rise to 4.3mn bpd soon

IRAN HAS SET a goal to increase its crude oil production to 4.3mn barrels per day (bpd), according to a senior Iranian oil official.

"In the near future, Iran's oil production capacity will reach 4.3mn barrels (bbl)," revealed Mansour Moazzami, the Iranian deputy oil minister for planning and supervision on hydrocarbon resources, at a conference held in

Moazzami also noted Iran's current refining capacity of 1.8mn bpd, adding that the figure will rise to three million in the coming years.

Iran's natural gas production has experienced a rise by 100mn cu/m and and the the country, Moazzami stated. The National Iranian Oil Company (NIOC) has predicted that oil production capacity of the Islamic Republic will reach four million bpd by March 2015.

The country will be able to access oil from its reservoirs for the next 60



In coming years Iran's oil production capacity is expected to reach 4.3mn bbl

vears as the country's proven oil reserves are reported at 157bn barrels, the NIOC said.

Tehran and the five members of the UN Security Council - China, Russia. Britain, France and the USA - including Germany will secure a deal on the Islamic Republic's nuclear energy programme in a bid to remove sanctions against Iran, particularly its oil sector. Both parties agreed on a landmark interim deal in Geneva, Switzerland last November.

Petrofac wins US\$620mn contract in Irag's Rumaila

PROVIDER OF OILFIELD services to the international oil and gas industry, Petrofac, has entered a US\$620mn contract to begin operations in Iraq and the North Sea.

The company, who has offices in Abu Dhabi and Sharjah, will provide staff to manage and set up construction projects to BP's Iragi division at the Rumaila oilfield in southern Irag, Petrofac said.

The company stated that it will provide the management and staff to set-up a number of construction projects at the oilfield, situated 32 km north of the Kuwaiti border.

The three year-deal, which can be extended by a further two years, Petrofac will also supervise work carried out by other contractors.

"On its own this contract in Iraq is a fairly small deal for Petrofac and won't have much of a significant effect on the company's share price," said Andrew Whittock, an analyst at Liberium Capital.

Back in August, Petrofac reported a net profit drop of 44 per cent to US\$136mn and an 11 per cent fall in first half revenues to US\$2.5bn.

Also commenting on the deal, Mani Rajapathy, Petrofac's senior vice president for the Middle East, said, "The award builds on an established track record for Petrofac in Iraq, in particular at Rumaila, dating back to 2011.

"We look forward to sharing in the continued success of the regeneration of Rumaila," Rajapathy added.

1-1-01 YDRAULIC TOOLS

With Hi-Force bolting tools, you will bolt it right first time, every time!

Hydraulic Torque Wrenches





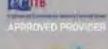
- >> Capacities up to 48,181 Nm
- >> TWSN Square drive type and TWHN Female Haxagon cassette head type options available
- Maximum working pressure 700 Bar
- >> FREE BoltRight Software

Hydraulic Bolt Tensioners





- >> Capackies up to 2,649 kN
- >> STS Topside, SBT Spring return and STU Sub sea tensioner options available
- >> Maximum working pressure 1500 Bar
- >> FREE BoltRight Software







Dana Gas signs Gas Production Enhancement Agreement with Egyptian authorities

DANA GAS EGYPT, a whollyowned subsidiary of Sharjahbased Dana Gas, has signed a Gas Production Enhancement Agreement (GPEA) with the Egyptian Natural Gas Holding Company (EGAS) and the Egyptian General Petroleum Company (EGPC), which it has said would lead to a substantial incremental in its production of gas, condensate and LPG in the North African country.

Under the terms of the agreement, the company will carry out a seven-year staged work programme project, due to start within months, during which it will drill 37 new wells and refurbish 37 existing wells.

The agreement will form the basis for a development programme to increase production from current levels



of more than 40,000 boepd from Dana Gas Egypt's Development Leases in the Nile

Dana Gas CEO Dr Patrick Allman-Ward remarked, "We are delighted to announce this GPEA with the Egyptian

government, which is a significant milestone for Dana Gas in Egypt.

"We believe this to be a great example of public-private partnership in action that will generate significant value to Egypt as the increased

production delivers much needed gas to domestic markets.

"It will also enable us to recover the overdue receivables due to us, unlock the substantial value of Dana Gas' current Egyptian assets and deliver maximum value to our shareholders in the long term."

The company estimated that incremental production would account to approximately 270bn cubic feet of natural gas, eight to nine million barrels of condensate and close to 450,000 tons of LPG, with peak production expected to take place in 2017.

Dana Gas Egypt, the sixth largest gas producer in Egypt, recently confirmed it has produced 100mn boe in the country since beginning operations there in 2007.

Saudi Aramco awards gas project contract to SEPCO

SAUDI ARAMCO, THE Saudi Arabian oil and gas company, has signed a contract with Chinese firm Shandong Electric Power Construction Corporation (SEPCO) to design and build a Master Gas System Booster Gas Compression Station.

The contract for the project, worth an estimated US\$1.3bn, will help deliver sales gas produced in Saudi Arabia's Eastern Province to sites in the west of the Kingdom, including King Abdullah Economic City, the Petro Rabigh petrochemicals complex and an Independent Power Plant on the country's west coast.

Once completed, the station will expand the capacity of the East-West Pipeline system from its 8.4bn standard cubic feet per day (scfd) to 9.6bn scfd by the end of 2016, with a further increase in the pipeline's capacity to 12.5bn scfd planned to be completed by 2018.

The first two phases will involve the installation of a pipe branching off and along the East-West Pipeline, and the construction of three compression station facilities and residential facilities. It will also see the introduction of Aramco's first integrated waste-heat recovery system for power generation.

The Master Gas programme will help Aramco diversify its portfolio, reducing its reliance on liquid fuel.

Operations begin at Oman's first tight gas project

OMAN OIL COMPANY Exploration and Production (OOCEP) has started operations on Oman's first tight gas field.

Located at OOCEP's Abu Butabul tight gas field in Block 60, the company has overseen an investment of US\$1bn on the facility, which will be expected to produce around 6,000 bpd of

Abu Butabul tight gas field spreads across 15,800 sq km in Block 60, which is owned and operated by OOCEP, following the company's acquisition of the block in December 2010.

Tight gas refers to natural gas reservoirs that are found in extremely 'tight' underground formation, often locked in extraordinarily impermeable, hard rock.

Sulaiman al Zakwani, chief corporate officer of OOCEP, said, "When we were awarded the block in late 2010, OOCEP was considered a new player in the industry, but we took on board one of the most challenging unconventional gas projects in Oman.

"We want to position ourselves as pioneers in the development of unconventional fields, such as tight gas, tight oil, shale gas and heavy oil."

According to OOCEP, its next move will be to undertake a detailed study and comprehensive appraisal of the entirety of Block 60.

Valeura Energy makes three natural gas discoveries in Turkey

CANADA-BASED VALEURA ENERGY has made three new natural gas discoveries in northwest Turkev.

Jim McFarland, CEO of Valeura Energy. said, "We are excited to announce the successful results from a new conventional natural gas exploration programme on our TBNG JV lands in the sparsely drilled Osmanli area.

"Three exploration wells have been drilled to date on new 3D seismic, all of which have discovered gas, which could potentially add gross 169,901 cubic metres to 198,217 cubic metres to productivity by late October 2014 when the wells are expected to be tied in," he added. "Two additional exploration wells have been planned in this programme, one of which has been drilled to total depth and is logging. We expect these results to lead to a number of follow-on exploration, appraisal and development locations in the Osmanli area."

McFarland added that one of the successful exploration wells at Gurgen-1 sat just 500 metres from the boundary of Valeura Energy's 100 per cent-owned Banarli licence and has assisted in identifying a number of Osmancik formation exploration prospects and leads on its acreage.

The vertical exploration wells were drilled in Q3 2014 at the site.

The MicroCORE™ Cutting System



INCREASE IN ROP against competitor offsets

Our revolutionary new design redistributes high energy consumption from the center of the drill bit to the more efficient areas of the cutting structure, resulting in faster ROPs and increased cost savings.

Visit us at stand 8335, ADIPEC, Abu Dhabi, UAE from 10 to 13 November.

Performance where it cuts





Industry association calls for further investment in gas technology

THE INTERNATIONAL GAS Union (IGU) has reiterated its advocacy of gas technology as an integral part of a sustainable global energy system.

The association called for further investment in gas projects and technology, describing the industry as possessing "the key technology to a safe, sustainable and efficient energy future".

The IGU said that, with global energy use increasing at unprecedented rates and energy-related emissions continuing to grow, emission reduction targets set by the United Nations Framework Convention on Climate Change (UNFCCC) could only be met with "new and improved clean energy technologies that balance climate change mitigation with growing energy demand".

Jérôme Ferrier, president of the IGU, said, "Gas has a key role to play in this context. It is the cleanest fossil fuel and its



IGU executive committee member Prof. Dr. Gerald Linke described gas as "the key technology for the integration of renewable energy" (Photo: Pline)

reserves are abundant and wide spread."

The association described gas technology as "mature and competitive", offering innovations on both the supply and consumption sides of the industry, stating that the adaptable nature of gas made it the ideal complement to renewables.

"Gas is the key technology for the integration of renewable energy," claimed Prof. Dr. Gerald Linke. IGU executive committee member and chairman of the board of directors of the German Technical and Scientific Association for Gas and Water (DVGW). "It provides a great opportunity for an ecologically and economically sensible combination of predictable, secure gas supply and volatile, renewable power generation. Gas is fossil and non-fossil, protects the environment and is part of the solution for greening our energy supply."

Based in Berlin, Germany, IGU works with a number of multilateral organisations. including UNESCO, the IEA and the World Bank to "promoting the political, technical and economic progress of the global gas industry". The union has 125 members, representing more than 95 per cent of the global gas market.

DPC discovers gas at Fateh field

DUBAI PETROLEUM COMPANY (DPC) has announced the discovery of significant volumes of gas in its T-01 deep gas exploration well, located at Fateh field, offshore Dubai,

In a statement, the company said that the T-02 deep gas exploration well was drilled to 5,562 metres into the Pre Khuff formation and is Dubai's deepest well to date.

The T-02 well has been wireline logged to evaluate the potential of gas formations. There are about 119 metres of gas rich zones out of the 274 metres drilled and logged in the Pre Khuff. The work at the well is currently being suspended to allow for later re-entry and production testing.

"Until the testing programme has been completed, potential reserves and possible production rates cannot be estimated accurately. The planned production testing procedures require the use of specialist items and equipment that have long lead times for delivery," said a company source.

DPC said it expected to have the test results of the T-02 deep gas exploration well by 2015. While drilling in the Pre Khuff formation, gas flowed into the T-02 well bore on a number of occasions. Current indications are that the gas is largely methane with no H2S content, added the company source.

PetroMaroc confirms significant natural gas potential of Kechoula structure

PETROMAROC HAS ANNOUNCED that Canadian gas resource consulting company GLJ Petroleum Consultants has completed an independent evaluation of the Undiscovered Petroleum Initially in Place (UPIIP) and prospective resources of the Kechoula structure in the Sidi Moktar Exploration License, Morocco.

The report included technical information from the Koba-1 and Kamar-1 wells, which were drilled in 2013 and 2014, and revealed that the Lower Liassic clastic reservoir was filled to spill point, confirming PetroMaroc's geological and geophysical model for the Lower Liassic reservoir for the Kechoula structure.

PetroMaroc president and CEO Tom Feuchtwanger stated, "We are very pleased with the result of this evaluation, because it independently confirms that PetroMaroc has encountered a significant accumulation of natural gas on the company's Sidi Moktar exploration license in Morocco. We will now move ahead with plans for an appraisal and delineation programme aimed at proving the commerciality of this asset."

OptaSense provides revenue assurance to Yemen LNG pipeline

OPTASENSE HAS CLAIMED to successfully prevent external threats to a natural gas pipeline in Yemen, which has previously encountered a number of incidents that disrupted supply.

The QinetiQ company and distributed acoustic sensing technology provider originally installed the system on the 320 km pipeline that runs LNG from Marib to Balhalf as part of a pipeline security operation in late 2013.

According to a case study paper to be presented by Total at ADIPEC, "Since the pipeline intrusion detection system was installed, there has been a significant improvement in pipeline availability and regular LNG shipments." It added that "no attempt at



The 320 km pipeline stretches from Marib to Balhalf in Yemen

intrusion on the pipeline resulted in damage to the facilities" as a result of integrating

OptaSense with other security measures.

Magnus McEwen-King, managing director at OptaSense, said, "This project demonstrates that the implementation of OptaSense into operations enables pipeline operators to reduce damage resulting from third party interference to zero.

"Ensuring pipeline integrity and availability is essential to enabling a continuous supply of product and therefore revenue from a pipeline

The requirements of the project included the implementation of a security system to allow early detection of potential threats, as well as minimising the amount of new equipment required in the field.



OIL FIELD CHEMICALS













CAUSTIC SODA | SODA ASH
GILSONITE | SODIUM BICARBONATE

XANTHAN GUM | PAC R | PAC LV

LIME | STARCH HT | PHPA

CORROSION INHIBITORS | LUBRICANTS

GLYCOL MC | BIOCIDES | DEFOAMERS

BUTYL GLYCOL | XYLENE

CALCIUM CHLORIDE | TEG

EMULSIFIER | WETTING AGENT

POTASSIUM CHLORIDE

CAUSTIC SODA SOLUTION

INDUSTRIAL SALT

SODIUM HYPOCHLORITE SOLUTION | BARITE

BENTONITE | LOSS CIRCULATION MATERIAL



Our new Storage & Blending facility at Dubai Investment Park 2 Covering 60,000 Sq.ft







Starlink Oilfield Supplies & Services DMCC

P.O. BOX: 24167, Office No. 3903 Liwa Heights, Jumairah Lake Towers, Dubai , U.A.E .

T: +971 4 425 3355, F: +971 4 364 9273, E: inquiry@soss.ae, W: www.soss.ae

Sohar to offer ship-to-ship LNG transfers in Oman

SOHAR PORT AND Freezone has announced that it is set to offer ship-to-ship LNG transfers service at its port in Oman.

Edwin Lammers, executive commercial manager of Sohar Port and Freezone, said, "We have put all of the necessary licensing structures in place to be able to start LNG ship-to-ship services in Sohar Port and Freezone."

Sohar Port and Freezone is also planning to establish LNG bunkering facilities at its port over the next few years.

"The ship-to-ship LNG transfers service is the first phase of our project, and we will move quickly in issuing the new licenses and getting things up and running. The second phase will involve installing LNG bunkering services for vessels calling at Sohar Port and Freezone," added Lammers.

According to Lammers, many of the world's biggest shipping



lines are moving towards ship-to-ship LNG transfers services. Sohar Port and Freezone is a deep-sea port on Oman's Indian

Ocean coast. With current investments exceeding US\$15bn, it is one of the world's largest port and free zone developments. It lies at the centre of global trade routes between Europe and Asia, making it a strategic attractive location for shipping companies.

IMF researchers advise Lebanon against gas extraction before 2020

A GROUP OF International Monetary Fund (IMF) researchers have said that they do not expect Lebanon to tap into its potential offshore gas wealth before 2020.

The study, which the authors stressed did not reflect the official position of the IMF, urged Lebanese authorities to apply a cautious fiscal policy before drilling takes place.

"Lebanon is expected to become a commodity producer over the next decade, albeit presumably smaller than others," the study said.

"Recent seismic surveys suggest that Lebanon's gas resources could be in excess of 25 tcf. not particularly large by international standards. Still, revenue could potentially increase significantly for many years to come, although starting from 2020 at the earliest."

In 2013, UK-based survey firm Spectrum said that a 3D seismic survey conducted in an area covering 3,000 sq km off the southern coast of Lebanon revealed potential reserves could account to close to 25 tcf of gas.

"Lebanon will need to reformulate its fiscal framework to take into account potential revenue from natural resources. If natural resources prove to be commercially viable and sizeable, Lebanon will become a commodity-producing country," the study added.

The study said that an "aggressive borrowing policy in anticipation of future resource revenues" could be counterproductive considering the uncertainty regarding the magnitude and temporal profile of the expected resource revenues.

BP awards drilling contracts for gas project in Oman

BP HAS AWARDED two drilling contracts worth a total of US\$730mn for the development of Khazzan tight gas project at Block 61 onshore Oman.

The company said that the first contract was won by the UK-based KCA Deutag to construct and operate five land rigs worth a total of US\$400mn in Khazzan tight gas project.

The second contract to Abraj Energy Service will take care of the supply of three drilling rigs worth US\$330mn for the full gas field development.

Holding a 60 per cent stake in the US\$16bn Khazzan tight gas project, BP will invest around US\$9.6bn in field development. State-owned Oman Oil Company Exploration & Production (OOCEP) holds the remaining 40 per cent stake. The project is expected to extract around 2.9bn cubic metres of gas per day upon completion.

A company official said that the project is one of the Middle East's largest tight gas plays, having the potential to serve as a major source of gas supply for Oman.

In December 2013, BP had signed the Khazzan tight gas deal, which involves a 15-year programme of drilling into the sandstone to extract gas using hydraulic fracturing technology developed for shale gas and oil.

Shah gas field project to help meet growing energy demands in the UAE

THE COMPANY DEVELOPING the Shah gas field in the UAE has said the project would have the capacity to supply half a billion standard cubic feet per day of network gas when developments on the project have been completed. Abu Dhabi Gas Development Company (Al Hosn Gas) said it was targeting full production for the field by the end of 2014.

Located 210 km south-west of Abu Dhabi, Al Hosn Gas said Shah gas field would contribute towards the growing energy demands of Abu Dhabi and the UAE for more than 30 years. The remote field has only been commercially accessible in recent years due to technological advances that make processing the field's sour gas reserves feasible.

According to Al Hosn Gas, Shah gas field is the biggest sour gas project of its kind, adding that the sour gas hydrogen sulphide content is 23 per cent and so corrosive that conventional recovery equipment would be destroyed attempting to recover the resource. The highest hydrogen sulphide concentration so far been exploited in sour gas fields is currently 15 per cent.

"The remoteness of the site, the difficulties of extracting and handling such high levels of sourness, and the attendant safety and environmental hazards all represented huge obstacles to overcome – especially when much sweeter and more easily managed gas field were available," said Saif Ahmad Al Ghafli, chief executive officer of Al Hosn Gas.

Al Hosn Gas is a joint venture between Abu Dhabi National Oil Company (ADNOC), which owns 60 per cent of the company, and US-based Occidental Petroleum (Oxy), which owns the remaining 40 per cent.



HSBC Presents The CEO's Outlook

with Riz Khan

Join Riz Khan as we speak to prominent CEOs in the region on their business, global trends and more. To tune in to this exclusive interview series, visit www.GlobalConnections.hsbc.com/mena





Efficient openhole logging of the horizontal wells

A paper by Tatweer Petroleum and Schlumberger shows how a new wireline tractor reduces time, cost and risk conveying downhole tools in openhole laterals.



Figure 1. UltraTRAC all-terrain tractor delivers more than twice the efficiency of conventional drill pipe conveyance methods in openhole laterals; the tandem configuration of the tractor allows negotiating abrupt changes in borehole geometry (Image courtesy of Schlumberger)

HE MARKED INCREASE in horizontal and deviated drilling, even in conventional formations, has enabled operators worldwide to maximise production by accessing a greater portion of the reservoir. Yet, safe and efficient data acquisition for reservoir characterisation and completion design in the openhole lateral section remains challenging, usually relying on methods that are costly, time-consuming and risky.

Loss of gravity assistance, especially when hole deviation exceeds 60°, requires that essential openhole logging tools be pushed downhole by mechanical force, typically using drill pipe. This conventional drill pipe conveyance method, or tough logging, is a labour intensive, time-consuming process that involves two crews working in synchronised fashion. The drilling crew pushes the tools with the heavy, rigid pipe, one stand at a time, while the wireline crew deploys the cable or wireline on a spool at a specific speed to facilitate communication between the surface and the downhole components.

The operation can take several days and often requires coordination of two or more companies, which is inefficient in terms of cost, time and risk exposure. The recovery cost of failure is very high, requiring multiple trips to pull out of the hole, change out the equipment and reenter to remove an obstruction or remediate other

Tatweer Petroleum deployed the technology in the long-producing Bahrain Oilfield"

problems. Casedhole conveyance tractors are not suited to open-hole environments, which have geometric anomalies, changing diameters, restrictions, rock debris and are not smooth.

A new wireline tractor to convey large payloads in challenging horizontal open holes and across high-angle extended-reach wells significantly reduces time and risk in conveying downhole tools. streamlining wireline operations for faster data acquisition and providing the capability to integrate conveyance, data-gathering and interpretation services from one provider. Tatweer Petroleum deployed the technology in the long-producing Bahrain Oilfield in the Middle East, saving considerable operational cost and time.

The Bahrain Field, the first discovery in the Gulf region, has been producing since 1933. The play is characterised by stacked tight carbonate and sandstone layers with 16 oil and gas reservoirs. Wells are shallow, and economics dictate that a maximum number of wells be drilled quickly. To improve production rates, an increasing number of wells in the field are being developed with horizontal drilling techniques. Thirty per cent of the wells drilled by Tatweer between 2010 and 2013 are horizontal; the company anticipates that percentage will increase to more than 60 per cent in 2014.

The need for efficient openhole logging of the lateral section was the impetus behind Tatweer's decision to use the new wireline conveyance method to deploy downhole tools in two key reservoirs of the Bahrain Field, where horizontal drilling has proved beneficial in targeting the pay zones to improve recovery.

Tractor conveyed logging

The technology, the UltraTRAC* all-terrain wireline tractor, has more than twice the efficiency of conventional drill pipe conveyance methods in openhole laterals and cased holes (Figure 1). Placed on



EMPOWERING THE OILFIELD INDUSTRY WITH WORLD CLASS EXPERTISE

www.topoilfield.com



TOP OILFIELD INDUSTRIES is a leader in the field of Offshore Rig and Land Rig refurbishment, Oilfield Drilling Equipment Manufacture, Repair, Overhaul and Madification for Petroleum, Petrochemical and Natural Gas Industries, Our services extend to cover drilling equipment and associated parts supply/ rental and the supply. Overhaul and repair of industrial diesel engines.

Core Services

- Jack-up Rigs Refurbishment, Upgrade, Modification, Class Certification and Engineering Supports.
- + Land Rigs Supply, Refurbishment, upgrade, new build rig up and commissioning etc.
- Overhaul and Repair of Jacking Systems and Offshore Cranes with associated spares supply.

- Overhaul, Repair and Supply of drilling equipment and spares Drawworks, Crown Blacks, Travelling Blacksm Swivels, Top Drives, Rotary Tables, Mud Pump. Elmagoo Brakes etc. As per API and OEM specifications
- Manufacture, overhaul/repair and modification of BOP Control Unit as per API 160 spec
- Zero hour overhaul/rebuild and repair of Caterpillar, GM-Detroit, Cummins Engines.
- · Manufacture and overhaul repair of Comenting Units, Batch Mixers, Frac Units
- . Fabrication and repair of complete mud systems with required solid control equipment and associated components,
- Inspection and repair of derrick/most, sub-structure etc. as per API 4F/RP4G categories.
- On-site services for Offshore and Onshore Rig inspection & Repairs.

















→ Analysis

top and near the front of the logging tool string, the continuous-drive system has wheels that apply axial force to push tools in highly deviated wells three to five times faster than pipe, facilitating horizontal conveyance on tractor. Deployment requires only a wireline crew for both the tractor conveyance and logging operations, reducing personnel and operational time. Conveyance in the casedhole near vertical section is up to 10 times faster on gravity descent than with drill pipe. When pulling tools out of the hole, the tractor is closed and the wire is pulled back to surface with the winch.

The tractor has three fit-for-purpose design features that provide robust manoeuvrability. Traction control enables real-time adjustment of the radial force being applied by the tractor arms. Radial force can be adjusted to increase traction if slippage occurs, and reduced to minimize wear on wheels and drive components and conserve energy. Dynamic suspension enables constant radial force applied by the extended-reach arms that can increase the opening up to 15 in. (38 cm).

Bidirectional capability reduces operational risk by allowing the tractor to be retrieved if tools become stuck or in cases of high friction or borehole collapse. By putting the tractor in reverse at full power, the operator can free up tools, eliminating the need for highcost fishing operations.

The modular design of the tractor enables it to be configured for load and well geometry. Drive sections, each with a motor and two wheels, can be stacked to provide greater push force. Multiple wheel diameters and designs can be used for different rock types and strength and well conditions. A tandem sub increases functionality by enabling independent surface control of the drives to help steer the tractor through washed out intervals.

Reducing time and risk

Characterised by hard formations with moderate unconfined compressive strength (UCS), the Bahrain Field reservoirs were deemed good candidates for applying the wireline tractor conveyance technology. Mauddud, the primary oil reservoir, is highly fractured and features a porosity system that often results in early water and gas breakthrough, UCS ranges from 1,500-3,000 psi. The two faces of the reservoir have a total thickness of 110 ft. (34 m), all considered net pay. The main oil zone has been on gas injection since production began and has developed a secondary gas cap. The primary recovery mechanism has been gravity drainage.

In recent years, the development of high-angle and horizontal wells in the primary oil zone has been successful in targeting production between high-permeable zones that promote rapid gas and water breakthrough. Horizontal sections are typically 1,000 ft. (305 m) in length.

The deep Arab D limestone reservoir is approximately 230 ft. (70 m) thick with a large gas cap and thin oil rim with a long water transition zone underlying the entire hydrocarbon accumulation. The formation has been developed both vertically and horizontally using crestal gas injection. Horizontal drilling has improved recovery by mitigating water and gas coning. Horizontal sections are about 600 ft. (183 m).

Prior to the tractor deployment, Tatweer and Schlumberger conducted pre-job modelling and planning using tractor tension modelling software to determine tractor accessibility, wireline tension modelling for the wireline weak point and size and tractor forces required for the operations. Formation pressures ranged from 1,400 to 3,000 psi.

Two 6,200-ft. (1,890-m) TD wells were drilled in three sections, 12 1/4 in., 8 ½ in. and a 6 1/8-in. openhole lateral section in the oil zone were approximately 3,200 ft. (975 m.) in length. In the Mauddud reservoir, the operational time to convey the downhole tool string using the wireline tractor was about 13 hours, compared to 30 hours using the conventional drill pipe conveyance method. In the Arab D well, the wireline tractor deployed the tool string in the in eight hours, compared to 26 hours using the conventional method.

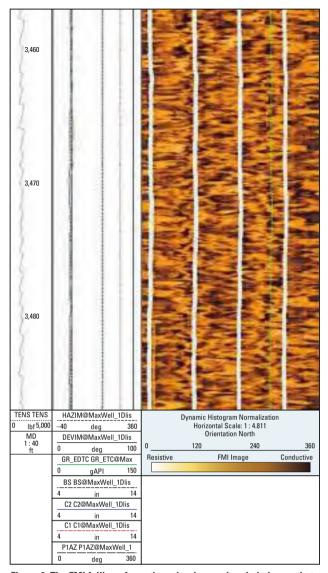


Figure 2. The FMI fullbore formation microimager borehole image that is obtained using the UltraTRAC all-terrain wireline tractor conveyance technology in the Mauddud Formation (Image courtesy of Tatweer Petroleum Company)

The wireline tractor was able to convey tool strings up to 2,400 ft. (732 m) per hour in both wells, enabling Tatweer to acquire necessary high-quality images for formation evaluation, while saving 60-70 per cent logging time (Figure 2). Rig cost savings were US\$40,000 per well. Since it was introduced in 2013, the wireline tractor has been deployed in wells worldwide.

As horizontal drilling continues to grow in all regions, wireline operations for reservoir understanding and completion design are essential in achieving economic hydrocarbon recovery. An integrated approach that streamlines efficient downhole tool conveyance, highquality logging data-acquisition and interpretation enhances the value proposition for operators in challenging horizontal wells by significantly reducing cost, time and risk.

*Mark of Schlumberger

References

This article is based on the 172172-MS SPE Conference Paper Efficient Open-Hole Logging of the Horizontal Wells Using Openhole Tractoring. Field Experiences from Tatweer Petroleum Company, Bahrain. Authors: Bill Ofield, Michael Down, Lana Al-Hashimi, Tatweer Petroleum; Amir Hermes, Nicolas Murphy, Mohamed Hamdy, Moustafa Eissa, Enrico Annovi, Schlumberger.







The first and only in-Kingdom pipe supports manufacturer and field services provider

LISEGA Arabia is a joint venture between Saudi-based company Kinetic Energy Factory Company "KEKSA" (Saudi Aramco - approved manufacturer and contractor) and LISEGA SE (Germany), the world's market leader in pipe supports.

Pipe Supports is an integral part of the piping systems, hence the operational safety of the supports is having a significant impact on smooth operations of piping systems.



LISEGA Arabia field services offers valuable contribution to:

- Prevent costly damages and shut-downs
- Increase operational safety
- Guarantee plant availability
- Secure long life of piping, associated equipment, and supports



Field Service

by Experts for Experts

The faults most frequently noted in pipe supports:

- Increased friction due to corrosion and wear
- Relaxation of springs in variable and constant supports
- Faulty load settings of variable and constant supports
- Jammed bearings and guides
- Broken or bent rods
- Deformed or broken pipe clamps
- Errors in support design
- Incorrect installation of supports
- Poor quality of certain brands

















Services

- Field Survey & Inspection
- Installation & Commissioning
- Testing & Maintenance





LISEGA Arabia - a Joint Venture of VLISEGE SE and WKEKSA



Support Industries Area 3 Jubail 1 Section N, Block 9, Lot No. 10 Road No. 267 - Al-Jubail - K.S.A. P.O.Box 359A Al-Khabar 31952-K.S.A. | Tel : + 966-133418899 | Fax : + 966-133417799



Leading in technological development

A Lloyd's Register Energy survey assesses the impact of innovation and investment on the global oil and gas sector.

YDRAULIC FRACTURING, OR fracking - with its revolutionary impact on US energy production may grab the headlines, but it is only a small part of a technological transformation underway within the global oil and gas sector, according to the survey, which was launched at the start of 2014 and released on 30 September.

As easily accessible hydrocarbon accumulations become exhausted. innovative companies are increasingly looking to more challenging frontier areas to maintain proven reserves and grow output - all collectively pushing back the "peak oil" date. Bolstering this has been a sustained period of strong oil prices. which has also been a key driver of a broad wave of innovation that has propelled the sector to the forefront of global technological development.

This has been a reversal of a long-term decline, which, in turn, has driven advances in fields as diverse as robotics and automation, data analytics and nanotechnology. Added to this, technological solutions are required to tackle rising costs, ageing infrastructure, tougher regulatory demands, changing energy sources and skills shortages. Given this, today's companies are left with little choice but to innovate.

Any continuing technology-led transformation of a sector with such longterm investment decisions and high capital costs will be unpredictable and complex,

Tomorrow's leading companies will likely be those that find the most effective ways of combining different technologies"



and will always be, to a degree, conditional on expected future oil prices. This Lloyd's Register Energy report, drawing on a survey of more than 250 senior industry executives from across the globe and in-depth interviews with numerous corporate leaders, considers the likely advances ahead, as well

as potential changes in the sector's approach to innovation.

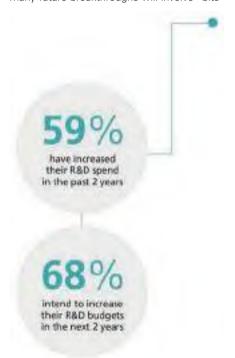
Key findings

According to survey respondents, a variety of technologies looks set to have a significant impact in the coming years, including several



relating to extending the life of existing assets, such as enhanced oil and gas recovery (EOR). In terms of near-term impact, however, topping the list is automation, including remote and subsea operation, as firms seek to cope with challenging environments.

High-pressure, high-temperature (HPHT) drilling and multi-stage fracking are also expected to have a major impact, but are only expected to become fully deployed around 2020, along with many other technologies. Just as important will be the more effective use of data and computing: 58 per cent of those surveyed agree that many future breakthroughs will involve "bits



and bytes, rather than physical hardware". Further out, from 2025 and beyond, the most eagerly anticipated innovations relate to subsea robotics.

Interviewees note that it is often the innovations that use a variety of new or existing technologies in combination that bring the most dramatic change. With so much technology potentially coming on stream in the decade ahead, tomorrow's leading companies will likely be those that find the most effective ways of combining different technologies to add to an expanding tool kit.

The oil and gas sector, while becoming more eager to adopt change, remains highly conservative"

Increasing rate of innovation

The vast majority of surveyed executives (73 per cent) believe that the rate of innovation in the sector is increasing. This is not true across the board – slim-hole coiled-tubing drilling, for example, has been in the wings for 15 years and remains stuck there – but many technologies are clearly seeing advances. Accordingly, nobody is safe from the resultant competitive forces: over three-quarters of respondents say that the pressure to innovate has risen over the last two years.

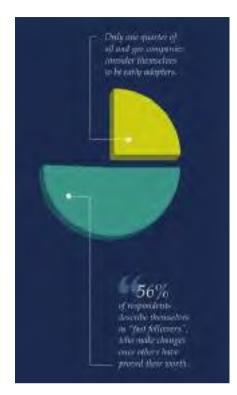
Investment in R&D, after decades of slow decline, began to rise in the middle of the last decade, driven in large part by high prices, as conventional production peaked against a background of strong global demand growth. Now it looks set to accelerate further: in the last two years, 59 per cent of surveyed companies increased their average R&D spending, with almost one in four boosting this by more than 10 per cent.

Looking ahead, 68 per cent intend to increase their R&D budgets, with about one-half of the total increasing this by at least 10 per cent. Although part of that rise might be aimed at coping with higher costs, the bulk represents real growth in activity and interest. For example, management time spent on R&D and innovation has risen at 45 per cent of companies in the last three years and 54 per cent of respondents expect it to do so in the next three; only 6 per cent foresee a decline.

According to those surveyed, international oil companies (IOCs) have introduced by far the most breakthrough technologies in the last two years (cited by 46 per cent), followed by exploration and production companies (31 per cent). The need for IOCs and exploration companies to move into new areas and to exploit more difficult-to-access reserves explains their lead in innovation. In the coming two vears, however, respondents expect the advantage of IOCs to diminish, as other companies bring in new technology. In particular, those surveyed see an increasing role for national oil companies (NOCs): two-thirds of those polled expect NOCs to increase their spending on R&D significantly, supporting their drive for greater international growth - and increasingly operating like IOCs.

Still highly conservative

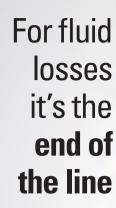
The oil and gas sector, while becoming more eager to adopt change, remains highly conservative. In particular, the new skills required, combined with the risks that new technologies can bring, such as in operational disruption, make the majority of firms reluctant to be the first to adopt substantial innovations.



Instead, 56 per cent of respondents describe themselves as "fast followers", who make changes once others have proved their worth; only one-quarter consider themselves to be "early adopters". Crucially, delayed deployment is a major barrier to progress, slowing the commercialisation of new ideas. In large part, this is due to the difficulties associated with testing in appropriate, real-world conditions. More than one in five (21 per cent) cite this as their biggest headache in dealing with the quality-assurance requirements associated with deployment.

Given the link between innovation and competitive advantage, it is no surprise that those surveyed report that, in the past two years, in-house research has been the most widespread approach to developing innovation (cited by 59 per cent). Although this will continue to be the most common model in the coming two years (51 per cent), companies are looking to spread the costs and reduce the risks of development. In particular, specific joint ventures with external partners are set to become more common. This should lead to more rapid change. While firms that rate their innovation as "highly successful" rely on in-house R&D to a similar extent as their less successful peers, they are also far more likely to partner with others in their quest for success. ■

The 2014 Lloyd's Register Energy Oil and Gas Technology Radar report is available to download at: www.lr.org/technologyradar.







ALPINE SPECIALITY CHEMICALS† Lost Circulation Products and Services form a fast-acting plug that stabilizes the wellbore and stops losses in any fluid, in any formation and every time.

Simple to mix, our products are engineered to perform consistently, regardless of the temperatures encountered or the time spent downhole.

www.alpinemud.com



†Mark of M-I L.L.C



Spearheading the UAE's oil and gas industry

ADNOC continues to lead the way in the UAE, although times are changing, says Martin Clark.

BU DHABI NATIONAL Oil Company (ADNOC) continues to spearhead the oil and gas industry in one of the Middle East's most prolific producer states.

The UAE is OPEC's fourth-largest producer, pumping around 2.85 million barrels per day (bpd), with almost all of this coming from Abu Dhabi itself.

Most of ADNOC's biggest endeavours are in collaboration with well-known overseas partners, both in the upstream segment and across all downstream and midstream areas too, from retail and transportation through to chemicals.

Onshore, and in shallow water areas, where the bulk of the emirate's production comes from, it is the Abu Dhabi Company for Onshore Oil Operations (ADCO) that leads the way.

Created in 1978, this - until recently - paired ADNOC with key foreign shareholders BP, Total, ExxonMobil, Royal Dutch Shell and Portugal's Partex.

The primary challenge is to grow production to meet demand both at home and abroad"

Production from the ADCO joint venture tallies around 1.5mn bpd of Murban grade crude, the UAE's main blend.

But the expiry of this concession in January leaves ADNOC temporarily with a 100 per cent stake on its hands.

It is responsible for a 21,000 sq km concession area that covers six producing fields: Bab. Asab. Bu Hasa. Sahil. Shah and North East Bab (Dabbiya, Rumaitha and Shanayel).

The Bab field was Abu Dhabi's first commercial oil discovery, made in 1960, reflecting more than half a century of successful production.

All change

But the times are changing in Abu Dhabi as the country seeks to enhance the value of its petroleum industry across all areas.

Crucially, that means driving up production numbers - the aim is to boost output to 3.5mn bpd by 2017 - as well as investing in new and advanced technology.

And that all comes at a cost, which, in part, explains why the emirate is now reshuffling the ADCO joint venture.

All of the previous investors, with the exception of Partex, are now courting local officials to retain their place at the top table, but face stiff competition from a host of other international rivals, from Asia. Chinese, Korean and Japanese companies are all vying for a stake in these strategic assets.



Abu Dhabi's Supreme Petroleum Council (SPC) is currently evaluating bids, although the situation is not likely to be resolved or confirmed until 2015, according to the latest industry murmurings.

But ADCO is not Abu Dhabi's only upstream production joint venture, although the others remain intact.

The Zakum Development Company (ZDC) is a partnership between ADNOC, the USA's ExxonMobil and Japan Oil Development Company Limited (JODCO), which works the Upper Zakum, Umm al-Dalkah and Satah offshore fields.

Also offshore, the Abu Dhabi Marine Operating Company (ADMA-OPCO) is another group that operates two major oil fields, Umm

Think globally. Act responsibly.

Sabin's processes for recovering and refining PGMs from spent

catalysts raise environmental protection to an advanced state for safety and regulatory compliance. Your advantage: assured peace of mind, and our promise of maximum value returns from your precious metal-bearing materials.





Platinum • Palladium • Rhodium • Ruthenium • Rhenium • Gold • Silver

Processing facilities and technical service offices around the world

→ ADNOC

Shaif and Zakum, from which crude is transferred to Das Island for processing, storage and export.

Here, ADNOC holds a majority 60 per cent share, while BP, Total and JODCO together hold 40 per cent.

Production plans

For all new and existing investors, as well as ADNOC itself, the primary challenge is to grow production to meet demand both at home and abroad.

Indeed, onshore projects will make a significant contribution to future growth plans.

While a decision still awaits on ADCO,

former partners BP, ExxonMobil, Royal Dutch Shell and Total, are providing technical assistance to maintain progress on any major projects.

Total onshore capacity within the UAE is expected to rise to some 1.8mn bpd by 2017-18 as part of the country's plan to hit 3.5mn bpd.

ADMA-OPCO and ZADCO are also expected to deliver production growth in the coming years, drawing on Abu Dhabi's 98bn barrels of proven oil reserves.

The flagship ZADCO project is looking to increase output from the



Upper Zakum field from 550,000 bpd to 750,000 bpd by 2015. It hopes to maintain this lofty production level for at least 25 years. This is a major technical feat, however, with a series of artificial islands being built specifically to support drilling and production activities, a technique deployed by partner ExxonMobil in other parts of the world.

Indeed, the technology push has become a central theme of ADNOC's production growth strategy.

Driving innovation

Although some of these technologies have been applied in other parts of the world, many are new to the region and - as in the case of the artificial islands - the projected scale of application is unprecedented.

ADNOC's own drilling specialist, the National Drilling Company (NDC), is growing in stature as a result, working alongside the super majors on these and other projects.

It provided the state-of-the art ND66 rig, which was only inaugurated on 12 June, 2014, to assist with the Upper Zakum development.

"The artificial islands concept will significantly reduce life-cycle development costs and enable long-term maximum recovery," said ZADCO executive Ali Hassan al-Marzooqi.

There are plenty of other technological advances to be witnessed too.

ZADCO is also using a technique called Maximum Reservoir Contact (MRC) which offers the opportunity to reduce the required number of new wells and unlock tighter areas in a reservoir.

Gas boost

And that extends into the gas sector too, where Abu Dhabi is likewise prioritising production increases after struggling to meet a surge in domestic energy demand.

It already imports gas from Qatar via the Dolphin pipleine, although it is still obligated to make export shipments from the ADGAS liquefied natural gas (LNG) project, another ADNOC project.



The Shah gas field is on track for full production by end 2014

Exploiting some of the nation's more complex reservoirs is posing a problem, however.

In response, ADNOC has teamed up with a number of joint venture partners to get to grips with some of the abundant sour gas that lies offshore.

These include Al-Hosn Gas, a joint venture with the USA's Occidental Petroleum (Oxy), which is undertaking the gas exploration and development of the Shah field.

The ultra sour gas field is still on track for full production by the end of this year and, once complete, will provide 14.1mn cu/m of gas per day to help meet UAE demand.

In another strategic project, ADNOC also selected Shell as its partner in a 30-year joint venture to develop the Bab sour gas reservoirs

These initiatives are more challenging than conventional fields, not least because of the toxic nature of the sour gas, which requires additional processing before it can be used.

And that all requires more investment and cost.

Due to the extremely sour nature of the gas at the Shah field, for instance, the facility will include the world's largest sulphur recovery units, comprising four identical 2,500 tonnes per day units.

Track record

Despite all this activity on the ground, ADNOC retains its position as one of the region's most reliable energy partners.

Again, in the LNG sector, Abu Dhabi remains steadfast in its gas export supplies in the face of its own domestic shortages, which have affected industry and the local power sector.

ADNOC is exploring other ways to get closer to its customers too, including developing storage in major consumer states in Asia.

India is building underground storage facilities at Visakhapatnam in Andhra Pradesh and Mangalore and Padur in Karnataka, the country's oil minister Dharmendra Pradhan said recently. He added that ADNOC was among those interested in using the sub-surface cavern facilities to store their crude oil.

ADNOC's impeccable reputation is perhaps no better summed up than with the strategic US\$9bn deal signed with the Egyptian General Petroleum Company (EGPC) in September, for the supply of oil products.

Egypt is facing up to a major energy shortage of its own despite being one of Africa's biggest oil and gas producers.

The deal means ADNOC will be supplying approximately twothirds of the country's oil product needs - including diesel, gasoline, heavy fuel and LPG - for one year.

It is a hugely responsible position for the company, essentially underpinning the energy needs of one of the region's great powers at a crucial and difficult time.

As always, no one expects anything else other than for ADNOC to deliver - reliably, safely and consistently, as it has done for decades.

KNOW UL? THINK AGAIN. The challenges and goals you face in today's market look different than they did 10, 5, or even 2 years ago – so does UL. While our focus on the testing, evaluation, and certification of safe equipment for hazardous locations remains unchanged, we continue to invest in ways to meet your needs on a broader level. For instance, by covering IECEx, ATEX, INMETRO, GOST-R and many other global specifications, UL helps eliminate duplicate testing to reduce costs and accelerate time-to-market. Tell us your needs, our portfolio may surprise you. Customer first, safety always. For more information on UL services for HazLoc, please contact Jomy Joseph at M: +966.544289896 / E: Jomy.Joseph@ul.com UL.COM/HAZLOC

Exploring new

production options

The time of 'easy oil' is over for the UAE. Paul Navratil, Middle East energy, utilities and mining leader for PwC, talks to Oil Review about the state of the UAE's oil industry, current challenges to overcome, and making the most of available resources.



HE UAE HAS been producing oil since the 1960s, before the seven emirates were even declared an independent country. Half a century later and, according to the US Energy Information Administration (EIA), the UAE's hydrocarbon economy is responsible for approximately 80 per cent of the government revenues and more than half of the country's goods exports.

The UAE has benefited from an abundance of well-stocked oil reservoirs, particularly in its capital emirate Abu Dhabi. It is ranked in the top 10 countries for proved oil reserves, boasting 97.8bn bbl in 2013, according to the US EIA Oil & Gas Journal, as well as ranking eighth in 2012 in the world's largest crude oil

The country has experienced a relatively easy ride in terms of oil and gas production, but it is clear that the days of 'easy oil' are coming to end, if they have not already. Having previously failed to achieve its production target of three million bpd, the UAE Ministry of Energy has set itself the target of increasing production to 3.5mn bpd

The oil price would need to come down significantly for assets to be put into question"

by 2017. Government officials have announced that this target remains in place despite the recent news of the declining oil prices. Brent crude oil futures, for example, reached a four-year low of US\$87.74 per barrel in October 2014.

In the same month, UAE Ministry of Economy undersecretary Mohammed Ahmed bin Abdul Aziz Al Shehhi revealed that the ministry was confident that falling oil prices would not negatively impact the UAE's gross domestic product. While ministry officials also rejected proposals from the Organisation of the Petroleum Exporting Countries (OPEC), which the UAE has been a member of since 1967, for the group to lower its output target. OPEC, which

> includes 12 oil-exporting member countries from across the Middle East, Africa, and South America, is due to meet in November 2014 to discuss the global issue of falling oil

Sharing the government's assuredness in regards to the UAE, Paul Navratil, Middle East energy, utilities and mining leader for PwC, told Oil Review, "The price needs to come down significantly [...] to get to the

producers, with 2.8mn bpd.

Country Profile



Dubai's real estate sector has experienced a fast pace recovery ((Photo: Jake Brewer)

A significant amount of benefit comes from the application of EOR"

point where the pressure on the [profit] margin is so great that you're actually thinking 'Do I continue operating this field or not because at some point it's going to become uneconomical?""

"The oil price would need to come down significantly for those [assets] to be put into question," he added. "This is simply not the case in the Middle Fast"

However, Navratil stated, "You can't say that people aren't paying attention to it, but by no means is it changing the outlook on the mega projects that are underway. By no means is it changing the outlook on whether companies should develop a field or not."

He explained that one advantage of the state-owned ADNOC controlling the majority of the UAE's oil resources - in partnership with a number of large international oil companies under long-term concessions – is that national oil companies (NOC) do not have any shareholders to answer to, or any investors to supply with quarterly dividends.

"We are feeding a state and a state has much longer time horizons than the average investor does, so there isn't the pressure on a NOC of what the analysts are saving and how the individual stock holder is going to value it. That eases a lot of the pressure," he explained.

Another reason towards explaining the UAE government's confidence in the face of a slowing-down energy industry is the growing importance and value of non-oil industries to the country's economy. In fact, discussing the topic of declining oil prices, the Ministry of Economy undersecretary explained that it is the diversified nature of the UAE's economy that meant the Ministry was not worried about the potential impact of price falls.

The UAE boasts strong progress in the areas of tourism, trade, and hospitality, for example. This is only enhanced and supported by mega projects emerging on the horizon, such as the Expo 2020, which has and will encourage visitors, potential employees and infrastructure investments to the country.

In fact, according to the International Monetary Fund (IMF), overall economic growth in the UAE is estimated to have reached five per cent in 2013. The IMF, however, puts much of this growth down to ongoing public projects in Abu Dhabi and substantial growth in Dubai's services sectors. Furthermore, since the economic crash in 2008, the real estate sector has been rapidly recovering, particularly in Dubai where the IMF estimates that prices in the residential market increased by an average of 30 per cent year-on-year in March 2014.

The same organisation has also forecast strong economic growth for the future of the UAE. It estimates that the country will



→ Country Profile

grow by 4.75 per cent growth in 2014 which, according to the IMF, will be primarily driven by the non-hydrocarbon economy.

Despite the value of its increasingly diversified economy, the UAE still relies massively on its oil and gas assets for the vast majority of its revenue. As well as the falling oil prices, the UAE must take into

account the declining likelihood of any more major reservoir discoveries - recent exploration has not hit upon any significant finds. Furthermore, the UAE's ever-growing population continues to create an increasing demand for energy internally. According to the BP Energy Outlook 2035, domestic oil demand across the Middle East countries is expected to rise by 55 per cent over the next two

Maximising recovery rates

It is clear to all that if the UAE hopes to achieve its US\$3.5mn productivity target by 2017 then the county's oil companies need to look at new ways to maximise the recovery rates of existing fields, namely through enhanced oil recovery (EOR).

"A significant amount of benefit comes from the application of EOR techniques in its various forms to increase the recoverability of its existing reservoirs," Navratil explained.

"There is a significant amount of oil which remains in the ground, because we are at the limits of what conventional production can extract."

"There are two ways of boosting production, one is bringing new assets online, which they're doing, and the other is to increase the amount that they take from existing assets. No company, or certainly no NOC, should lose sight of doing both of those at the

Adopting efficient EOR techniques requires more complex and advanced technology than standard practices. As more progress and developments have been made in oil and gas equipment, EOR has become an increasingly viable option for upstream companies.

Abu Dhabi, evidently recognising the advantages, began channelling investment into EOR in the 1990s. Primarily opting for

When the current reservoirs are so bountiful, it's an easy way to produce oil"

November 2009. Another example is Total Abu Al Bukhoosh, Total's wholly-owned subsidiary operating the Abu Al Bukhoosh field offshore Abu Dhabi, which has also invested in EOR projects.

Although the UAE, and Abu Dhabi in particular, has made some advances into adopting recovery techniques and carrying

out EOR projects, other countries in the Gulf have made a name for themselves and led the EOR wave. But a country's willingness to invest heavily in EOR often boils down to a question of necessity.

As Navratil explained, "You've got places, Oman for example, where it's just the national imperative. They are always seen as the leaders of applying EOR in the region. "Countries, such as Oman and Bahrain where their fields are highly depleted, they don't have a choice, it is the imperative."

"There are a lot of niche players that specialise in EOR," he added. "On an international level you've got a lot of independent or mid-tier companies, which are building their names on the application of specific techniques, whether that's thermal EOR, water, or other forms."

Some professionals argue that, ultimately, the call for EOR has not quite been reached yet in the UAE. There is no doubt, however, that EOR is the inevitable future of the country's oil exploration industry. Rather than asking whether or not to adopt EOR methods, the question that energy companies will currently be asking themselves is when they plan to make the big move into fully embracing EOR techniques. All companies in the UAE will, eventually, return to mature fields in order to take more than the current 30-40 per cent of oil that conventional technology allows them.

"When the current reservoirs are so bountiful, it's an easy way to produce oil." Navratil commented.

He highlighted Norway as an example of an oil-producing company that is fully-invested in EOR. As such, it is now at the point where it is extracting at least 70 per cent of the hydrocarbons that exist in the reservoirs.

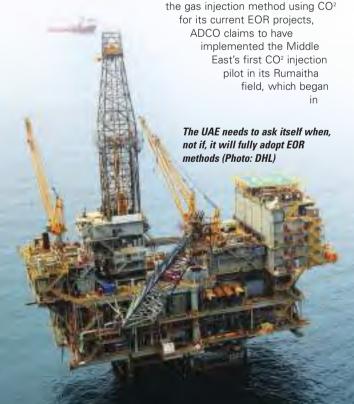
"The discussions are starting to be had [in the UAE] and preliminary studies are starting to happen," he said. "I sense that there hasn't been a collective reckoning that, in fact, they're not happy with 35 per cent and they should be doing more."

"As soon as you make the decision to do it you have committed yourself to a tremendous challenge. The payback and the benefits are enormous, but when you're dealing with so many issues at the same time, it's always hard to embark on the new frontier."

There is no doubt that the UAE's oil and gas industry faces challenges, such as the current decline in oil prices. But rather than posing any sort of real threat to the country's economy, the challenges are making the government and relevant companies sit up and guestion the future of the industry and how they intend to make the most of the plentiful resources available to them. All the while, these companies continue to benefit from the economical

support of the UAE's growing non-hydrogen

markets |



Visit us at ADIPEC Booth #4210 in Hall 4

- 70 ISO 13679 CAL IV tests
- Installed in 70 countries
- Chosen by 200 operators
- 15 million feet installed with Dopeless® technology

Trusted. Tested. True.

For the past ten years, TenarisHydril Blue® connections have proven their worth with capabilities that exceed the highest industry standards and will continue to do so under the forthcoming revision of the API RP 5C5 Testing Protocol. The Blue® connection is one of a kind, offering 100% fully tested pipe body rated seal, excellent overtorque capacity and the versatility to perform in all environments. Its reliability and running efficiency have been proven extensively in the most complex operating conditions around the world. In sum, an easy choice. Learn more about Blue® connections and performance at www.tenaris.com/blue.

Technology that makes the difference.





Selecting the optimum residue upgrading solutions

Euro Petroleum Consultants (EPC) vice-president of business development Stefan Chapman discusses the options available and factors to consider when selecting a residue upgrading solution in the downstream sector.

ESIDUE UPGRADING HAS increasingly been identified as the key solution to meeting growing market demand for cleaner fuels, the gradual substitution to processing heavier feedstock and the falling demand for heavy oil.

For refineries, and particularly those that are processing heavier crudes, there is a simple challenge: how can you raise the overall conversion of the residues of all crudes into the most valuable distillates?

In recent years we have seen refinery complexity increase and, despite the increased capital costs associated with this, there have been to undeniable benefits in terms of flexibility and financial performance.

But how does a refiner go about selecting the optimum residue upgrading configuration?

A key step in the process is to be able to identify the residue upgrading configuration that best fits a particular refinery. To do this it must answer important questions based on factors specific to each refiner and project, including return on investment, the specific product slate desired, refinery location, refinery configuration, target markets, feed and product pricing and type of crudes available.

Other questions that need to be asked include:

- Have the market needs and opportunities been fully researched and
- Is there an outlet for petcoke or anode coke?
- Is power generation an option?
- Is there a possible use of unconverted materials?
- What are the budget constraints?
- How do you best integrate with existing refinery units?

Ideally, these key issues are studied and resolved during the evaluation phase of a project.

There is also the issue of potential extra capital expenditure (CAPEX) associated with residue upgrading technologies, particularly pertinent when funds are limited, or there are other competing options. Most importantly, too, is to look at margins and operating costs, as well as CAPEX.

So what options are open to refiners when looking at residue upgrading technologies? To upgrade heavy and extra-heavy crude oils, there are two known basic technological routes:

- Carbon rejection technology, e.g. Delayed Coker, Visbreaker
- Hydrogen Addition, e.g. H-Oil, LC-Fining.

The criteria in selecting one of these routes as an upgrading option depends on several factors that must be analysed in detail when considering a project of this nature.

The technology of hydrogen addition, for example, produces a



As the complexity of refineries increases it brings greater flexibility and financial performance (Photo: Pontla)

high yield of products and upgraded crudes with a commercial value larger than that of the carbon rejection technology. It requires, however, a larger investment and more natural gas availability to produce the amounts of hydrogen and steam required for these processes.

Conventional residue conversion solutions are well developed and, mostly, operate efficiently within their technical constraints and are licensed by many of the big names in the industry.

Table 1: Present distribution of residue upgrading solutions % Residue upgrading processes installed: Cokina 32 Vishreaking 30 15 Hydroprocessing Catalytic cracking 19 Solvent deasphalting

Delayed coking

As shown in Table 1, delayed coking has, more often than not, been the preferred choice when selecting a residue upgrading technology -



Scomi Oiltools is a leading global product and service provider of:

- Drilling Waste Management Services
- Solids Control Equipment
- Filtration Services
- **Drilling Fluids Solutions**
- Production Enhancement Chemicals

Scomi Oiltools provides innovative and cost-effective solutions to optimise your operational performance, minimise and manage your waste streams and provide for environmental preservation. Scomi products and services are supported by a global network of skilled, technically competent engineering and management

Whether you require individual products or integrated services; we offer a tailored, process-efficient solution to your needs backed by over 60 years of experience to catalyse your business performance.

Scomi Oiltools - Realising Potential.

Scomi Oiltools (Cayman) Ltd Tel: +971 4 883 8236

Email: dubai.sales@ae.scomioiltools.com

www.scomioiltools.com.my

approximately 30 per cent of all residue upgrading units installed are delayed cokers. Its popularity at many refineries stems from the fact that it allows refiners to handle heavier fractions containing impurities.

It is a semi-continuous process based on the alternate use of the drums in filling, coking and emptying cycles. Due to which heavy hydrocarbons with low commercial value, coming mainly from the bottom of atmospheric distillation towers or vacuum columns, are converted into lighter hydrocarbons of higher value and a solid byproduct known as coke, the value of which will depend on its properties (sulphur and metal content). Product yield is in the range of 65 to 70 per cent, with the balance staying in coke form.

Visbreaking

Visbreaking is another carbon rejection technology that is widely known and consists of a thermal cracking process to produce gasolines and other distillates, with a residual product that is visco-reduced (less viscous than the initial load)

A number of companies have been dedicated to developing and commercialising this process, namely UOP, FW, and Shell.

Other options include power generation through processes such as gasification, flexicoking or circulating fluid bed boilers to convert coke to power. This may fit with some regions where power is in demand at a high price.

Flexicoking

Flexicoking is a process developed by ExxonMobil as a modification to fluid coking, adding a step for coke gasifying to produce flexi-gas, a coke gas with a low heating power (80 to 100 BTU per cf), considerably reducing the coke production.

Product yield is similar to that of fluid coking, but coke production is reduced from about 25 per cent to five per cent, converting it into flexigas. The first flexi-coking unit was put in to service in 1976 in Japan.

There are several commercial technologies worldwide that compete with thermal cracking in the barrel bottom conversion of heavy and extra-heavy crudes. All are based on the hydrogen addition in order to increase production and quality of liquid products, as well as reduce coke generation in the process.

These include the ebullated-bed hydrocracking technology licensed by Axens with its H-Oil process and CLG with its LC-Fining process.



Conventional residue conversion solutions are well developed and are licensed by many of the industry's big names (Photo: Rongy Benjamin)

The key for owners and producers is to possess enough knowledge to know which questions to ask"

These processes use ebullated-bed hydrocracking technology to process heavy feedstock residues (atmospheric and vacuum residue) with high metals, sulfur, nitrogen, asphaltenes and solid contents.

These processes have seen continuous development over the last 50 years and can now achieve levels of conversion in the range of 50 to 85 per cent, depending on the feedstock. These processes are commercially proven.

Slurry hydrocracking

There is presently a big push for slurry hydrocracking, with leading licensors including KBR, ENI, UOP, Chevron and Axens/PDVSA. One reason for the increased interest in this type of residue upgrading technology is the claim for much higher levels of conversion, i.e. greater than 90 per cent.

Today, however, there is relatively little 'real' commercial experience of large operating units so an in-depth due diligence is strongly recommended before proceeding down this route.

Economics look attractive, but, as with all first experiences with new technologies, there are some potential risks with commercial operations until all the potential initial operating problems have been ironed out.

Table 2: Leading Licensors	
Process	Experience
VCC process	Licensed in China and Russia
Uniflex process	Licensed in Pakistan
ENI EST process	EST Unit started up at
	Sanazzaro Refinery
Chevron VRSH process	Major development programs
	in progress
Axens/PDVSA HDH plus process	Major development programs
	in progress
	Process VCC process Uniflex process EST process VRSH process

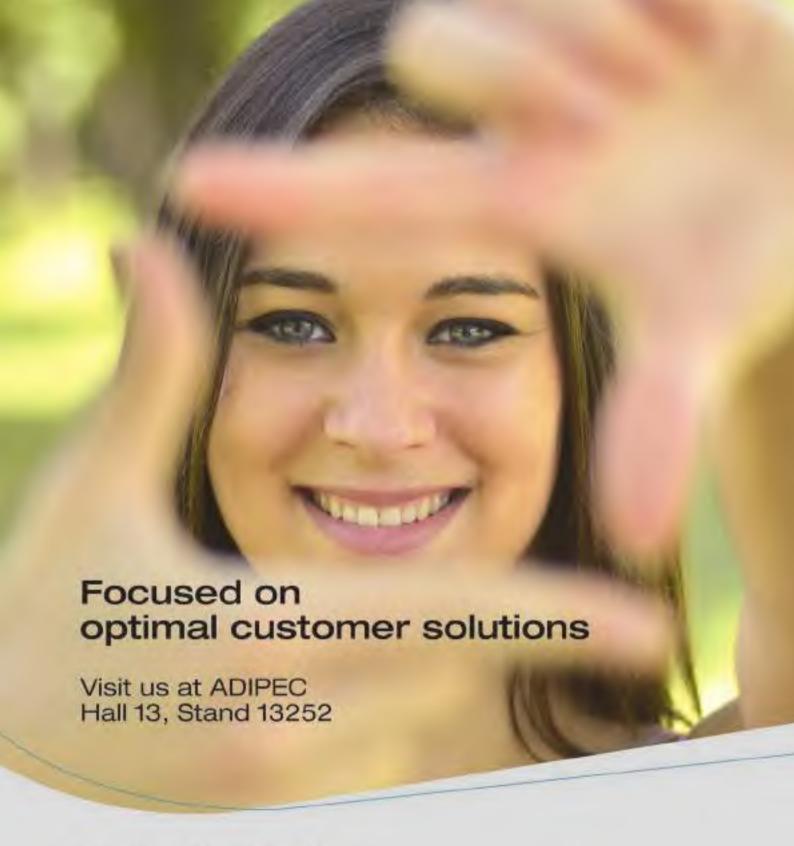
Ultimately, what are required are residue conversion solutions that use proven technologies to maximise conversion to distillates, eliminate any potential project risks and which facilitate project financing.

The key for owners and producers is to possess enough knowledge to know which questions to ask. You can then effectively use the specialists from the technology providers to supply the answers. One option is to develop some well-informed and knowledgeable in-house capability to be able to manage the various parties involved.

An alternative is to engage a specialist consultant to act as your 'client project engineer' (CPE) and act as an integral part of your project team to support you in technology selection and in managing the interfaces with technology providers and EPCs throughout the life of the project.

There are several companies with experienced and capable personnel and which can act as a highly effective CPE.

There is a strong need for many refiners to increase conversion. Furthermore, there is a need for refiners to consider all options to fit the specific requirements, evaluate all risks, select the best options for the situation, then implement the project using the project implementation strategy that will ensure delivery on time and meet all quality requirements within the initial budget.



voestalpine Böhler Welding voestalpine Tubulars voestalpine Grobblech Böhler Special Steels



UAE accounts for 26 per cent of total chemical workforce in the Gulf region

PETROCHEMICAL COMPANIES IN the UAE employed 38,100 people in 2013, according to new data from the Gulf Petrochemicals and Chemicals Association (GPCA). The country is now the GCC's second-largest petrochemicals hubs in terms of employment, accounting for 26 per cent of the Gulf's total chemical workforce.

The UAE currently manufactures an estimated US\$11bn worth of chemical products, including plastic and fertilisers.

Abdulwahab Al- Sadoun, secretary general of GPCA, said, "The UAE's petrochemical industry has steadily built a solid base of highly skilled human capital over the last few years. While other markets in the region may have access to a larger pool of financial or human resources, the UAE has managed to create some of the highest value products in the region, earning valuable revenues for the country's economy."

The GPCA has estimated that the 'multiplier effect' for the chemicals industry currently sits at the ratio 1:3, meaning that every 10 jobs created in the sector eventually leads to an additional 30 indirect employment opportunities in the petrochemicals supply chain.

For the UAE, direct employment, along with services that support the petrochemicals industry, led to the creation of an estimated 114,300 indirect jobs in 2013.

The regional chemical industry as a whole, meanwhile, was responsible for the direct employment of 148,900 people and indirectly created an estimated 446,800 additional jobs. Petrochemicals output from the Gulf produced up to US\$102bn worth of products, as per GPCA estimates.

"Petrochemicals is evolving into an industry that touches nearly every sector of the GCC economy, from technology, equipment manufacturing,



The GCC's petrochemical industry's capacity has grown consistently at 9.5 per cent year on year since 2008 and currently produces 140.5mn tonnes of products

construction and agriculture to retail and trade. On a global level, the GCC can help meet rising chemical demand, and, in the process, create new, medium- and high-skilled employment for talented GCC nationals" Al-Sadoun added.

Rittal – The System.

Faster - better - everywhere.



Embracing Standards... Empowering the Industry.









A perfectly coordinated platform with vast product range covering Industrial/Electrical Enclosures, System Climate Control and Power Distribution suitable for Oil & Gas, Energy, Industries, Construction etc. Ri4Power Form 2-4: New structured solution for reliable low-voltage switchgear system compatible with international players (breakers).

Experience the Rittal 'Advantage' with our overall expertise as a systems supplier for the industry & building services.

For enquiries, mail to : info@rittal-middle-east.com Rittal Middle East FZE

Post Box 17599, Dubai, UAE | Tel: +971-4-3416855

www.rittal-middle-east.com

Visit us at Hall 5 Stand D 10



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



MARITIME

PUT THE FUTURE OF YOUR FLEET IN SAFE HANDS

As your classification partner, our extensive maritime expertise, technical knowledge and regulatory foresight will help to ensure that your fleet meets the demands of the future. Our aim is safety, compliance and optimal operational performance throughout the lifetime of your

vessels, benefitting your business and the maritime industry as a whole. With DNV GL your fleet is in safe hands. Can you afford anything else?

Learn more at dnvgl.com/maritime

SAFER, SMARTER, GREENER

DNV-GL

Saudi Arabian firm to invest in South Korean PDH plant

SAUDI ARABIAN PETROCHEMICAL firm Advanced will collaborate with SK Gas in South Korea to invest in propane dehydrogenation (PDH) plant for the production of propylene in the Asian country.

The company has already approved the equity investment of 35 per cent in PDH plant with SK Gas, for the production of propylene in South Korea through its subsidiary Advanced Global Investment Company (AGIC), which is 95 per cent owned by Advanced.

The total cost of the project is expected to be approximately US\$1bn and the project will be financed 40 per cent by equity and 60 per cent debt. The project has commenced the



The total cost of the project is expected to be approximately US\$1bn

construction activities and it is scheduled to start up in the first half of 2016, with a nameplate capacity of 600,000 metric tonnes per annum.

The company has already announced plans to increase production capacity of its polypropylene plant in Jubail to more than 500,000 metric tonnes per annum (mtpa), from the current 450,000 mtpa, by mid-2105, *The Saudi Gazette* reported. Advanced has begun sourcing additional feedstock propylene to run its PP plant with the expanded capacity. The company had inked an agreement with Jubail-based Satorp — the joint venture between Saudi Aramco and Total Refining and Petrochemicals — in August 2013 for supplies of 50,000 metric tonnes/year of propylene.

Egyptian petrochemical firm plans to boost revenues by 18 per cent

EGYPT'S SIDI KERIR Petrochemicals expects to increase its revenues by about 18 per cent over the next two and half years.

The state-run company, which is the largest producer of petrochemicals in the country, hopes to increase its output capacity of polyethylene by 40,000 to 50,000 tonnes a year, chairman Ahmed Helmi told *Reuters*. Its annual production capacity is currently 225,000 tonnes of polyethylene and 300,000 tonnes of ethylene. Egypt needs around 500,000 tonnes of ethylene a year.

The cost of initial investment will be US\$75mn, according to the chairman. He added the cost of expanding production would be 'self-funded'.

Egypt also plans to invest US\$14.5bn in developing its refining and petrochemicals sectors over the next five years as part of efforts to overcome an energy crisis that has led to near-daily power cuts and hit company profits.

Sidi Kerir is one of three state-run petrochemical companies participating in a joint venture to build an ethylene factory due to start production in 2015.

The factory could save Egypt about US\$500mn on annual imports and allow it to begin exporting petrochemicals to Western Europe and Africa, its chairman said.





Reliable Crude Oil Vapor Recovery. Guaranteed.

Over 5 million cubic meters. More than 30 million barrels. Estimates say that's how much crude oil is lost each year through vapor generated from loading and storage operations. That's not just product, it's money and pollutants. But we've developed a system that can cost-effectively recover vapor from crude and other light semi-refined products. Reducing emissions. Eliminating NOx. And recapturing cash.

Want to put that innovation to work for you? Call us.









International Headquarters John Zink Company, LLC 11920 East Apache Street Tulsa, Oklahoma 74116 United States

T: +1.918.234.1800

John Zink International Luxembourg S.àr.l. Zone Industrielle 'Riedgen' L-3401 Dudelange, Luxembourg

T: +352.518991

johnzink ham worthy.com

















Addressing the region's HR challenges

Oil Review sought the views of Mohammad Ali Khan, Senior Competency Specialist, Capability Development Programs at Zakum Development Company (ZADCO) on some of the critical HR issues facing the oil and gas industry today.

What do you think are the most critical HR challenges facing the oil and gas industry today?

Khan: The oil and gas industry is a global industry with a global workforce, utilising cutting edge advanced technology and innovative solutions for a variety of complex problems in all segments (upstream, midstream and downstream). The industry faces two critical HR challenges in particular the scarcity of talent and employee disengagement. These two challenges are serious, because of their potential to impede growth and financial performance, and to tarnish the reputation of the industry, due to inadvertent errors related to safety aspects.

Past incidents should be a reminder to us to remain vigilant (though not panic). It takes years to build a reputation, and minutes to destroy it. The good news is that the industry appears to be aware of these challenges. Whether adequate measures are being taken to proactively address these challenges is a big guestion mark.

What do you think are the root causes of scarcity of talent, and how do you address the challenges?

Khan: In the past, the oil and gas industry did not market itself to young people entering university in the way the electronics and IT industries did. As a result, there is a global shortage of talented graduates in oil and gasrelated disciplines. The industry's response is to address the issue of talent scarcity mainly by poaching talent, which causes a talent war and drives up remuneration, but does not necessarily increase the global talent pool and intellectual capital. For example, more than

The industry's response is to address the issue of talent scarcity mainly by poaching talent"



Mohammad Ali Khan

5,000 vacancies are currently listed on one of the oil and gas recruitment websites, mostly for drilling, oilfield services, geosciences, petroleum and other engineering disciplines.

The effective, long-term solution is to invest in the development of talent rather than relying on poaching it. This can be achieved by a two-pronged approach, i.e. by increasing the size of the talent pool of graduates relevant to the oil industry, and by accelerating the development of the current talent pool within the industry. Joint, collaborative efforts by the industry, as well as teaching/training institutions and HR consulting firms are required to address this issue of talent scarcity.

What do you mean by employee disengagement, and how do you ensure employee engagement?

Khan: Employee disengagement means emotional disconnection, i.e. lack of motivation and emotional commitment by

employees. As a result, minimum efforts are made by employees towards meeting their work responsibilities, and not enough discretionary efforts are made to serve with a smile or dedication. Put simply, disengaged employees use their body and brain to accomplish the assigned tasks, but not their heart and soul. As a result, the quality of work and productivity are not at their best.

Disengagement primarily reflects poor leadership and lack of trust between managers and subordinates. Employee disengagement can also occur if there is a perception of an internal or external inequity of compensation or rewards, or lack of competency development and career growth opportunities. Disengaged employees have a greater tendency to leave their employers. It is believed that about half of the people who leave their organisations do so due to their immediate supervisors or managers.

Therefore, the solution is to enhance the leadership skills of managers, to enhance the competencies of all employees, and to create robust HR systems for compensation, performance management and rewards.

What is the role of competency frameworks in developing a skilled and competent workforce, and what factors are to be considered when designing such frameworks?

Khan: Job descriptions provide an overview of task functions, roles and responsibilities, scope and limit of authority, and management expectations of work timing, scope, place, etc. The competency framework highlights what it takes to effectively deliver such responsibilities. For example, what skills or competencies are required, what performance standards are needed for each skill to enable success in the role, and what options can be utilised to develop such competencies. Such frameworks provide a strong foundation for developing a skilled and competent workforce, similar to laying the foundations for a longlasting and strong building. Having such a



For hazardous applications in potentially explosive gas and dust atmospheres

Digital Manometers

Intrinsically safe manometers for industrial applications

Pressure Transmitters

Pressure transmitters with flameproof enclosure

Intrinsically safe pressure transmitters for industrial applications and the mining industry

www.keller-druck.com











framework in place makes it possible to conduct an objective, baseline competency assessment of each employee, and devise individualised personal development plans to close any identified gaps. Thus it accelerates employee development. Such frameworks serve other purposes as well, for example, to assist in the identification of the training needs of the company, and in the internal search of the talent pool to match specific business requirements.

In designing competency frameworks, it is important to keep an eve on the ball, i.e. consider whether the employee will succeed in the role if he or she has achieved the identified competencies and has reached the specified performance standards as stated in the competency framework. It means that the competency framework must have the right mix of soft skills, discipline relevant, and jobspecific skills, to ensure that the employee has gained the right knowledge, skills and attitude for the target position. The competency statements should describe observable behaviours or evidence-based performance criteria to enable an objective assessment. Keeping the employee development perspective in mind, the framework should include not only the terminal competencies, but also key enabler competencies.

What other measures do you think should be taken by oil and gas companies to address skill gaps and enable their employees to achieve their maximum notential?

Khan: Induction programmes for new employees, on the job development, coaching

Such frameworks provide a strong foundation for developing a skilled and competent workforce"

and mentoring, attachments, job rotation and stretch assignments are major tools for effective development. The right training courses at the right stage of development are very helpful, when the employee is given an opportunity to practice newly acquired knowledge and skills, soon after the training. Last but not least, e-learning and performance support tools are also helpful if the contents are engaging and include formative and summative assessments.

How can succession planning help to ensure business continuity? What strategies and measures can be employed to identify and develop future leaders?

Khan: Succession planning entails proactive planning to ensure that the qualified candidates are available to fill any vacant key and critical position due to planned retirement, resignation or other unforeseen circumstances. It involves identifying the critical and key positions, identifying the matching talent pool for such positions, developing all candidates in the talent pool, and estimating their readiness level (as backup candidate, bench strength or talent pipeline).

One size does not fit all, and each

company needs to develop strategies to identify and develop future leaders based on its own strategic direction, core values and business challenges. Some approaches, which appear to work well in the industry under normal situations, are:

- Select candidates based on their performance (track record), their observed or assessed potential, and an alignment of their competencies with target positions.
- Identify more than one candidate for a key position and provide them with equal opportunities for development, but do not guarantee equal outcomes and do not make any promises (i.e. manage expectations).
- Develop leadership skills, utilising competency based leadership frameworks, built around the company mission, vision, core values and strategic direction. Utilise competency development tools and methodologies as outlined earlier, as well as the outcomes from psychometric assessments and 360 degrees feedback.

Mohammad Ali Khan is Senior Competency Specialist, Capability Development Programs at Zakum Development Company (ZADCO) Abu Dhabi. He has been with the company for the past 12 years, with previous roles including Learning & Development Advisor, and Senior Standards & Career Development Advisor. Khan will be speaking at the HR Forum: Oil & Gas to be held in Dubai from 23-25 November 2014 (www.hrforumoilandgas.com).



Jubail Energy Services Company (JESCO) with the most modern state-of-the-art technology produces OCTG and Line pipe carbon steel seamless pipes with diameters ranging from 5 ½" up to 16" with annual capacity of 400,000 MT.

For Regional and International Sales: sales@jesco.com.sa



Hiring remains sluggish in the Middle East

THE GLOBAL JOB market has weakened after a flurry of hiring earlier in the year, according to the Hays Q3 Oil and Gas Global Job Index. Global economic weakness, excessive supply versus demand, regulatory uncertainty, government policy changes and civil unrest have all negatively impacted hiring in key markets, John Faraguna, Global Managing Director of Hays Oil & Gas, said, "The decrease in the price of oil coupled with shifting political landscapes in key oil and gas areas are curtailing hiring plans. Conversely, US unconventional activity continues apace, Africa's economy continues to grow, the reform in Mexico indicates future investment in the oil and gas industry and the shale gas market in the UK is predicted to rise significantly. With such contrasting markets, we expect to see this levelling of the global Job Index to continue through to the end of 2014." In the Middle East, hiring has been comparatively

Maersk Oil Roundtable debates the talent shortage

THE YOUTH OF the United Arab Emirates have a critical role to play to ensure the country develops and maintains the national talent required to sustain the country's oil production through the 21st century, a group of experts agreed at a Roundtable debate hosted by Maersk Oil in Abu Dhabi on 26 October.

The global energy industry is facing a talent shortage crisis with nearly half of all petroleum engineers expected to reach retirement age before 2030, making it vital for the next generation of young people growing up in oil-rich countries like the UAE to be attracted into the industry to become future engineers.

"The ability to attract the required talent is a number one priority and challenge facing the energy industry today, both in the UAE and around the world," said Richard Doidge, Managing Director, Maersk Oil Middle East. "Not only do companies need to fill roles in petroleum engineering, the industry also needs to attract men and women from a diversity of disciplines, such as geology, mathematics, IT and analytics

to drive innovation in future technologies," he said.

Maersk Oil hosted a range of national stakeholders from industry, academia and government to discuss which policies are required to tackle the talent shortage, with participants including Emirates Foundation, GASCO, the Abu Dhabi Centre for Technical & Vocational Education & Training and The Petroleum Institute.

Developing local talent, including women, is one of the ways in which the global industry can help to mitigate the pending talent shortage, the Maersk Oil Roundtable of experts agreed. Today the majority of new university students entering science and engineering programmes in the Gulf are young women. However, females still represent a small percentage of the industry's total workforce.

Technological advances can potentially help to plug the widening skills gap, while at the same time attracting the next generation of young professionals to an increasingly tech-savvy industry, the Roundtable agreed.

Rotary Tables

sluggish despite strong business activity,

according to Hays. This is a response to the

politically charged landscape and civil unrest.

Sizes: 17 1/2 to 60 1/2

Drive Options: DC / AC / Hydraulic Drive

Features:

- Triple Labyrinth to keep mud out
- Heat Treated Spiral Bevel Gears
- Heavy Duty Bearings for Extended Life

Manufactured to API 7K





www.americanblock.com



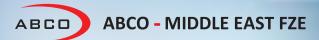
Rotary Swivels

Size: 150 Ton to 750 Ton

Features:

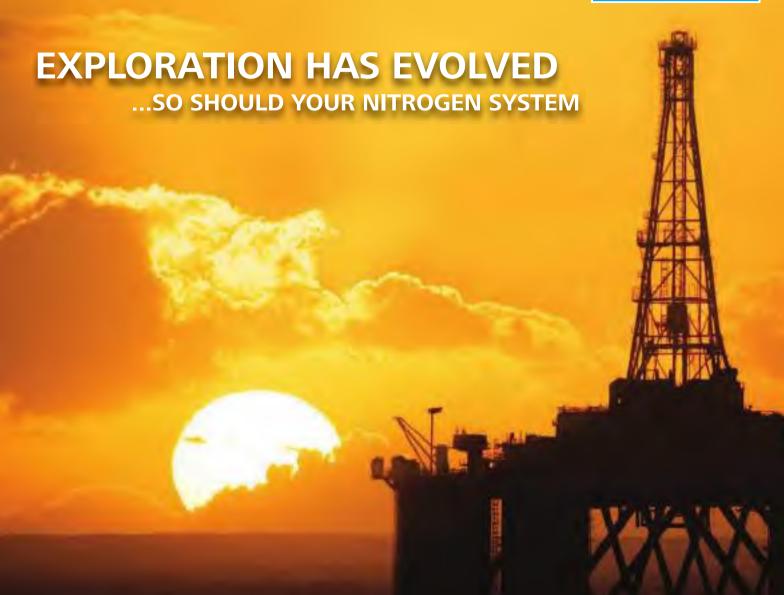
- One Piece Forged Alloy Bail
- Easily Changeable Wash-pipe
- Heavy Duty Bearings For Extended Life

Available With Saver Sub Manufactured to API 8C



P.O.Box 17235, Jebel Ali, Dubai, U.A.E. Tel: +971 4 8806535, Fax: +971 4 8806536 E-mail: abco_me@eim.ae







OFFSHORE SOLUTIONS

[FROM THE HIGH PRESSURE EXPERTS]

BAUER has been the world's leading manufacturer of high pressure compressors and integrated compression systems for industrial offshore applications as well as breathing air, for over 65 years. We've worked for many years to **evolve** our compressors and nitrogen generation systems to meet the ever rising costs and increased safety requirements for offshore operations. Our systems are designed with offshore applications in mind, safely delivering consistent purity at higher capacities than ever before.

BAUER understands that reliability and optimal performance are extremely critical for drilling operations. **Evolve with us.**

Basra Oil and Gas

Date: 4th-7th December 2014

Venue: Basra International Fair Ground





HE FIFTH EDITION of the Basra Oil & Gas Exhibition and Conference will look to provide a much-needed boost to the Iraqi economy when it returns in December, providing an interactive business platform for senior-level decisionmaking buyers, investors and service providers to network with hundreds of local and international industry professionals.

Since the first edition of the exhibition took place in 2010, the show has grown into one of the largest of its kind in Irag, with Basra's reputation as 'Irag's oil capital' making it the ideal location to host oil and gas professionals from across the industry to build their business networks and develop their knowledge of exploration and production opportunities in the country.

On hand at the exhibition with be information on the latest technologies, solutions and products available to customers working in the country.

The supporting conference will provide delegates with the opportunity to hear keynote speeches from officials at state companies and government ministries, as well as senior level managers from both the international and local oil and gas industry, all offering information on their current operations in Iraq.

Basra Oil & Gas has official support from Irag's Ministry of Oil, while the European Association of Geoscientists and Engineers (EAGE) has been appointed as the official technical programme coordinator for the event. EAGE is a professional association for geoscientists and engineers, with close to 17,000 member. Based in the Netherlands and with local offices in Houston, Moscow, Dubai, Kuala Lumpur and Curação, EAGE organises conferences, exhibitions and workshops, as well as

printing industry publications, organising educational programmes and providing recruitment services.

This year's event will also be supported by two gold sponsors in GE Oil & Gas and SKA Energy, while the USAID-supported Iraq Opportunities Project, which seeks to connect Iragi businesses with qualified workers, has been named as Internet Cafe Sponsor

The Technical Committee for Basra Oil & Gas 2014 will comprise a host of industry



and government officials, including representatives from Irag's Ministry of Oil, South Oil Company, Missan Oil Company, BP, PetroChina, ExxonMobil, Emerson and Taga Global.

Positive business in Iraq

Despite of recent turmoil in Iraq, which led Brent prices to rise to US\$116 bbl earlier this year, the market has been recovering of late and, according to the latest International Energy Agency Oil Market Report, OPEC crude oil output surged to a 13-month high in September 2014, led by higher Iraqi flows and Libya's continued recovery. Crude oil production throughout OPEC, of which Iraq is a key member, rose 415,000 bpd from August 2014 to 30,66mn bpd.



Visitors on the exhibition floor at the 2013 edition of Basra Oil & Gas

OPEC's Annual Statistical Bulletin 2014 placed the value of Iraqi petroleum exports at US\$89.402mn, while the country's proven crude oil reserves total 144,211mn barrels and proven natural gas reserves of 3,158bn cubic metres.

Iraq is home to an extensive pipeline network, internally built for crude oil and raw gas feeding refineries and gas processing plants. To handle all oil and gas fields target production rates, much of the existing infrastructures will need to be rehabilitated and new structures built to support the network inside Iraq, making the industry attractive to outside investment. With this in mind, Basra Oil & Gas remains a key platform for those companies looking to break into the Iraqi oil and gas industry, as well as for those keen to reestablish business relationships in the country.

Other positive news to come out of the Iraqi oil and gas industry in recent months includes Russian oil firm Lukoil's announcement that it expects to increase production at its West Qurna-2 oil project in Iraq to 400,000 bpd by the end of 2014 or the beginning 2015.

"Current production at the field exceeds 300,000 bpd and we are expecting it to increase to 400,000 bpd by the end of this year or beginning of the next year," said Fedor Krimklin, a spokesperson of Lukoil Overseas, the operator of Lukoil's international upstream projects, which started production of 120,000 bpd at West Qurna-2 in March 2014

"In recent months, the company sent several carriers to the southern Iraqi port of Basra to receive buy-back oil for delivery to its customers in Europe," Krimklin added.

Meanwhile, in October 2014, Petrofac's Offshore Projects and Operations confirmed it had been awarded a contract to provide general construction management services to BP Iraq NV at the Rumaila field near Basra.

The oilfield service provider will provide general construction management services to BP and its partners on the field for a threeyear period, with an option to extend the contract for a further two years, giving the deal a potential value of up to US\$500mn. ■

Basra Oil & Gas will take place at Basra International Fair Ground from 4-7 December 2014. To find out more about the event, please visit: www.basraoilgas.com

YOU SERVE THE WORLD WITH OIL & GAS -WE SERVE YOUR INDUSTRY WITH **SPECIAL STEELS**

- **BGH-THE OIL AND GAS STEEL MILL**
- > Duplex
- Nickel Alloys
- > Stainless > Special Alloys

Size range from 0.25" to 35" from stock!



Reliability in special steel



BGH Edelstahlwerke GmbH Industriestrasse 12

D-57076 Siegen E-Mail: oilandgas@bgh.de www.bgh.de

Oil Review sat down with four leading professionals from the Middle East's compressor industry to discuss trends within their sector and their views on markets throughout the region.

Compressor experts air their views

What trends within the compressor industry have you been excited about recently, and what can you tell us about innovation within the sector?

Briden: We are always looking to make our products as efficient as possible with respect to energy consumption. A few years ago, in this region nobody was concerned with energy consumption as they were primarily concerned with cost. Reliability and energy consumption have, however, become more of a concern, with our customers becoming more aware of what the machines will do once they are plugged in, and what their operation means to the environment and their bottom line.

Fountain: In terms of compressor design and technology, there is very little we can do to make it any more modern, as the basic principle of how it works has not changed. But I agree with what Carl [Briden] was saying about customers becoming more perceptive and demanding in terms of the total life cycle of a machine, which is why we are looking at after-market packages as a way of enticing customers. In this regard, we are trying to find innovative ways of bringing down maintenance costs and locking in customers with warranty programmes.

In our field, we consider ourselves to be the Rolls Royce of compressors and if the customer does not want a high-quality product, we do not have a second line to serve them with.

Fenwick: If we look at advanced countries like the UAE, there is still a compromise on cost and manufacturers are looking towards low-cost countries in Asia to manufacture their products. This puts a lot of pressure on companies like ours to look in that direction and consider whether to join them or continue to behave as a premium manufacturer from Europe.

Fyfe: The industry is dominated by a small number of brands who have been leading the sector. There are four or five names that are truly known as quality global brands.

I think what has changed within the industry is the consolidation of certain brands under one umbrella. Competitors are now looking towards the downstream



Oil Review's Compressor Industry Round Table took place at the Jebel Ali Recreational Club in Dubai

industry, so not just compressors, but also related equipment. Major brands have been bringing downstream equipment into their own stable and the consolidation of these businesses is leading the market to be less fragmented from a manufacturing standpoint.

I don't think that the fundamental technology is changing and if you look through industry catalogues almost everybody has oil-free compressors and oillubricating compressors. From an end users perspective, the question remains on how much these companies care about the products once installation is over.

How important is the Saudi Arabian market to your business and what are your thoughts on the quality of the distribution network within the Kingdom?

Fountain: For us, in the region we cover, Saudi Arabia is the biggest market we are responsible for representing about 50 per cent of our business. Much of the equipment we sell in Saudi Arabia is related to drilling activity in the oil and gas business, and every new hole drilled in the ground or at sea requires one or two compressors.

Saudi Arabia's oil business is driven and controlled by Saudi Aramco, who plans ahead three years in advance. With that in

The participants

Carl Briden, general manager, Kaeser Kompressoren FZE

David Fenwick, regional sales manager CompAir Middle East

Colin Fountain, managing director, Bauer Kompressoren GCC FZE

John Fyfe, director, Rite Networks

mind, we see 2015 continuing to grow, while we expect 2016-2017 to plateau a little bit in terms of exploration and drilling opportunities. Having said that, we plan to set up a branch in Saudi Arabia next year to serve our existing customers, as it's becoming more difficult to service and support customers from our base in Dubai.

Briden: Saudi Arabia offers the biggest potential for sure, and having the right partners with well-educated engineers is key to being successful there. In the past we used to train our partners workforce in Germany, but now we have a facility in Dubai that makes it easier and more cost effective. Our partners had to send people away for long periods to Germany so having

Technology ←

a regional facility makes for more convenient to train our respective Saudi Arabian partners' engineers.

Fyfe: I'm no longer working on the manufacturing side, but for me the right distribution network is hugely important in Saudi Arabia. When I was with a manufacturer Aramco was a huge part of that market, and to get into Aramco you needed your product to be approved and a distributor authorised by Aramco. Then you had to have a contact at Aramco who could put your name forward. I think the Saudi market is dominated by two or three principal companies, with Aramco obviously on the oil and gas side. The market appears relatively static and has not changed that much in recent years.

Is Qatar a hotbed of opportunity for the compressor industry as the country gearing up to host the 2022 FIFA World Cup?

Fenwick: We have had a few relatively small experiences working with Qatar Petroleum (QP), but in general Qatar's domestic sector is relatively limited for us. There are opportunities in construction, but our business has remained relatively unaffected by the World Cup hype, and the market seems to be pretty much the same as it was three or four years ago.

Briden: Despite everyone raising the World Cup flag, activities in Qatar are still a little slow to develop. QP is the biggest customer in this country and dominates the market from an oil and gas perspective, but from an industrial point of view the market is smaller compared to neighbouring countries. We are looking forward to infrastructure projects that look set to come on stream in the short to medium term and believe with the support of our local partner in Doha we will take advantage of these situations.

Fyfe: Qatar is not an easy place to do business. One of the biggest hurdles is presented by the paperwork required to get products into the country through customs and the rules seem to change every six months. In Qatar, you have a country in the region that probably has business to be done, but its not easy to get access to that business in my experience.

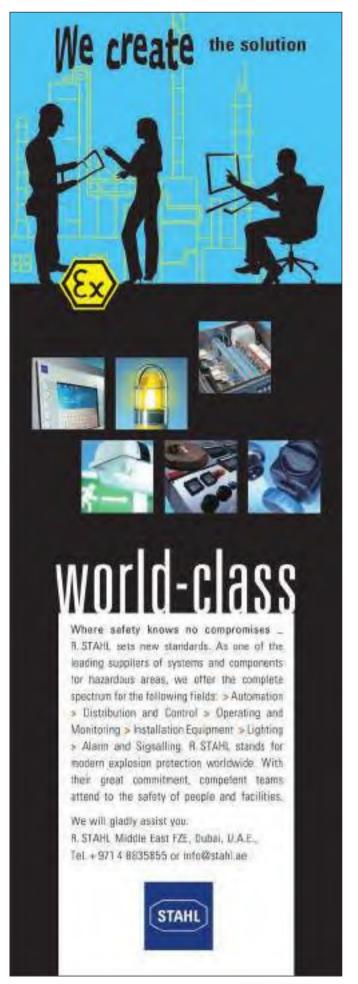
In spite of recent events, does Iraq still offer future potential for the compressor market?

Fenwick: In 2013, we participated for the first time in the Basra Oil & Gas exhibition and the people we met there said it was one of the best shows they had attended in Iraq in terms of quality and enquiries. Having attended the show, we ended up appointing two or three dealers in the country for various products from within our product range and we started this year with a number of good orders.

Unfortunately, it is no longer the Iraq that we know it as. There is the Kurdistan Region of Iraq, which we thought would remain unaffected, but that too has now been embroiled in the current ongoing situation within the country.

Fountain: If you had asked me six months ago, I would have said Iraq was our number two priority after Saudi Arabia. We were really starting to make some headway there – we had appointed a new dealer, we were making a number of deals and were seeing some good enquiries, but many of the people we were working with have pulled their staff out of the country and projects we were working on have now been shelved. Iraq went from being our number two priority to being our biggest headache in the space of two months. Potentially, it could be a massive market, but what happened a few years ago in Libya left about two million barrels of crude per day missing from the global market. Saudi Arabia picked up some of it and Iraq was picking up the rest, and every one million barrels of oil means compressors to us. We were really beginning to be encouraged by Iraq and it was on the backburner literally overnight.

To read the full version of this article, please visit www.oilreview.me



Oil spill events reviewed

Influenced by news coverage and increased public sensitivity to perceived risks, the industry is fighting back by putting all the issues on the table.

REVENT, PREPARE, RESPOND, restore" was the theme of this year's largest international get-together on oil spill prevention and control. The 2014 International Oil Spill Conference (IOSC) was held in Savannah, Georgia, in May as part of a three-year regional cycle that includes Interspill (2015 details below) and Spillcon.

IOSC 2014

As IOSC 2014 conference chairman Peter Velez commented, "In the wake of the 2010 Deepwater Horizon incident, we find ourselves at an unprecedented and exciting moment in oil spill preparedness and response...One of the central goals of the IOSC is to engage at this critical moment in history to bring about a promising future for the energy industry, our partners in government agencies and, most importantly, those who rely on us to meet these challenges."

This year's keynote address was given by Pulitzer-winning Daniel Yergin of The Quest (2011) fame. The four-day technical and shortcourse programme was still viewable at www.iosc/org in October, providing an excellent summary of the current issues faced by the industry worldwide.

And IOSC Proceedings, published since 1969, can be obtained in various forms by contacting iosc@ourtesyassoc.com. This invaluable archive constitutes a complete record of the changing priorities of a fast-growing activity, orientated towards American issues of course.

Interspill

Next in the three-year cycle of major information-sharing events will be the 2015 edition of the Interspill conference, which rotates around Europe and is due to be held in Amsterdam from 24-26 March next. Focusing on an area extending beyond the MENA region, Interspill provides a regular platform for the industry, academic community and government officials to meet and discuss global issues.

More than 75 companies and institutions will be taking part in the associated trade exhibition, many of them coming from far beyond Europe's shores.

...we find ourselves at an unprecedented and exciting moment in oil spill preparedness and response"

As at IOSC, spill preparedness and response will be the main themes, specifically as these apply to E&P operators and shippers alike. In addition to a series of CEDRE-run Science Workshops and a special Eurospill Association Spill Industry Seminar, the parallel conference streams will cover:

Multi-agency response; dealing with the often differing priorities of what are described as "multiple actors and agencies"



- Stakeholder engagement; issues and best practice in the age of social media and 24-hour news coverage
- Inland issues; latest developments in inland spill preparedness and response, as dealt with across the Atlantic by the EPA and by national governments within the EU
- Remote sensing; to help delegates make informed decisions about the use of the many earth-observation and modelling tools and technologies that are now "being developed at an exponential rate"
- Holistic response; how to manage and choose between multiple prepare-and-respond strategies
- Future risks and requirements; an analysis of the abundant new legislation that has been emerging recently, which impacts on the industry's "licence to operate". New risk profiles are emerging for shipping, exploration and other O&G operations too
- Emerging technologies and strategies; "There are a number of emergent strategies and tools or techniques that have the potential to change the way we work".

A programme of short training courses will be held on the day before the conference formally opens. These will include: Oil spill fundamentals; Aspects of salvage and surveillance; Correct use of dispersants; and Planning; and Compensation/claim issues.

Spillcon

Asian/Pacific as well as broader worldwide issues will be focused on in Perth, Western Australia, from 2-6 May 2016.

Other forthcoming conferences will include UKSPILL 2015, a brand-new North Sea-focused event to be held near Birmingham on 3 February. And the whole cycle renews itself with the next IOSC, which will take place at Long Beach, California, from 15-18 May 2017. ■

For more information on next year's key event visit www.interspill2015.com or call +44 845 625 9890 (info@interspill.org).

ENERGISING YOUR FUTURE



Hoisting high its credibility as a national energy spearhead, Bapco fee consistently stepped up its endeavours in bolstering Bahrain's economy over the numerous decades of its existence. Addressing industrial and environmental affairs allike with awe-inspiring splendour, the national energiser constantly strives to add to its rich heritage with its day to-day operations. Bapco also takes great pride in developing the nation, safeguarding our environment and recognising the prospective leaders of tomorrow with its your-round initiatives.

As a regional energy champion, Bapco believes in building the nation progressively whilst understanding the importance of giving back to the

community. Because at the end of the day, our nation is our responsibility.



Prevention is better than cure

WHETHER A LARGE scale multinational, or a small independent contractor, all companies operating in the oil and gas industry have a moral - and legal responsibility to mitigate the risk of oil spillages.

Aberdeenshire-based oil services company ROMAR International has designed and built a unique Packer Management System (PMS) to address potential hazards. The system's main objective is to prevent drilling mud spills from slip joint and overshot packers by providing an early stage 'fault and remedy' safety management process that alerts rig operators to a potential problem.

The PMS provides constant monitoring of slip joint packers and is designed to

automatically energise the back-up packer system when the primary packer fails or begins to leak, or in the case of power failure. In this situation the PMS automatically inflates a bottom packer when the top packer loses a pre-set amount of pressure below a pre-set "trip" point.

The system also has an inbuilt recorder that logs the previous 1,000 events that the unit has been asked to perform. This enables the customer to instantly assess what conditions the system was operating under prior to failure and if conditions, or actions carried out by the user, attributed to the failure.



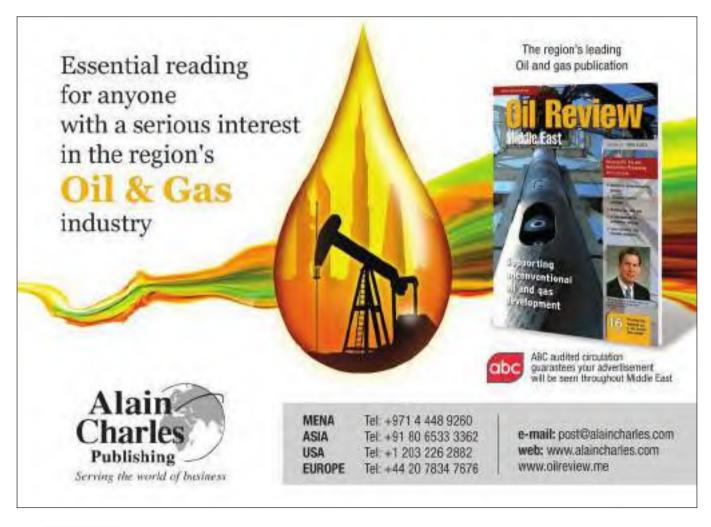
ROMAR International's Packer Management System (PMS)

Initial interest within the mobile rig industry started in the UKCS North Sea with Transocean leading the way by installing ROMAR PMS units on their entire North Sea rig fleet. As part of the installation process on the Arctic III Semi Sub rig, a number of scenarios were tested, when the PMS unit performed successfully.

ROMAR International's PMS approach was also utilised to great effect by Petroserv SA, a Brazilian drilling contractor. A requirement was identified to monitor the supply of air to the primary packer and to also monitor the divert system on the rig. In the event of the divert function being activated both packers would then be energised, giving the rig full control of

both packers from a remote location such as the rig floor or internal office. For the four new systems an upgrade to the Programmable Logic Control (the hub that controls the system) was required to enable independent solenoid control and accommodate the installation of a further pressure transmitter. This alternative use of the PMS unit demonstrates its adaptability.

The PMS's primary objective of preventing mud spills has a 100 per cent track record across the 85 drilling rigs it has been fitted to globally since its introduction to the market in 2008.







Introducing the **Fas-Trac III Ratchet Suspension** from MSA. Designed for use with market-leading MSA helmets, the Fas-Trac III suspension improves the user's head protection experience.



G1 SCBA



ULTIMA X



V-Gard Accessory System



ALTAIR 2X



EVOTECH

Because every life has a purpose...

Meeting the demand for on-site power

Engine generating sets are found on most oil and gas installations, but choosing the right size can be difficult.

IESEL OR GAS, selecting the rated output of any on-site power generator is a complex task anywhere. When the application is offshore the complications mount further. A decision always has to be made as to whether the installation is to be permanent. or merely a standby measure until mains power arrives. And on many oil and gas sites a choice has to be made between a reciprocating engine generator(s) or gas turbine

None of these are easy decisions to make, but most drilling and production operators have policy guidelines, and there is plenty of advice available across North Africa and the Gulf.

Many factors have to be weighed up when 'sizing' a conventional engine generating set: these include deciding both the minimum load to be served as well as the maximum, because no modern diesel/alternator pairing should be run below a third of its rated output for long and because of maximum allowable single-step voltage and frequency dips. The normal duty cycle should be defined, and the usual considerations resolved of type of prime mover, single- or three-phase output, 50 Hz or 60 Hz frequency, and the operating voltage of the equipment that will be served.

On an established rig or platform there is no substitute for on-site experience in making basic calculations, but suppliers' representatives can provide useful guidelines too; most reputable manufacturers provide their own sizing software these days. Examples found with a brief search on the internet include reference guides from Aggreko, Cummins Power Generation and Eaton.

Some experienced designers/operators take the common-sense approach and allow for maximum likely load under normal operating conditions, meeting this with a range of their own matching equipment moved from site to site to boost capacity as needed - and opting for the handy rental solution when anticipated loads exceed a defined critical mass.

Whether you depend on a modest diesel set or heavy-duty gas-turbine it always helps to know the key factors that should influence your sizing decision, which include:

- What is the minimum size of equipment that will ensure the set can meet demand and run efficiently and reliably? Often using a bank of matching diesels is the best way to achieve this is as loads are highest when many motors (driving pumps, reciprocating compressors, lifting equipment etc) are being run intermittently
- Typically the demand for starting power can be five or more times the running load; this essential information is usually included in/on the appliance's manual or rating plate
- What are the maximum-allowable stepand voltage-dips that can be tolerated? These considerations are particularly important during the high-load period when motors start up. Consideration of both will help determine the minimum size of genset needed
- How to err towards the larger end of the scale when planning for location in challenging climates, with adequate cooling arrangements being especially important here?
- Is the application needed for meeting prime (all operating hours) or standby power demand?
- And, on land, will its output eventually be integrated with that of the local utility?

The system specifier has to make a decision about what powered equipment is to be connected. All characteristics and sizes

Many factors have to be weighted up when 'sizing' a conventional generating set"

of loads need to be identified and listed. with clear guidelines given to operatives about which combinations are allowable. It is not just the amount of power consumed that matters, but also the 'power factor' involved

PF rating is a complicated topic best discussed with the equipment supplier. It depends on single- or three-phase output being specified and the measures taken to maintain line voltage at all times.

Peak loading usually occurs as machinery such as motors and welding equipment switch on and off, often automatically. With a relatively simple equipment set-up an operator needs to be at the control end monitoring what is going on demand-wise, i.e. within specified parameters.

Accounting for such "cyclic" loads usually means opting for a larger installation and keeping it fully loaded, or having an adequate supplementary set available on standby.

Motors are normally the most critical items, and working out how much each uses at different stages in the operating cycle is best achieved by use of special sizing software. Again, refer to your supplier's representative or an internet resource.

And finally there may be the question of how to deal safely with so-called 'regenerative loads', fed back into the system by equipment which produces a heavy demand for power intermittently, such as a materials hoist. Their safe performance depends partly on the power supply system itself absorbing recovered energy during braking; this can be a problem even with a comparatively large system.

O&G operators do not use much equipment like this, but it may still be necessary to ensure other loads are connected which can absorb the sudden surge - by starting up automatically to operate a non-critical item like a battery charger, fan or floodlight, for example. Failure to do this could mean that the genset over-speeds and then shuts down for self-protection. ■



مؤسسة معدى محمد القحطاني للمقاولات Madi Contracting Est. (MCC) (MADI GROUP)



Always At Your Site

(0+966 13 805 0048

+966 59 897 2285



About Us

MADI GROUP was established in the year 2000 as an industrial service provider for Cooling Towers and growing enormously with diversified Business line based on principles of INTEGRITY, VALUE and SAFETY.

Products & Services

Cooling Tower

- WISPECTION & TESTING.
- TESIGN & JUPYLY
- MAINTENANCE & ERECTION
- V SPARE PARES FOR ANY TYPE / ANY BRAND
- W REHABILITATION / RE-DESIGNING
- V ANNUAL MAINTENANCE CONTRACT I AMC I

Heat Exchanger

- MECHANICAL CLEANING
- CHEMICAL CLEANING
- V RETURING/RECESION.
- FAILICATION OF NEW HEAT EXCHANGER

Fabrication & Welding

- ANY TYPE / ANY MATERIAL FABRICATION.
- CAPABLE OF 100% RT WELDING
- FARRICATION IS SPARE PARTS.
- WS/GHCS/55/COPFER ETC

FRP Work

- FEF LINING FOR ALL PURPOSE INCLUDING SEA WATER APPLICATION.
- ALL TYPE OF FRP LAMINATION / REPAIR.
- FRE TANKS & SPARE PARTS FABRICATION

Mechanical Products & Services

- SUPPLY OF PUMPS, VALVES, BOILERS,
- EXECTION OF PUMPS, VALVES, BOLIERS, MOTORS, COMPRESSORS AND OTHER MECHANICAL PRODUCT.
- ANNUAL MAINTENANCE CONTRACT FOR COMPRESSOR

Structural Erection

ALL TYPE OF STRUCTURAL EXECTION. SS.MS.CS.GI Re.

Turnkey Contracts

ALL TYPE OF MECHANICAL AND CIVIL (MECHANICAL) TURNIET CONTRACTS

Shutdown Services

SPECIALIZED IN SHUTDOWN JORS FOR COOLING TOWER, PUMP, MOTORS, VALVES COLUMNS, FARRICATION, WELDING, HEAT EXCHANGERS FRF WORKS EIG.



Dammam, Al Khobar, Jubail, Jeddah, Bahrain, India Email: info@madicc.org, Web: www.madicc.org



Addressing the issue of **CUPS**

Laza Krstin, principal consultant at ABB Consulting, examines the causes of Corrosion Under Pipe Supports (CUPS) and the risks it presents, as well as prevention and remediation techniques.

ORROSION UNDER PIPE Supports (CUPS) is a growing problem and a particular threat to pipework integrity. Local deterioration, difficulty of inspections and the potential for significant incidents to take place all contribute hugely to a phenomenon that threatens safety and production continuity, and which could be costly.

Why is CUPS important?

For many operating companies, extending the operational life of their process installations beyond their original design life is a business objective. For ageing plant, pipe supports present a particular threat to the integrity of pipework due to local nature of the deterioration and difficulties of inspection to determine pipe condition. Failure at supports has the potential to lead to major loss of containment such instances are difficult to repair on-line (e.g. by clamping). Inspection and remediation present many practical difficulties – the extensive (system-wide) nature of the problem has safety implications, while the potential disruption to production and cost of dealing with CUPS are significant.

A recent CUPS incident illustrates the safety and business impact of CUPS. A leak caused by corrosion in a 40-year-old steel pipe was found to be the direct cause of an explosion and fire in May 2009 at a US oil refinery. The explosion happened when flammable gas escaped from a 10-inch pipe which had corroded and developed a leak. The corrosion occurred in a small section of piping because moisture was trapped between the pipe and a metal sleeve on which it was supported. The explosion shook homes for miles around the refinery. No one was hurt in the blast and resulting blaze, which burned for nearly 24 hours. The company said customer demand did not justify the cost of rebuilding the production unit. It was reported that the closure of the damaged unit would result in over 40 layoffs.

In recognition of the severity and potential consequence of CUPS, the Energy Institute initiated a CUPS project in 2013. ABB Consulting has been commissioned to produce a guide, in collaboration with HOIS who are providing a section in the guide covering the latest NDT techniques. (HOIS is an industry forum for discussing inspection issues and utilising improved inspection technology for applications in oil and gas, administered by ESR Technology).

The management of CUPS should be part of the overall piping integrity management strategy including internal deterioration mechanisms and system-wide stress (thermal expansion/contraction, fluid hammer, vibration).

The management of CUPS should be part of the overall piping integrity management strategy"



Fig. 1 - Evidence of pipe movement - early stage fretting/wear at the contact point

The Energy Institute document aims to provide guidance on CUPS, to understand the range of integrity threats from CUPS, to help determine an effective inspection and maintenance strategy for managing CUPS including advice on NDT techniques, and to understand how to reduce the risks of CUPS.

CUPS damage mechanisms

Regarding corrosion, the greatest concern is that this develops in areas that are difficult to inspect, so pipe wall loss is undetected. The features and shape of the support, the material of construction, and a number of other factors affect the type and rate of deterioration. The main contributory factors include:

- Moisture (rain, fire water deluge testing etc.) and contaminants (e.g. chlorides from sea water) increase the likelihood and rate of corrosion.
- The design of most pipe supports results in crevices which allow moisture to collect.
- The pipe operating temperature affects the corrosion rate. The support can act as a "heat sink" on "hot" pipework resulting in the pipe wall local to the support being cooler than the bulk of the piping system, which may encourage both internal and external
- Protective coatings should be carefully selected for the expected conditions, and correctly applied. However, coatings tend to deteriorate over time.







Take steps towards a step-change in safety and competence in the oil and gas industry with OPITO

Funded by industry, for industry OPITO sets the standard for safety and competence in oil and gas.

OPITO works with Governments, NGOs and oil companies across the world to develop and implement national and international competency frameworks. Using a combination of skills, expertise and OPITO standards, these frameworks help deliver a competent, safe and sustainable workforce.

For further details on how you can take steps towards improving safety and competency, contact:

OPITO Middle-East T: +971 4 4458482 PO Box 500726 F: +971 4 4458481

Block 11, Room F11 E: mea.enquiries@

Knowledge Village

Dubai

United Arab Emirates





Thermal expansion and contraction of the piping can damage the coating by fretting, or cause it to crack and disbond.

The main focus for CUPS is corrosion of carbon steel, the most commonly-used material of construction for pipework and pipe supports. However, where austenitic stainless steels are used, there are different concerns, e.g. chloride-induced stress corrosion cracking (particularly in marine and coastal environments) where the pipe is above 60°C; or pitting corrosion in the presence of chlorides below 60°C. Duplex steels and other materials may also be vulnerable to CUPS.

Figure 1 shows evidence of pipe movement – early stage fretting/wear at the contact point. The pipe has been lifted from its support to gain access for inspection.

The design of a pipe support can affect the vulnerability to CUPS"

Pipe support design and CUPS

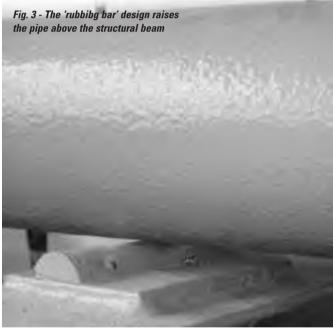
The design of a pipe support can affect the vulnerability to CUPS. There are many "design standards" for supports, but many of these have grown from convention rather than as a specific engineering specification. For example, many piping systems sit directly on the structural support beams. This approach offers the lowest capital cost, but the point of support contact promotes corrosion and makes it difficult to inspect and so determine the true condition of the pipe.

Trunnions, where vertical pipework is supported by a short horizontal pipe welded to the process pipe, are particularly vulnerable to corrosion from the inside. The trunnion may be open-ended or incorporate a vent hole. In both cases the volume inside the trunnion may accumulate moisture, debris etc. and result in corrosion or stress corrosion cracking of the process pipe. A number of operators have experienced this form of deterioration; in some cases leaks have occurred.

In Figure 2, a close-fitting saddle support had been fitted to protect the pipe from fretting and local loads. However, the saddle was simply loose-fitting, allowing moisture to become trapped between the saddle and pipe, giving rise to hidden corrosion.

A better design is a "rubbing bar" (in Figure 3, which raises the pipe above the structural beam, reducing the potential for moisture to be trapped and providing a certain amount of improved access for inspection and remedial painting.







Load quickly

safely

www.rs-seliger.de

→ Technology

An even better design is a continuously welded saddle (Figure 4), though this is more expensive than the previous example. These cases illustrate that the choice of support standard is as much a costbased decision (capital cost vs life-cycle cost including inspection/maintenance) as it is a "technical design" issue. And of course, the selection and design of each support should take into account not only CUPS but also the other pipe supporting requirements, such as the type of support (anchor, guide etc.), whether the pipe is insulated or not, the requirements for fabrication and on-site installation etc.

Inspection for CUPS

In some cases it may be possible to estimate the severity of corrosion from the visible appearance around the support. However, this has been shown to be an unreliable approach. Direct examination under the support requires removal of the support (with the pipe supported on temporary supports) and lifting the pipe. Both these options are costly, time-consuming and increase risk of loss of containment. Pipe isolation or unit shutdown is often required.

Consequently, there is considerable interest in using nondestructive testing (NDT) to inspect underneath pipe supports in-situ during plant operation, without line-lifting. A range of techniques are reviewed in the Energy Institute guide e.g. CHIME®, EMAT, Guided Wave Testing/Long Range UT, Multi-Skip®, Radiography, Shear wave pitch-catch, and Guided Wave Tomography.

Accurate through-wall sizing is particularly challenging due to the obstruction caused by the support and the variable nature of the corrosion itself, which can be highly non uniform. In addition, many of the NDT techniques have limitations in terms of the support types, pipe diameters and wall thicknesses they can be applied to.

The El quide discusses the current experience of NDT techniques, including scope of the technique (pipe size, wall thickness etc.) and application (demonstrating absence of corrosion, fast screening, or quantification of corrosion).

CUPS remediation can present many technical and project management challenges"

The limitations of NDT techniques for CUPS applications mean that there is no straightforward approach. Operators are finding it necessary to trial and build up confidence with a range of NDT techniques before selecting an inspection strategy, but this can be costly and time-consuming. The uncertainties in accurately determining pipe condition in situ, coupled with the need to prevent





further corrosion, are leading some operators to provide direct access for inspection and remediation ("fabric maintenance") by support removal or line lifting. NDT techniques can be used to help manage the risks of pipework remediation, for example, by helping to determine whether the pipework can be safely re-supported, lifted, grit blasted and painted.

CUPS remediation

Many operating companies are addressing CUPS by their on-going piping inspection programmes. However, CUPS remediation can present many technical and project management challenges, including inspection strategy (selection of NDT techniques, on-line or with the unit shutdown), procedures for safe support removal/line lifting, determination of life extension requirements (minimum pipe wall thickness criteria), system isolation requirements, procedures to deal with leaks. Consequently, some companies have found that the scale of CUPS warrants a specific pipework remediation project.

Re-supporting and line lifting requires careful planning, preparation and execution to avoid damaging the pipework and potentially giving rise to a leak. For example, the piping system stresses will be altered by re-supporting or lifting, and must be checked to ensure there is no detriment to the pipework.

Projects of this nature provide long term benefit, that is, continued long term operation of the asset, but they can make life more difficult while the work is in progress. It is therefore important to communicate the aims of the project to all of the operations team and others affected by or involved in the work. It helps to second an operations supervisor into the remediation project team to help develop project processes and procedures, and to communicate and build confidence in the operations team. CUPS remediation work has the potential to produce a leak in pipework that is being remediated. Specific emergency procedures should be developed covering communication requirements, isolation and blow-down procedures, checking access to and operation of isolation valves, the availability of emergency equipment and so on.

As operating companies deal with CUPS, more experience is being gained across the industry, enabling better assessment of the scale of the issue, development of safe and cost effective inspection and remediation strategies and development of NDT techniques.

For further information please contact Heidi Boden or Steve Maybury at Admiral PR, email: abbconsulting@admiralpr.com, tel: 0191 222 0722.

Elegantly Simple, Simply Effective.



When the problem is complex, the solution is often simple. Volant Casing Running Tools simplify well construction, reducing both manpower requirements and problems leading to hole instability and non-productive time. Volant HydroFORM™ Centralizers greatly improve casing runability with an enviable 100% failure-free track record. Volant MLT Rings™ provide high torsional capacity, critical for liner drilling operations.







Marine Applications



Power Generation



Cogeneration (CHP)





CHALLENGES AND OPPORTUNITIES
FOR THE NEXT 30 YEARS

Marelli Motori SpA

Via Sabbionara 1 36071 Arzignano Vicenza - Italy

Marelli Middle East c/o The Carlyle Group

DIFC Precinct Building 3 P.O. Box 506564 Dubai - UAE Phone +39 0444 479711 Email sales@marelimotori.com Web www.marellimotori.com

Phone +971 56 1428569 Email mme@marellimotori.com Web www.marellimotori.com



Oil & Gas



Hydropower



Industrial Motors



Marelli Motori is a leading global independent designer and manufacturer of generators and electric motors. The main manufacturing plant is located at the HQ in Vicenza (Italy) and another production site is in Shah Alam, Kuala Lumpur, Malaysia.

Marelli Motori's extensive range of products features low and high voltage, horizontal and vertical mounting, various polarities and degrees of protection as well as explosion proof products.

Generators range:

from 11 kVA to 10,000 kVA

Motors range:

from 0,25 kW to 6,400 kW

Marelli Motori offers worldwide Sales & Service support through a global network of sales offices, stocking facilities and service points.

SAOGE 2014

Date: 24 - 26 November 2014

Venue: Dammam, Kingdom of Saudi Arabia





Kingdom's Eastern Province set to host SAOGE 2014

In its sixth year, the Saudi Arabia International Oil & Gas Exhibition is set to explore the latest trends in oil and gas, and engage decision makers to discuss the future of the industry.

HE SIXTH EDITION of the Saudi Arabia International Oil & Gas Exhibition (SAOGE) will be held 24-26 November 2014 at the Dhahran International Exhibition Centre in Dammam, Saudi Arabia. His Highness Prince Saud Bin Naif Abdulaziz will inaugurate the exhibition on 24 November 2014. Saudi Arabia has 25 per cent of the world's oil reserves, according to the Saudi Arabian General Investment Authority. Initiated in 2008, SAOGE was established to enhance the region's burgeoning oil and gas industry, and eventually become a platform for industry leaders and technical experts to converge and discuss ideas that would revolutionise the industry. Global oil and gas companies have always been keen to participate in SAOGE. According to the organisers IES Srl International Exhibition Services (IES), the

Eastern Province (where the show is set to be held) is a prime area for business opportunities, covering 33 per cent of the Kingdom's area and serving as a strategic gateway for international trade. This year, companies such as Qatar Petroleum, China Petroleum Technology & Development Company, Al Estagamah Global Group, Abdullah H. Al-Shuwayer Sons Trading and Contracting Company, Alaa for Industry



A Saudi German L-SAW Pipe Manufacturer in Jubail Industrial City- Saudi Arabia



LSAW PIPES

Line pipe for transmission lines and structural tubulars for Onshore and Offshore construction. 16" up to 200" Diameter with Wall Thickness 9.53 up to 130 mm.





STATE OF THE ART Machinery and Equipment





WHEN QUALITY AND STRENGTH COUNT





SAOGE 2014

(AFI), Alfanar, Alsuwaiket Oil and Gas Services, Middle East Specialised Cables Co. (MESC), Sawary Energy and Saudi Steel Pipe have confirmed their participation.

While local and regional attendance is naturally high, there is considerable participation from other countries. Organisers stated that nearly 34 per cent of exhibitors are from outside Saudi Arabia. This year, Australia, China, France, Germany, India, Indonesia, Italy, Russia, Switzerland, Singapore, Taiwan, Turkey, the UK and the USA will be seen exhibiting their products at SAOGE. Most companies, regional and international, claim that there is huge potential in the Saudi Arabian oil and gas sector and are using SAOGE to introduce their products and services to the market.

Piero Zipoli, president of IES, said, "We pay special attention to SAOGE and regularly see great demand from multinational companies to participate and be at the heart of the industry. SAOGE clearly offers them a platform for more insight into the possibilities of new investments, developments and technologies, aimed at the global petroleum sector".

The Arab Oil and Gas directory has stated that Saudi Arabia is expected to invest in



petrochemicals, power generation, natural gas projects and water desalination in the coming years. While the Kingdom has allotted US\$90bn for petrochemicals and power generation, it is expected to spend US\$88bn on water desalination projects and US\$50bn on natural gas-related projects.

In addition, the country's energy sector will be supported with investments worth US\$140bn, mainly on general infrastructure such as transport and development of economic cities, added the Saudi Arabian

General Investment Authority.

The previous edition of SAOGE was considered a success and has bolstered the confidence of exhibitors for the upcoming show. In 2013, 7,975 exhibitors from over 25 countries participated. There were a large number of technical experts, specialists. innovators and decision-makers at the show. Qatar Petroleum, Hewlett Packard and Yusuf Bin Ahmed Kanoo Company had bagged awards for design, innovation and technical content repspectively. Zipoli said that,







Reliable, Fast and Flexible Power... Anytime, Anywhere

Whether you need temporary power for the construction of a platform, an HV power module for early production, loadbanks for resistive and reactive testing of main power systems, or power for planned or emergency maintenance, Aggreko has the solution.

Our extensive range of equipment includes generators, loadbanks, transformers and fuel tanks. We offer full project planning, installation, commissioning and operation service supported by 24-hour on-site service and maintenance.

With over 50 years' experience providing services to the Oil & Gas industry you can rely on Aggreko.

Aggreko, Power Specialists in the Middle East

Aggreko Middle East Ltd.

PO Box 16875, Dubai, UAE

T: +9714 808 6100 F: +9714 883 1825

Abu Dhabi, UAE +971 (0)2 5549494 Kuwait City, Kuwait +965 23983648

Dubai, UAE +971 (0)4 8086100 **Dammam, KSA** +966 (0)13 8580301 Sharjah, UAE +971 (0)6 5345999 Jeddah, KSA +966 (0)12 2727640 Muscat, Oman +968 (0)24 501872 Riyadh, KSA +966 (0)8 111005060 Doha, Qatar +974 44606178 Yanbu, KSA +966 (0)14 3963993

Manama, Bahrair +973 17723381 Istanbul, Turkey +90 212 4652050

SAOGE 2014

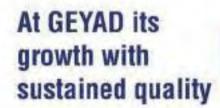
through these awards, the industry's most creative ideas were honoured, thereby allowing greater opportunities for business relationships and inventions to improve the scope of the industry. This year too, SAOGE will provide a similar platform for companies to display their latest work in oil and gas development. To support these endeavours, there are prominent sponsors - Riyadhbased telecom provider Integrated Telecom is the gold sponsor, medical and safety technology company Dräger is the silver sponsor while industrial productivity solutions firm Atlas Copco is the bronze sponsor for the event.

To further the scope for innovation and ideas, SAOGE recognised a potential opportunity to introduce a special Student Programme - designed to boost the number of locals working in the oil and gas industry. The programme is supported by King Fahd University of Petroleum & Minerals and University of Dammam, which send groups of students each year to the exhibition. The show help students gain knowledge about the industry's latest happenings and acquaint themselves with the technological requirements as well.



Why the Kingdom is a preferred investment destination:

- Ranked fifth globally for fiscal freedom.
- Third most rewarding tax system in the world.
- Largest economy in the MENA region, and 19th largest economy in the world.
- Ranked 22 out of 185 countries in terms of doing business with ease.
- Largest free market in MENA.
- World's fastest reforming business climate.
- Contributes 25 per cent of Arab GDP.
- Easiest to register property in.
- Largest recipient of FDI among Arab countries.











Geyad is looking ahead to expand its customer base after commissioning of its new production unit and increasing its structural steel fabrication capacity as well as capability to fabricate higher thickness pressure vessels.

Geynd's product range includes Structural steel, Pressure vessels, Storage tanks, Pipe spools & Miscellaneous steel Items. The company is accredited with ISO 9001: 2008 as well as ASME U stamp & R & MB stamps from National Board.

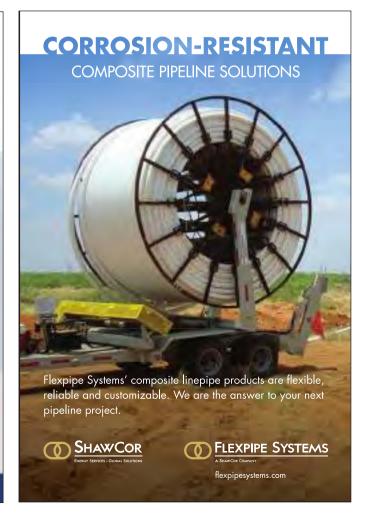


GEYAD FOR INDUSTRY AND CONTRACTING Co LTD.

Seyad Factory for Pressure Vessels and Steel Buildings (Formerly : Geyad for Commerce And Import Co LTD) PD Box 1325- Al-khobar 31952

Tet: +965 3 8121610(5 Lines), Fax: +956 3 8121271 Web: www.Geyad.com 👔 📑 Geyad Factory

Quality is the Heart of our Business





Keep your plant cool... With Hisaka Service Packages

- Full service package, your best choice for COMPLETE full refurbishment of Plate Heat Exchangers.
- Site SERVICES
- Genuine Spare parts supply
- Technical support
- In Operation Performance Check











P.O.Box: 8221 Dammam - 31482, King Saud Street, Saudi Arabia Phone: +966-13-833-1473, Fax: +966-13-833-1471

Email: info@hisaka-me.com Website: www.hisaka-me.com

ADIPEC 2014

Date: 10 - 13 November 2014 Venue: Abu Dhabi, UAE



CHALLENGES AND OPPORTUNITIES

Momentum builds for Abu Dhabi's premier oil show

As ADIPEC continues to evolve to reflect the priorities of the regional and global oil and gas industry, this year's event looks set to be bigger than ever.

REPARATIONS ARE HOTTING up for the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC). to take place on 10-13 November at the National Exhibition Centre in Abu Dhabi.

Held under the patronage of HH Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE, and supported by the UAE's Ministry of Energy, Abu Dhabi National Oil Company (ADNOC) and the Abu Dhabi Chamber, ADIPEC 2014 marks the 30th anniversary of the event, which is aptly themed 'Challenges and Opportunities for the

According to the organisers, dmg events, ADIPEC is now the third-largest oil and gas event in the world, reflecting the importance of the region to the global industry and Abu Dhabi's rise as a global energy hub. Christopher Hudson, Senior Vice President at dmg events, said: "ADIPEC has officially grown to become the world's largest meeting point outside North America for the oil and gas industry, and the exhibition has developed into a global hub for doing business."

Bigger than ever

This year's event promises to be bigger than ever before, and will attract more than 2,000 exhibitors, including more than 16 NOCs and 15 IOCs, and more than 60,000 international business visitors, with ministers, senior officials and VIPs galore in attendance. Regional NOCs represented include ADNOC, Saudi Aramco, BAPCO, QP and KOC. Two new halls have been added to accommodate the growth in global exhibitors, while international exhibitor pavilions from India, Indonesia, Malaysia, Taiwan and Nigeria will, for the first time, join those from Belgium, Canada, China, Denmark, France, Germany, Italy, Korea, Netherlands, Norway, Singapore, Spain, Scotland, Turkey, the UK and the USA. The expectation is therefore that the business generated during the

The exhibition has developed into a global hub for doing business"

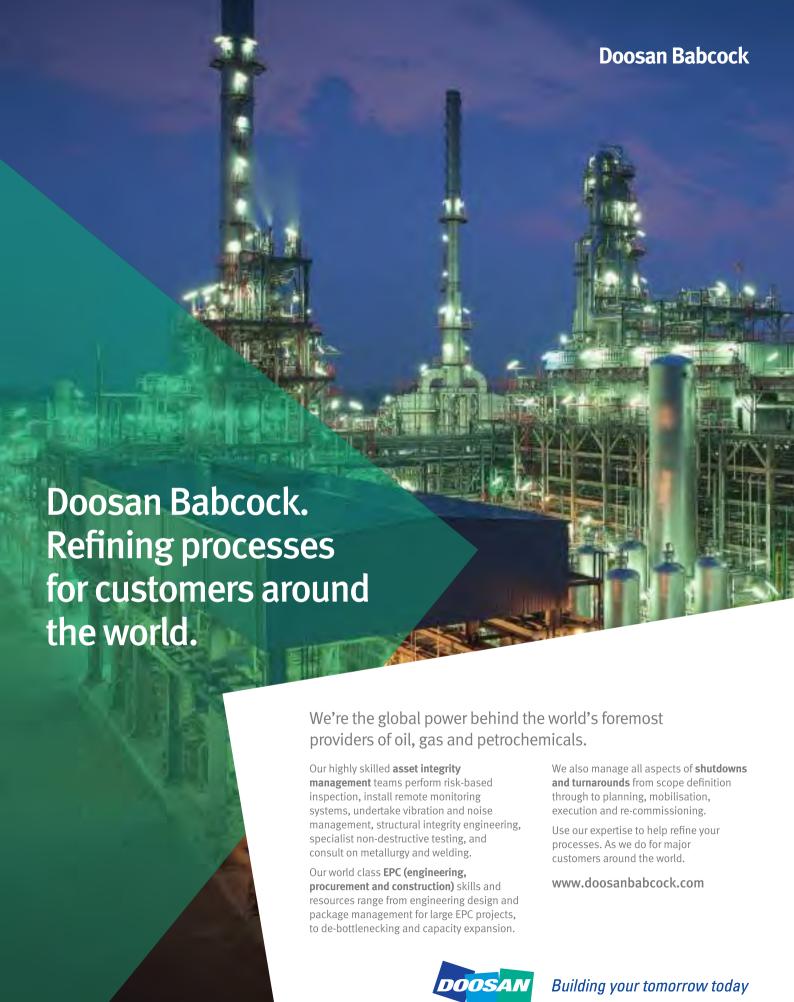


event will surpass the US\$5 billion reported in 2013.

The ADIPEC 2014 conference, delivered by the Society of Petroleum Engineers (SPE), will bring a host of innovators, policymakers and experts together to discuss the challenges and opportunities facing the industry over the next 30 years. They will share ideas to meet the world's pressing energy requirements, which are forecast to increase by approximately 35 per cent by 2040, according to the latest figures from Exxon Mobil Corp. Meeting the increasing global energy demand through developments in technology and international collaboration will feature strongly, with a focus on developing unconventional resources, in line with the emerging focus on this sector in the Middle East.

The ADIPEC conference is now the largest technical conference programme for the oil and gas industry, receiving 1,806 abstracts this year, a 61 per cent increase from last year. This year it will feature 84 technical sessions, covering every aspect of the energy industry, with four dedicated academic sessions for the first time.

Keynote speaker will be world-renowned physicist and environmentalist Dr Michio Kaku. The conference programme includes a high level ministerial panel session including His Excellency Suhail Mohamed Faraj Al Mazrouei, UAE Minister of Energy, as well as three other international energy ministers, which will focus on developing and sustaining local content. Executive plenary sessions will focus on Innovation and Leadership, as well as Technology and Sustainability. Eight panel sessions will cover NOC/IOC collaboration in mature fields; achieving excellence in capital projects; attracting and developing talent; unconventional resources; energy security, market supply and demand; HSE; research and technology development; and improving hydrocarbon recovery.





This year, for the first time, the Middle East Petroleum Club, an exclusive private business club for decision makers of the oil and gas industry, will also host a series of high level exclusive briefings. These include a special 'Women in Industry' session, and briefings on UAE downstream; pumps and pipes; Mexico; and Indonesia.

Continually evolving

ADIPEC has grown and evolved over the years to reflect the changing priorities of the region and the global industry, with new features and





New features and initiatives are being introduced, some of which extend far beyond the confines of the event itself"

initiatives introduced, some of which extend far beyond the confines of the event itself.

The Young ADIPEC initiative. established in 2013 to raise awareness among young people of career opportunities in the industry and enable them to engage with key industry players, has given students aged 14 to 17 years the opportunity to take part in field trips to ADNOC sites and energy company operations. Such programmes play a critical role in attracting the younger generation to the energy sector and setting up a substantial local talent pool for the future, say experts in the industry. ADIPEC 2014 will house a Young ADIPEC Edutainment Zone, where students will be able to experience what working in the oil and gas industry is really like, through an interactive learning experience.

Another new initiative is the HSE zone, established in 2013 in response to demand from both exhibitors and visitors and reflecting the increasing focus on this area, which will in 2014 house almost double the number of specialised exhibitors as it did last year.

While a series of Women in Industry events, held under the auspices of the Middle East Petroleum Club over the last year and designed to address the low levels of female participation in the industry, have proved very popular, providing a forum to discuss the barriers women face in entering and succeeding in the oil and gas industry, as well as presenting a positive image of the industry to women

For further information see the website at www.adipec.com



Reveal your potential, energize your career, and contribute to shape the future of your company and country join the Master of Engineering program in Oil and Gas Surface Facilities (OGSF) organized by King Fond University of Petroleum and Minerals and IFF School

Your contacts...



Dr. Mamdouh AL-HARTHI

Coordinator - Master of Engineering program in OGSF mamdouh@dupmedusa



Mr. Hervé CHAUVIN

Managing Director IFP Training Middle East herve.chauvin@fptraining.com



PREVENTS MARINE GROWTH ON NEW STRUCTURES, CLEANS AND PROTECTS EXISTING STRUCTURES NO STRUCTURAL MODIFICATION REQUIRED *NO ADDED WEIGHT *NO EFFECT ON CATHODIC PROTECTION

The Marine Growth Control Technology was first commercialized in 1987. Today, with a global track record of 27 years, over 30,000 Marine Growth Preventer (MGP) products have been deployed to enhance the structural integrity of offshore structures worldwide. Our MGPs are installed at global locations, including China, India, Malaysia, Europe, United States, Australia, Vietnam, Indonesia, Thailand, Myanmar, Middle East and Nigeria.

IEV's latest generation of wave driven MGP (MGP-W) has been developed with "anti-impact" (AI) features to withstand extreme weather and rough sea conditions. It is enhanced with "one-piece" rigid connectors which absorbs direct impact especially at the splash zone area prolonging its durability under harsh weather. The product requires no anti-fouling paint as it is also designed with self-cleaning (SC) features maintaining it free from marine growth throughout its service life span.









NIGERIA, ATLA

CHINA TILL

UNITED ARAB EMIRATES.

MALAYEIA, INT.



For further information, please contact: IEV GROUP OF COMPANIES

HQ: Level 22, PJX-HM Shah Tower, No.16A, Persiaran Barat, 46050 Petaling Jaya, Selangor, Malaysia.
T : +6 (03) 7931 9921 F: +6 (03) 7931 9964 E: mgc@iev-group.com W: www.iev-group.com



Celebrating excellence in

energy

A record number of entries have been submitted for the ADIPEC Awards this year.

DIPEC HAS ANNOUNCED the 21 shortlisted entries across seven categories for the 2014 edition of the ADIPEC Awards. The awards celebrate excellence in energy, giving organisations and individuals an opportunity to receive recognition for their achievements through a stringent evaluation process.

New to the awards this year is the Best Oilfield Services Company Award, which recognises exceptional service to the region's oil and gas industry, based on ethical and sustainable practice, adherence to timelines, cost control and overall value.

Ali Khalifa Al Shamsi, the ADIPEC 2014 chairman, and strategy and coordination director at the Abu Dhabi National Oil Company (ADNOC), said, "As we look forward to the next 30 years in the oil and gas industry, it is clear that innovation and technology will be the key to a sustainable future. The seven categories in the ADIPEC Awards represent some of the most important aspects in the energy sector, and among the 396 entries received, there are many projects that will make a big difference as we progress in our field. A particularly exciting aspect of the ADIPEC Awards is that they challenge and encourage the considerable young talent in our industry, as well as cultivate Corporate Social Responsibility (CSR) among the next generation of oil and gas professionals."

Record number of submissions

The ADIPEC Awards received a record 396 submissions from 27 countries this year, featuring participation from 100 organisations. Posting continuous growth since their launch in 2010, the awards received 104 more submissions than last year, representing five more countries and with the participation of 21 more organisations compared to 2013

The task of evaluating the entries fell to the ADIPEC Awards Regional Select Jury (RSKJ) led by the award's chairman and chief executive officer of Abu Dhabi Company for Onshore Oil Operations, Abdul Munim Saif Al Kindy, who commented, "The high quality of submissions confirms that continuous innovation is a dominant feature of the industry, pushing the use of technology, creativity and awareness of the need to address both environmental and sustainability concerns."

Among the 396 entries received, there are many projects that will make a big

"It is important that we develop a process to use the Awards as a platform to exchange best practices. Every submission is a credit to the parties involved, and it has been quite a challenge to arrive to the final list. All are winners."



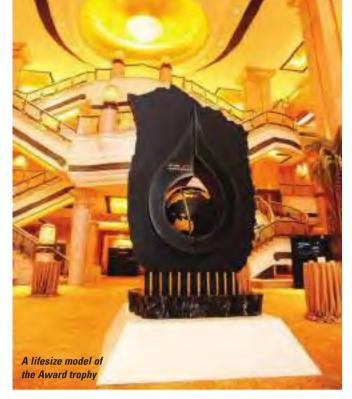
More than 130 entries were submitted for the Best Oil & Gas Innovation and Technology Award, demonstrating the pivotal role research and technology plays in the region's energy sector.

Nominees were shortlisted after an initial assessment by the Regional Select Jury comprised of 26 experts from across the oil and gas industry. Each shortlisted entry was screened at the Regional Select Jury Meeting on 22 October 2014.

"The submissions received this year demonstrate the excellence upheld by the region's oil and gas companies in all aspects of the industry, be it innovation, sustainability, safety, or professional development," said Jean-Philippe Cossé, ADIPEC 2014 event director at dmg events.

"What is really underpinning this increased momentum is how fundamentally active the market is in developing new projects. All the major companies in the region are pursuing world-class projects and, in essence, defining an era," said Paul Navratil, an RSJ member and Middle East energy, utilities and mining leader at PricewaterhouseCoopers, UAE.

"The ADIPEC Awards not only provide a platform for these companies to showcase and receive recognition for the significant contribution they are making to the global energy market, but also to share their good practice with the rest of the world."



The shortlisted companies are as follows:

Category 1 - Best Oil & Gas Project

- Drydocks Dubai World Best Oil & Gas Project
- GASCO APC in GASCO Ruwais
- Petroleum Development Oman (PDO) Five-Fold Production Increase

Category 2 - Best Oil & Gas Innovation or Technology

- Abu Dhabi Marine Operating Company (ADMA-OPCO) - Acron Fiber Composites Subsea
- ExxonMobil Upper Zakum Artificial Islands
- Schlumberger GeoSphere: Truly Game-changing

Category 3 - Best Oil & Gas HSE Project or Initiative

- ADNOC Distribution Sustainable Service Stations
- Qatar Shell Improving Behavioural Safety
- Schlumberger Regional Journey Management

Category 4 - Best CSR Initiative

- ADMA-OPCO Let's Dive Together
- PDO Banat Oman
- PETRONAS Carigali Iraq Holding B.V. Garraf Asset Operations

Category 5 - Empowerment of Women in the Oil & Gas Industry

- Abu Dhabi Company for Onshore Oil Operations (ADCO) -ADCO is Leading Women Empowerment
- Saudi Aramco Women Development
- Kuwait Oil Company Professional Women Network

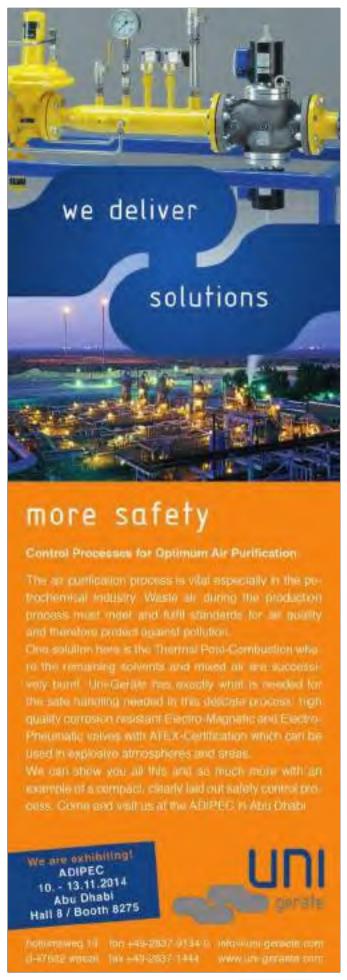
Category 6 - Young ADIPEC Engineer

- ADCO New Era Of Young Emirati Engineer
- Jordan Oil Shale Company B.V. An Emerging Engineering Leader
- Kuwait Oil Company Young ADIPEC Engineer

Category 7 - Best Oilfield Services Company

- AlMansoori Specialised Engineering Commitment to
- National Drilling Company Committed to the Region
- Schlumberger Best Oilfield Services Company

The winners will be announced at the ADIPEC Awards Gala Dinner, which is hosted by ADNOC and takes place at Emirates Palace on 10 November 2014. ■





Showcasing

British companies

The EIC will once again be hosting the UK Pavilion at ADIPEC

HE ENERGY INDUSTRIES Council (EIC) will once again be hosting the UK Pavilion at ADIPEC, bringing together 60 leading UK-registered suppliers, each with their own expert products and services to showcase to the Middle East market.

Headquartered in London, the EIC is a leading trade association that provides dedicated services to help members understand, identify and pursue business opportunities worldwide, through expert market intelligence, business and training events and support services. Established in 1943, the EIC is a not-for-profit organisation with a large membership of more than 700 UK-registered companies which deliver goods and services to the oil and gas, petrochemical, pipeline, power, nuclear and renewable industries globally.

In September 2014, the EIC opened its new Asia Pacific office in Kuala Lumpur, while its Middle East office, based in Dubai. has also continued to prosper, with the introduction of a comprehensive business and training events programme now fully

The EIC also has regional UK offices in Teesside and Aberdeen, and other international offices in Rio de Janeiro and Houston.

Soaring demand

"In the Middle East region, soaring demand has fuelled a a dash for gas and moves into shale exploration in Saudi Arabia, which both offer substantial new market opportunities

This scale of activity underlines the substantial new market opportunities for UK businesses"



The UK Pavilion will bring 60 companies to ADNEC during ADIPEC 2014 (Photo: Michael Renner)

for experienced UK businesses," comments the EIC. "Cutting-edge technologies are being developed and applied in moves to maintain output, while major new projects are pushing ahead in the UAE, Kuwait and Irag." As the project landscape continues to shift, and socioeconomic drivers such as local content come to the fore, there are plenty of opportunities and challenges for the global supply chain, the EIC adds.

According to its global on-line project tracking database EICDataStream, there are over 1,000 projects proposed or under development in the region with almost a third of these located in Saudi Arabia, UAE and Iraq - countries with long-standing trade relationships with the UK, the EIC notes. "This scale of activity underlines the substantial new market opportunities for UK businesses as the region's energy sector continues to thrive," it comments.

EICDataStream shows that between January 2010 and September 2014, there were 246 major upstream contracts (EPC, FEED and PMC) awarded in the MENA

region. The UAE continues to dominate contracting activity, accounting for a total of 77 major contract awards. The majority of these contracts (66) are for work on projects in Abu Dhabi, where the goal of increasing onshore oil production, particularly through innovative EOR technologies, and the pursuit of gas to meet increasing demand is driving heavy investment.

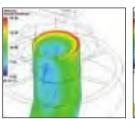
Presenting ElCDataStream

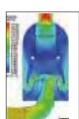
EIC staff will be available on its stand at the event to present EICDataStream and discuss other ways that the organisation can help with business development activities in the Middle East region. The EIC will also be organising a reception, and launching its EIC Connect Middle East event scheduled to take place in Abu Dhabi in June 2015, which encompasses a series of supply chain briefings, a conference and exhibition covering opportunities and updates on major energy projects in the region.

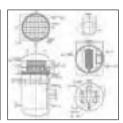
Stand 8240 (Hall 8)



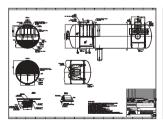
UNLEASH THE FULL POTENTIAL OF YOUR SEPARATION TRAIN















Oil/Gas/Water Separation

New Build and Retrofit Solutions





SEE OUR HIGH THROUGHPUT PROCESS SYSTEMS ON STAND 5020





Head office 74410 SAINTJORIOZ - FRANCE Tel.: +33 (0)450 685 660 technogenia@technogenia.com

TECHNOCE

Visit us at Hall No. 95

www.technogenia.com







Sandvik Coromant products

Sandvik Coromant launches new component solutions

SANDVIK COROMANT, A leading supplier of tools and know-how to the metalworking industry, is returning to ADIPEC this year. The company will present new component solutions covering mandrel, collar and bottle boring as well as the new GC4315 and GC4325 grade inserts, which it says help customers to improve process security and productivity.

To securely machine deep grooves on oil and gas components, the CoroCut® QD system will be enhanced with the launch of CoroTurn® SL blades. Large diameter drilling with CoroDrill® 880L - a system using a flexible cartridge solution with a hole diameter range of 65.00 - 84.00 mm will also be launched as the latest addition to a range of drilling solutions suited to oil and gas component manufacture.

> Visitors to the stand will also see the latest Sandvik Coromant Apps, which provide valuable information ranging from calculations and product recommendations to technical catalogue information.

> Sandvik Coromant will also launch a new digital service at the show. Visitors to the company's website will be able to communicate directly

with technical experts via a live online chat service. "This new service demonstrates our commitment to providing close support and sharing knowledge with customers operating in this region," says Valerio R Vertua. sales manager Middle East.

"The Middle East is an increasingly important region for us, and we have strengthened technical support in the area through the expertise and presence of local partners who work in close cooperation with, and are strongly supported by Sandvik Coromant's Italian organisation based in Milan," adds Vertua.

Stand 14060 (Hall 14)

The vMonitor

Optilift-GL unit

Rockwell Automation set to showcase solutions

Rockwell Automation, A leader in industrial automation and information, will be once again be participating at ADIPEC this year.

Global demand for affordable energy and an increase in relatively low-cost natural gas supplies, increasing regulatory pressures and skyrocketing capital and operational costs make it challenging for oil and gas companies to balance operations and maintain profitability. Thus, industry and technical experts from Rockwell Automation will highlight technology and solutions to optimise production processes, maximise profits and reduce costs. Rockwell Automation will also look to address topics on reducing energy consumption, upgrading legacy systems and making better use of data, as well as showcasing signature products such as PlantPAx (Process Automation System) and vMonitor RTU, Wireless and Optilift solutions. At last year's exhibition Rockwell Automation, which supplies automation controls and drive systems throughout the Middle East, announced its purchase of digital

oilfield solution provider vMonitor as part of its plans to strengthen its business in the region's oil and gas sector. Rockwell Automation has

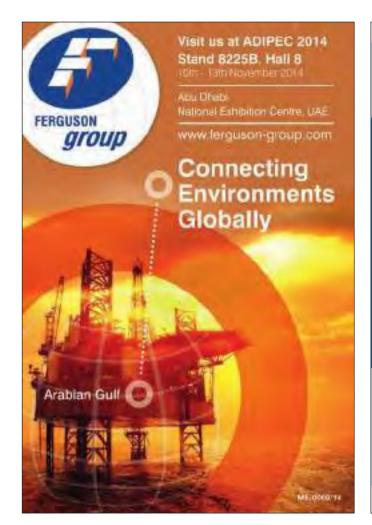
support teams in Abu Dhabi, Dubai, Bahrain and Egypt.

Stand 1320 (Hall 1)



UK - Worksop, Laser Cladding Technology

CANADA - Edmonton (On) - Guelph (Ab)







Email:sales@indianagroup.com

www.indianagroup.com





SFC to launch new process safety products

K COMPANY SMITH Flow Control will be exhibiting at ADIPEC in Abu Dhabi this year. Mike Fynes, SFC's sales and marketing director, discusses the company's participation.

What are SFC's aims at ADIPEC?

Fynes: We will aim to showcase both new and existing products, which greatly enhance valve safety and efficiency. Visitors will be offered the opportunity to discuss their requirements directly with our senior management team, who will also provide product demonstrations. We'll be extending our stay in the region by calling on end users to discuss specific requirements and provide product presentations if appropriate. We encourage visitors to come to our stand to request an onsite presentation or demonstration.

Is this the first time SFC has exhibited at ADIPEC?

Fynes: No. we've attended and exhibited at the show before and always found the level of interest by both new and existing clients to be extremely positive.

Is the company launching any new products or services?

Fynes: Our booth (8350) will feature a full array of process safety products, including demo units of our mechanical key interlocks fitted to a range of different valves. Our



valve management systems will also be on display - they proved incredibly popular at the event last year.

We're pleased to announce the global launch of SmartTrap, which is designed to ensure that vessel closure doors can only be opened when particular process conditions have been met. So, for example, this could mean that the key for opening the door will only be released when the pressure inside the vessel is released and no dangerous gases or residue are detected. This is achieved by permissive signalling, which can include (but is not limited to) pressure detection, gas detection, flow/level and pig detection.

We are also launching other new products at the exhibition, including TorkDrive, a valve torque limiting device, and SmartKey+, a key management system which records the movement of keys in real-time using RFID technology.

Are these products of specific interest to the Middle East?

Fynes: Definitely. Our sales to the Middle East have almost quadrupled in the last few vears due to increasing demand for SFC's valve safety and valve management products. Our presence in the region is vital for the company and we're continuing to develop relationships with local partners who have the knowledge and expertise to help consolidate our position.

Where are SFC's key markets?

Fynes: Our markets are truly global. Through direct sales and our extensive network of agents and distributors, our products can be found on projects right across the world. Our products are designed for the oil and gas, petrochemical, power, nuclear and water industries.

Is the company looking for partners and distributors in the Middle East?

Fynes: Following last year's event, we set up distributor relationships for Dubai, Qatar, Kuwait, Oman, Saudi Arabia, Abu Dhabi, Egypt and Iran. We're always keen to establish new relationships where partners can promote our products in their region. We have positioned ourselves to be a preferred supplier to several of the major operating companies and welcome discussions with new contacts.





CEMENTING COILED TUBING STIMULATION & FRACTURING SURFACE PRODUCTION MANAGEMENT DRILLING SERVICES
SLICKLINE COMPLETION WIRELINE SERVICES WELL TESTING INTEGRATED OILFIELD SERVICES ARTIFICIAL LIFT





Leading the way in asset integrity management

Leading asset integrity company Wood Group Intetech (WGI) will be exhibiting at ADIPEC this year for the fifth time. Oil Review spoke to its founder and director, Dr Liane Smith FREng.

GI HAS BEEN working with oil and gas producers for more than 20 years, helping them to enhance the safety and improve the availability of their operations. WGI's specialist engineers, consultants and software solutions support effective well integrity management, corrosion monitoring and materials engineering, addressing the full range of issues that challenge the integrity of assets. The firm operates internationally with offices located in the UK, Europe, Americas, Middle East, South East Asia and Australia, and has experienced continuing international success since its acquisition by the Wood Group in 2013.

The Middle East is the mainstay of the company's business focus, says Dr Smith, accounting for up to 30 per cent of turnover. "We've been working in the Middle East since 1998 and business has been building year on year as our reference list grows, much of it repeat business. The Gulf is a particularly good market for us, particularly Abu Dhabi, where we have an important set of customers in the ADNOC group of companies. We are also doing a lot in Qatar and Oman, while Saudi Arabia, Dubai and Sharjah are growing markets for us." The company appointed a new regional manager in Dubai earlier this year to drive this expansion, and further recruitment is underway, with a focus on attracting integrity engineering specialists.

Wood Group Intetech was formerly active in Libya and hopes to return there when the political and security situation permits. "There are very good engineering opportunities and we have received much interest in our products," Dr Smith comments. It is a similar situation in Egypt, while Wood Group Intetech's parent group, the Wood Group, is active in Iraq.

Strong demand

With increasing importance being attached to asset integrity management in the region, the company is experiencing strong demand for its services.

"We are the only company in the world that can offer integrity management from the well bore right through to the refinery - this is a key offering of the organisation," says Dr Smith. "Most companies tend to specialise in either upstream or downstream, but we have integrity management capability right the way through, and that

The operators are focusing on good integrity management to maintain their infrastructure into the future"



attracts a lot of interest. The Middle East is a mature, sophisticated market to work in: the operators in the region have the capability to be producing 50-60 years from now, and are focusing on good integrity management to maintain their infrastructure into the future. That maturity of thinking is what makes the Gulf a very special region for us."

The company's well integrity toolkit, iWIT®, which won a Queen's Award for Enterprise, has been established for some time in the ADNOC group of companies, and the company has recently won a major contract with Qatargas. WIG's position as a world leader in well integrity is set to be further strengthened with the launch in September of its cloud-based global well performance database, iQRA®, which includes data from over 1,000 wells and enables users to benchmark well reliability figures against a global dataset.

The company's corrosion estimation software, ECE® is also very well established in the Middle East as a strong guiding tool for corrosion prediction and materials selection, Dr Smith adds. "With major new investments taking place it is useful to have a tool like ECE® to gain an insight into how corrosive these new projects are, and to be guided in the selection of materials. Additionally, there is interest in identifying how much corrosion might have taken place in aging infrastructure."

Comprehensive approach

"Our approach to all of our work is very comprehensive," Dr Smith continues. "We hand over a complete functioning system and ensure







Innovation to do more

Specialists in engineering, design, fabrication and erection of:

- Fixed & Floating Roof Storage Tanks
- Pressure Vessels, Shaft Kilns, Stacks, & Silos
- Heavy Steel Structure
- Maintenance at refineries and power plants







P.O Box 109, Riyadh 11383, Saudi Arabia Telephone: +966 11 265 3001

Fax: +966 11 265 1109

Website: www.metscco.com Email: metscco@metscco.com







our clients obtain the maximum value out of it. We assist the operators to export data from old legacy systems into the new software so they become operational very quickly, with all their history in place. At the same time, we put our trainers into the organisation to comprehensively train what can be very large numbers of people we've just finished delivering some software to PDO Oman where my engineer trained 40 personnel. We will return when there is a need for retraining, for example, when there is a change of personnel."

Skills shortages

To what extent have the well known skills shortages impacted the business? "This is an industry-wide problem and is not unique to the Middle East, although the situation is guite acute here," says Dr Smith. "We have come to the conclusion that if you can't recruit skilled and experienced people you have to grow them yourself. We run a graduate scheme where we take on young graduates and build up their experience, including a spell at our Head Office in the UK to enable them to get a thorough understanding of what we do. We are also assisting some of the operators with the training of their own graduates, offering short specialist training courses in areas such as corrosion materials."

Dr Smith is a strong supporter of initiatives to encourage women to pursue careers in engineering, which are receiving an increased

In some ways the Middle East could steal a march on the rest of the world"

focus both in the UK and in the region. "In some ways the Middle East could steal a march on the rest of the world," she comments. "In the UK, only around 12.5 per cent of undergraduate engineers are female, but the impression I get is that it is higher in the Gulf, at least in the UAE, which is the country I am most familiar with. A number of my friends and colleagues in the Middle East oil industry are telling me that their daughters are studying electrical engineering or mechanical engineering, so we can expect a groundswell of graduate engineers. There are also a number of female engineers working in the oil companies here and earning a high level of respect from their male colleagues. I think in general it's a transition period for the industry, and we can expect to see more women engineers entering the profession internationally."

Dr Smith's personal experience of doing business as a woman in the Middle East has been very positive. "I have always been treated with courtesy and respect, reflecting the nature of social interaction in the region," she comments. "I haven't found gender to be an issue at the professional engineering level. If you can demonstrate that you can provide a service and add value, issues such as race or gender are irrelevant."

The Middle East is a very positive place to work, concludes Dr Smith, despite the occasional frustrations, such as lengthy decisionmaking processes. "It can take a long time for a project to get the goahead, but, in my experience, once you do get a contract, the process is totally secure and straightforward – you deliver and you get paid. We have never been let down anywhere in the Middle East, and it's definitely a region I consider very secure to do business in."

Stand: 3110 (Hall 3)



When oil and gas engineers need high-performance, cost-effective solutions, they partner with Sulzer.

Pumps Equipment

- State-of-the-art solutions for performance reliability
- Intensive research and development in fluid dynamics, process-oriented products, and special materials

Rotating Equipment Services

- Customized and innovative service solutions for compressors, turbines, pumps, generators, and
- Reduce maintenance time and cost, and improve the efficiency and reliability of your equipment

For your convenience, we are strategically located with sales & service facilities in Abu Dhabi, UAF, and Riyadh, KSA. Find out, how we can develop the ideal solution for you! Visit us at ADIPEC 2014, Booth 628, Hall 6.

Sulzer Pumps Middle East FZCO

SULZER

PO Box 262097 Jehel Ali Free Zone, Duhai United Arab Emirates abu.dhabi@sulzer.com

Sulzer Turbo Services Venlo b.v.

Peter van Neerven Phone +31 65 378 7856 peter.vanneerven@sulzer.com

www.sulzer.com





ASIA'S LARGEST MANUFACTURER OF CEMENTING EQUIPMENTS.

Centralizers, Float Equipments, DV Tools and Rubber Cementing Plugs.

- SledgeHammer Oil Tools Pvt. Ltd., INDIA.
- SledgeHammer Malaysia SDN BHD, Malaysia.
- SledgeHammer Gulf DMCC, U.A.E.
- SledgeHammer Oil Tools International, Kingdom of Saudi Arabia.





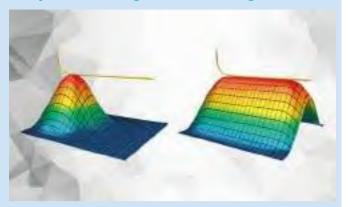


All-electric intelligent well system combats early water and gas breakthrough

WELLS WITH LONG horizontal laterals are sometimes susceptible to early water or gas breakthrough near the heel of the well. Premature breakthrough can guickly transform a healthy well into a water or gas producer, leaving hydrocarbons unrecovered in the reservoir.

Several types of systems have been developed over the years to combat early water and gas breakthrough, but each has its limitations. Passive inflow-control devices (ICDs) cannot be adjusted after the well goes on production, rendering a once-optimised ICD completion less effective when fluid properties and reservoir conditions change. Hydraulic intelligent well systems offer adaptable production control, but they require multiple lines per sleeve, limiting the number of zones you can control in a single production string. Mechanical sliding sleeves can also help with early breakthrough, but they require intervention to actuate and have no choking capabilities, meaning they are either fully open or fully closed.

Baker Hughes, the leading supplier of oilfield services, products. technology and systems to the oil and natural gas industry, recently introduced the MultiNode all-electric intelligent well system to enable operators to monitor and remotely control an extended number of production zones in both cased and openhole completions. If water or gas breakthrough is detected in one part of the lateral, the active flow-control device (AFCD) in that zone can be choked back or closed completely to lock out water and gas. Up to 27 AFCDs can be run in a wellbore and controlled from the surface with a single tubing-encased conductor (TEC) cable. Each AFCD includes six customisable choke settings—including the open and closed positions—and can be adjusted from the surface. The surface controls can also be accessed using a SCADA interface to remotely monitor



Early water or gas breakthrough leaves hydrocarbons unrecovered (left): using AFCDs helps balance production across the lateral and increases ultimate recovery (right)

and control production zones from virtually anywhere.

The all-electric intelligent well system combats early water and gas breakthrough in long laterals and helps operators actively balance flow in production zones.

www.bakerhughes.com/multinode

Stand: 8210 (Hall 8)



VISIT US AT ADIPEC HALL 12 STAND 12230

QUALIFIED IN ADCO, ADGAS, TAKREER...

your source for instrument bulk material



GRP INSTRUMENT ENCLOSURE & SUNSHADE



DOUBLE FERRULE TUBE FITTINGS



INSTRUMENT MANIFOLD

bulk srl

Office:

via Giotto, 7 20032 Cormano Milano - Italy

Manuafcturing unit & Warehouse:

via Cimabue, 1/A 20032 Cormano Milano - Italy

www.bulksrl.it info@bulksrl.it

tel. +39 02 66307514 +39 02 66307430

fax +39 02 93664351

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV

= ISO 9001 =







With Seco, you benefit from strong local support backed by a global network of resources. From process optimisation to inventory control to creation of full turnkey solutions, you receive more than innovative cutting tools from Seco. You get the expertise and experience needed to maximise your performance.



PUT PROCESS IMPROVEMENTS IN YOUR PIPELINE





Reviewing old jack up rigs in the Middle East

MORETHAN 60 per cent of jack ups operating in the Middle East are aged beyond their intended design life. In the wake of recent offshore accidents, oil majors in the region are being very careful in renewing the contracts of these aged units. Two major oil companies in the region contacted DNV GL's jack up service centre in Dubai to assess 11 of the aged instruments against their own integrity standards. This will help them to finalise their decision to extend the contracts on these units. They also required DNV GL to recommend necessary actions to keep these units in service for safe operation with less downtime. After the merger, the offshore iack up resources have been strengthened. and the service centre can cater to client needs.

"Our jack up service centre is able to carry out high value technical evaluation services related to jack ups locally in Dubai after combining the expertise of DNV. GL and Noble Denton. For example, in one of the life extension studies, our customer was not able to produce any wave data. Through the



MP Bijali, regional offshore manager for the Middle East and India, DNV GL

experience and database of Noble Denton, we were able to complete the studies," said M P Bijali, regional offshore manager for Middle East and India for DNV GL.

"We were also able to calculate the fatigue utilisation index of the rigs thanks to Noble Denton's marine warranty services even though the units' past operational history was not available from the rig owners. As many rigs are sold and re-sold during the process, operational history is often lost."

These kinds of services require a multidisciplinary team of specialist engineers in structural, mechanical, electrical and controls, drilling systems and safety systems. DNV GL will recommend the remedial actions to bring these 11 units to an acceptable level. The fatigue life of the structures was assessed as per the company guidelines. The study will help oil majors to assess the condition of the rigs in order to review contract extensions.

Stand:2140 (Hall9)









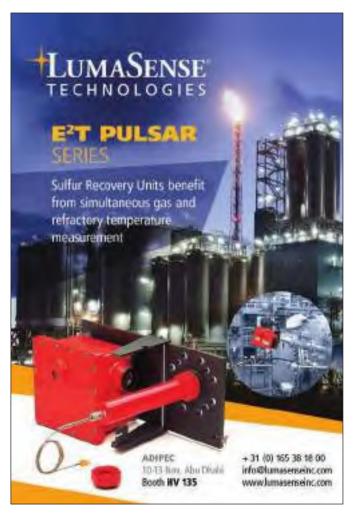


For OIL&GAS, MINING, ENERGY and **CONSTRUCTION Projects, we provide** "Turnkey Camps" & "Prefabricated **Buildings**" such as:

- Accommodation
- Offices
- Dormitories
- Kitchen / Dining Halls Industrial Buildings
- Warehouses

info@tepeprefabrik.com.tr www.tepeprefabrik.com.tr







SUPPLIER OF CONTRACT & INDUSTRIAL SCAFFOLDING SERVICE FORMWORK/SCAFFOLDING SYSTEMS, HIRE AND SALES

Technical Access Services specialises in the supply of high quality, safe scaffolding and specialized access services to the Oil and Gas, Power, Construction and other major industries. At Technical Access Services (TAS) our mission is to offer innovative solutions which increase safety and efficiency while being cost effective and complying fully with international standards and legislation.



Dubai

PO Box: 127463 Tel: +971 4 4391500 Fax: +971 4 4523330

Abu Dhabi

PO Box: 92765 Tel: +971 2 5555166 Fax: +971 2 5555156

Sharjah

PO Box 41829 Tel: +971 6 7487050

E-Mail: info@tasuae.com | Web: www.tasuae.com

ACCESS SOLUTIONS THROUGH INNOVATION

Hi-Force launches innovative three-speed hydraulic torque wrench pump

THE UK'S LEADING manufacturer of hydraulic tools recently launched a new range of hydraulic torque wrench pumps. The TPA and TPE range of air and electric-driven pumps compliments Hi-Force's existing range of bolting products which provides effective and safe bolting solutions to a wide variety of industries.

These torque wrench pumps created by Hi-Force's research, development and design team, based at the manufacturing facility in Daventry, UK, have a high speed three-stage design which provides a faster flow at midrange pressure. The pumps multi outlet four-way design allows for four hydraulic torque wrenches to be used, simultaneously providing an even compression of the critical leak sealing gasket on flange joint connections. Both the TPA and TPE range are compatible for use with

hydraulic torque wrenches. An automatically activated oil cooling heat exchanger. fitted on all electric models as standard, cools the pump and the hydraulic fluid, extending the service life of this reliable

range of pumps. The TPA air

the TWS-N square drive and

TWH-N low profile female

hexagon design Hi-Force

operated models incorporate an exhaust radiator located inside the oil reservoir which also helps to keep the oil temperature under control during high usage operations. For ease of use and safety, the TPA and TPE models

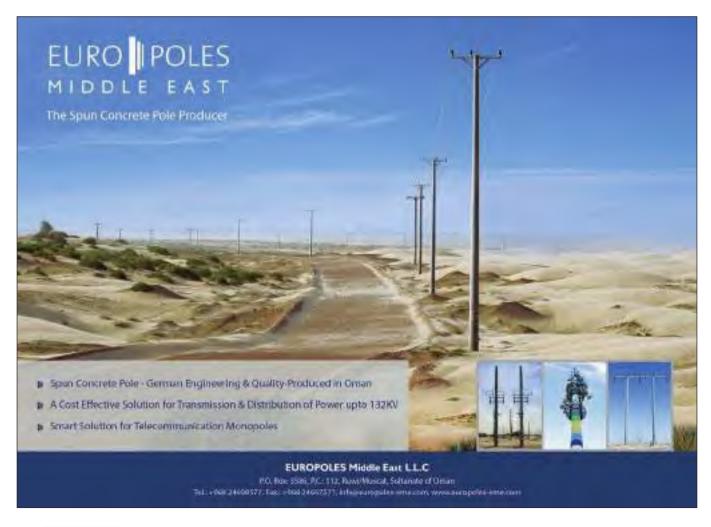
> incorporate a 5m pendant cable which allows for a considerable and safe distance between the pump and the bolting application.

This leading-edge range of torque wrench pumps provides consistent and reliable hydraulic power and can withstand the demands of operation in harsh environments. The compact and rigid roll frame provides protection for the pump as well as a convenient method of maneuvering the pump on site. The lightweight aluminium reservoir, with a maximum capacity of seven litres, makes the TPA and TPE range one of the lightest hydraulic torque wrench pumps available in the market.

For further information please visit www.hi-force.com.

Stand: 240 (Hall 2)







And the Knock Out Drum. And the Separator. And the Feedwater Heater. And the Sump.

When process applications require best-in-class level control technology, you've got to play your cards right. The Eclipse® Model 706 guided wave radar transmitter can deal with nearly any process condition — even the most challenging.

- Superior signal-to-noise ratio provides the most accurate and reliable level measurement available
- Extensive line of probes, including overfill safe probes, handle a variety of level challenges
- Advanced diagnostics take the user interface to new levels of convenience and functionality
- HART® and FOUNDATION fieldbus™ protocols provide full digital communications capabilities
- Convenient pre-configuration reduces installation time apply 24 VDC and walk away
- Quick-disconnect probe coupling makes servicing easier

Don't gamble with reliability. Contact Magnetrol® — the guided wave radar innovator — to learn more about the ECLIPSE Model 706 transmitter.







Investing in the next generation of local talent

Mariam Abdullah Al-Hendi, winner of last year's Young ADIPEC Engineer award and the Young ADIPEC ambassador for 2014, speaks to Oil Review about inspiring youth to follow a career in oil and gas, training as a graduate employee, and how by encouraging women businesses tap into a country's full potential.

DIPEC 2013 SAW the launch of Young ADIPEC, a new initiative and programme of events designed to spark an interest of the oil and gas industry in the country's youth. Similarly, the 2013 ADIPEC Awards announced that it was to include a new awards category that celebrated the achievements of young people working in the sector, titled the Young ADIPEC Engineer award. The inaugural award last year was won by Mariam Abdullah Al-Hendi, a mechanical engineer at GASCO.

The current trend in the UAE, and across the Gulf as a whole, for nurturing young talent is a direct consequence of the supposed skills shortage that the oil and gas industry is experiencing. In a recent study titled Global Oil and Gas Workforce Survey Q1 2014, by Air Energi and OilCareers.com, 44 per cent of the industry professionals questioned identified the skills shortage as the biggest threat to the oil and gas industry worldwide. Furthermore, of those 500 individuals surveyed, 80 per cent said that they felt the skills shortage was real from their experience in recruiting.

The government is really focused on development and empowering the younger generation"

By encouraging the next generation to pursue a career in oil and gas, companies in the UAE are arguably not only ensuring a greater level of presumably enthusiastic and knowledgeable applicants for future vacancies, but also tackling another topical issue of staff retention in the region by employing more localised talent, otherwise known as 'Emirate-isation'.

In the lead up to ADIPEC 2014, Young ADIPEC is running an outreach programme offering students across Abu Dhabi and the western region a line up of events, including site visits to oil fields belonging to leading oil and gas companies, such as ADNOC, Al Mansoori Specialised Engineering, Total, and Schlumberger.

Last year's Young ADIPEC Engineer award winner Al-Hendi has returned as the ambassador for this year's Young ADIPEC initiative.

"Such opportunities give students a chance to lead by example, show what they are capable of, and set themselves apart from the rest," she said.



GASCO mechanical engineer Mariam Abdullah Al-Hendi is the Young ADIPEC ambassador for 2014

Looking beyond ADIPEC initiatives, however, Al-Hendi has expressed that she thinks more guidance and direction is needed in the region's schools to help students consider and work towards a future career - something she believes was lacking while she was

"As for guidance, I feel that back in my days there were no such initiatives and you didn't really know what you wanted to be until you graduated from school," she commented.

"I feel some children really need that push so they can see that 'I can be that person, I can do that, I can have that job'."

Al-Hendi added that schools could benefit from guidance in the form of councillors who allow students to discuss their interests and hobbies, and look at how they can then be shaped into future

She said, "They really need to focus on that and if you had that [quidance in place] more children would be driven towards a better

But with the skills shortage and staff retention posing current and pressing problems in the industry, how are the UAE's graduates those who presumably know the direction they want to take and have some knowledge on the topic - faring in the industry?

"I feel the majority of people go into oil and gas as it's a huge part of our economy," she commented.

A mechanical engineer for GASCO, which is part of the ADNOC group, Al-Hendi believes that public sector oil and gas companies tend to be sincere in their approach to the recruiting and training of

"The public sector [companies], I feel, they focus on attracting, training, and developing the newer generation of graduates," she

"Now the government is really focused on development and empowering the younger generation, giving you [graduates] that strength to become whatever type of leader you want."

This is an attitude that is evidently shared by many companies,



f 📵 in 🚇

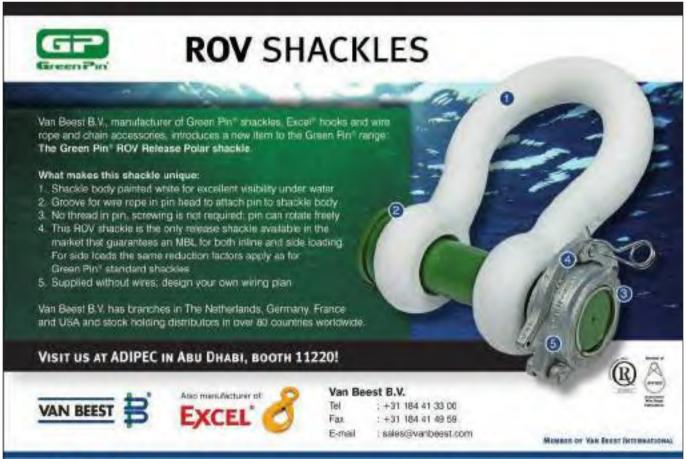
Visit us at ADIPEC, Stand 6130

LED lighting for the most demanding applications



- 5 / 10 year full performance warranty Superior visual acuity
 Certified for hazardous areas Low maintenance IP 66 rated
 vibration resistant Good visibility Robust, low weight design No re-strike delays Savings in energy and maintenance Low heat & Improved T-ratings
 - CEDEE

Dialight • sales-europe@dialight.com • +971 (0) 4 319 7686 www.dialight.com



www.vanbeest.com



both from the public and private sector, and industry professionals in the UAE and across the Gulf nations.

For example, speaking on the topic of Young ADIPEC 2014, Ibrahim Al-Alawai, Al Mansoori Specialized Engineering deputy CEO, encouraged the efforts being made in the Emirates and emphasised the importance of what he calls 'nurturing home-grown talent'.

"This talent pool has a strong network of contacts and also an understanding of the cultural context that expatriates may not always offer," he said.

"Second, tapping into the local workforce is sustainable - the professional environment in this region is very transient and expatriates may often leave to go home of seek other opportunities. whereas UAE nationals are more likely to stay in their home country."

The problems of staff retention and the skills shortage can, in many ways, be seen to go hand-in-hand. Many professionals have underlined the large number of expatriates employed in the Gulf countries, and competition in terms of rates and salaries from regions such as Asia, as main reasons for why many companies have trouble retaining employees.

With every staff member that leaves a business they take with them valuable skills and experience that they have gained and, as a result of the high turnover, these companies could become increasingly reluctant to invest in training their new employees.

Al-Hendi, having joined GASCO in 2011, believes that providing effective training programmes to graduate employees, which is then continued and added to throughout an individual's employment, as well as succession planning, are the key to retaining staff over the long term. In turn, this would allow a company to benefit from more experienced and knowledgeable staff.

Talking about her personal experience as a graduate in her company, Al-Hendi said, "As an employee you know what's expected of you, and you know what the company owes you, when you need to be promoted, and when you need to move to the next stage."

"For me, environment is very important, and respect, and knowing that any job you're doing is adding value," she added.

"If the environment is really supportive and recognises you as a valuable member of a team it makes you want to stay."

Since winning the award last year, Al-Hendi has not shied away from highlighting the role of women in the oil and gas industry and

My responsibility is to represent female Emirati engineers"



The Young ADIPEC initiative started at the oil and gas exhibition in 2013

particularly from encouraging young women to follow careers in the

"For me it is about being a role model," she explained when asked about her time since winning the award. "My responsibility is, firstly, to represent female Emirati engineers in a professional atmosphere, trying to show them what exactly it is to be a career woman in the oil and gas industry."

As well as the Young ADIPEC initiative, last year saw the debut at ADIPEC of its 'Women in Industry' feature. For 2014 it involves a series of events and panel discussions in the run-up to the exhibition, which are intended to bring together the industry's leading females and fuel the current rise in women pursuing careers in oil and gas. 2013 also saw the addition of another new category to the ADIPEC Awards, the Empowerment of Women in the Gas and Oil Industry.

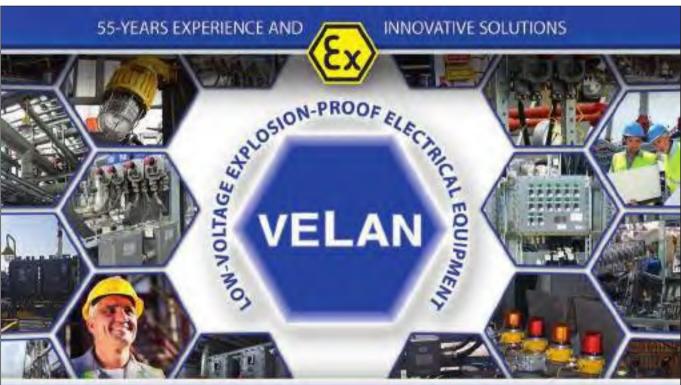
Similarly to Young ADIPEC, by encouraging and focussing on those women looking to enter the energy sector and the large number that are already working in it, companies will benefit from a wider pool and resource of potential local talent.

As Al-Hendi said, "People subjecting women to gender profiling must realise half the global population is female, and not harnessing the talents of women because of their gender is not only discriminatory, but also a waste of human resources."

With both the skills shortage and issue of retaining staff presenting an ever-looming challenge to the optimised productivity of the UAE's energy sector, it comes as little surprise that governments and companies are choosing to tap into the full potential of local talent available to them as means of creating a stronger, more steady, more knowledgeable workforce.







- Explosion-proof lighting equipment
- Explosion-proof junction boxes
- Explosion-proof control panels and switchboards
- Explosion-proof push-buttons

- Explosion-proof alarm stations
- Explosion-proof cable glands and fittings
- Explosion-proof enclosures
- Explosion-proof plugs and sockets

www.velan-td.com e-mail: velan@velan-td.com

French firms to demonstrate host of products and services

A TOTAL OF 30 French companies will be in attendance at this year's ADIPEC, where they will be showcasing the latest in French innovation and technology.

Organised by UBIFRANCE, the France Pavilion will include companies seeking to consolidate or strengthen their position in the Middle East, including Gas Viewer, which supplies infrared cameras for real-time detection of gas leaks, fluid pumping solutions firm PCM and Kermel, a supplier of filters for technical applications.

The French oil services industry provides 80,000 high-level technical and scientific jobs, and generates a turnover estimated to be in the region of €35bn (US\$44.6bn). According to UBIFRANCE, the sector has garnered international recognition for its technological solutions, especially in the deep and ultra-deep offshore markets.

The French oil services sector generates more than 90 per cent of its turnover abroad, and the country ranks among the world's largest exporters. UBIFRANCE said that the country's performance in foreign oil and gas markets stemmed from "the high technological standards of French companies that are maintained through ambitious research and development programmes".

The country is also home to a number of international oil and gas players, including Total and GDF Suez, both of which have a major presence in markets throughout the Middle East.

Some of the other companies set to exhibit on the French Pavilion include 3X Engineering, which provide repair systems for water mains, gas and oil lines and



The French Pavilion at ADIPEC will feature a host of companies including Drillstar Industries. Technogenia and Sofren

electrical power supplies, fire protection company Al Group, oil drilling equipment firm Drillstar Industries and environmental engineering company Ecogeosafe.

Other names will include magnetic bearings manufacturer SKF Magnetic Mechatronics, energy sector engineering consultants Sofren and anti-wear protection solution provider Technogenia.

To visit these companies, along with a host of other French manufacturers, service suppliers and product distributors for the oil and gas sector, visit the French Pavilion in Hall 9. blocks 92-20. 92-25. 93-20 and 93-24. at Abu Dhabi National Exhibitions Centre (ADNEC).

Going off grid with Carré Products

FRENCH SMART ENERGY management expert Carré Products will be showcasing two innovative product ranges at ADIPEC 2014.

The designer and manufacturer of eco-efficient solar lighting products will look to use its platform on UBIFRANCE's French Pavilion to promote its Lusola range, consisting of bollard lights and columns, and its Solaled range, consisting of lamps of up to eight metres. The firm also offers a number of premium products for industry professionals.

Carré Products said it hoped to tap into the Middle East's economic growth by utilising the region's abundance of sunlight throughout the year to provide oil and gas operators and contractors a host of lighting products that do not need to rely on the power grid.

The batteries used by the company have been manufactured by French Nickel battery manufacturer ARTS Energy and have the ability to operate in extreme conditions of up to 70°C.

Carré Products' high-performance solar lighting offers an alternative to conventional lighting, while radio communication technology developed by the company enables lighting units to communicate with each other and operators to remotely monitor their systems.

The company offers smart solutions through tailored electronic control and management, while a mini-computer monitors the operation of the various components and the outside environment. Through these systems, the products automatically adapt to their environment and weather conditions,



Visitors at ADIPEC will be able to found out how solar lighting products from Carré Products can help their oil and gas operations

which acts to maximise capacity and increase their service life. A special feature of Carré Products' offering is that its products' batteries can last up to 10 years without maintenance.

Carré Products' team is made up of experienced engineers and technicians who graduated from prestigious French schools and have worked at major industrial corporations including AREVA and STMicroelectronics.

Stand: 9225B (Hall 9)







At Univar Oil & Gas, we're creating customers for life.

With nearly a century in the industry, Univar Oil & Gas has helped oilfield services companies accelerate their business. Partnering with Univar gives you an advantage. We offer a suite of services across the Oil & Gas spectrum and provide our customers with a one-stop, dedicated global resource. Over the past century, we have built strong relationships with leading suppliers, by sourcing 4,500 chemicals from more than 3,500 producers. We utilize that buying power for you—to deliver top-of-the-line products at a better price point.

- Comprehensive chemical portfolio
- > Proven oilfield logistics expertise
- Dedicated. 24/7/365 customer service
- > Inventory management
- Custom blending by Magnablend

- > Technical expertise and consultation
-) Import and export
- > Safety and regulatory compliance
- > Full service support for the entire spectrum upstream/offshore/midstream/downstream

Dassault Systèmes set to showcase 3DExperience Platform software

THE 3D DESIGN software company Dassault Systèmes is offering visitors at ADIPEC 2014 the chance to interact with its 3DExperience Platform through a number of demonstrations.

Dassault Systèmes, which specialises in 3D Digital Mock Up and Product Lifecycle Management (PLM), will be showcasing its solutions for the upstream and downstream sectors.

Hichem Ben Cheikh, general manager Middle East of Dassault Systèmes, said, "In the Middle East there is a unique 50/50 split in the focus between upstream and downstream operations. Owners and operators in the Emirates are investing to progress downstream operations aimed at increasing revenues.

"Dassault Systèmes responds to this regional business driver with 3DExperience Platform based Industry Solution Experiences. These global industry proven solutions are helping to move the Emirates oil and petroleum industry to a new position of innovation excellence."

The 3DExperience Platform is designed to support efficient energy field and asset management with a single unified stakeholder accessible resource that turns data into knowledge, allowing it to be used as a valuable business asset. This data can include 3D digital models of engineering, construction, refining plants and equipment.



Through the 3DExperience Platform, operators can produce digital models of refining plants and equipment

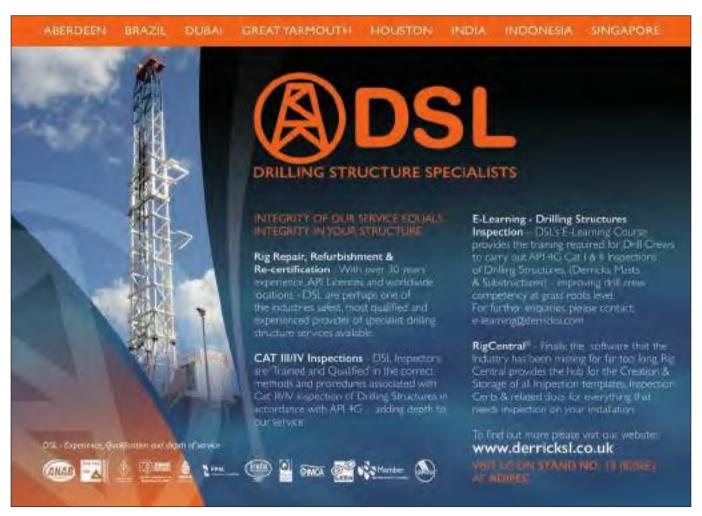
According to the French software company, there are currently six dedicated Dassault Systèmes Industry Solution Experiences that are available or under development, most of which will be demonstrated at ADIPEC.

These six Industry Solution Experiences include 'Winning Tender', which intends to improve project win rates through collaboration enabling knowledge capture and management of end-to-end proposal processes; 'Single Source for Speed', which is designed to deliver unified and collaborative 3D design and engineering experiences; and 'Safe Plant Operation and Maintenance'. providing the means to efficiently reengineer, operate, train for, maintain and

shutdown assets safely and at a lower cost.

In view that, according to Dassault Systèmes, many projects overrun delivery dates and exceed their budget by 30 per cent, it also includes 'Optimised Plant Construction', which aims to improve project productivity by minimising development time, costs and resources through streamlined transmittals and collaboration using 3D plant construction and operation simulations.

Stand: 13070 (Hall 13)







Critical processes Up, Mid and Downstream

WIRE & CABLE MANAGEMENT

Ty-Met*
T&B Cable Tray

EX PROOF LIGHTING

ENCLOSURES & JUNCTION BOXES

FURTHER TABLE PROTECTION & CONNECTIVITY & GROUNDING

Further Table Tray





Thomas & Betts designs, manufactures and supplies technically advanced products for electrical systems. Exploration, extraction, refining, transporting and dispensing operations require reliable, robust and cost effective equipment.

Our solutions solve real-world problems. Thomas & Betts offers the industry's most advanced materials distribution system, and our commitment shows in our unmatched products, unequaled service and loyalty from end-users and OFMs.









Globus solutions for hand protection at ADIPEC

HAND PROTECTION AND safety glove manufacturer Globus will be exhibiting its portfolio of innovative protective gloves for the oil, gas and petroleum industry at ADIPEC 2014.

Hands are an essential tool as the contact point for every worker in the oil and gas industry making gloves an essential piece of work wear. Gloves, which are specified to match both the hazards as well as worker requirements, can be invaluable for the 'task in hand' and positively lessens hand accident rates and save costs at the same time.





Globus' Showa 380 nitrile foam grip

from impact, chemicals, cuts, abrasion, water and punctures. As well as reducing the risk of hand accidents, the specialist gloves can also provide powerful grip in wet and oily handling conditions. They should also be comfortable to wear and provide an ergonomic fit. This can help to reduce the incidence of workers removing gloves who find them uncomfortable and subsequently putting themselves at risk.

Steve Shale, marketing manager at Globus, said, "We are delighted to be showcasing our hand protection solutions containing innovative technology at ADIPEC. Oil and gas workers shouldn't be at risk of hand injuries caused by ineffective personal protective equipment (PPE). When hand safety challenges are analysed, specific task-related gloves can be specified that not only protect the workforce, but encourage productivity too. Our gloves are designed to meet the rigorous requirements of the oil and gas industry and also enhance the wearer's performance which can ultimately boost productivity."

In conjunction with health and safety teams, Globus officials said that they can help build hand protection policies for organisations operating in this sector. The range fulfils all legal obligations to provide safe PPE in the workplace, contributing to widespread wearer acceptance.

Stand: 8225D (Hall 8)

SPX to showcase pump technology for offshore use

GLOBAL MULTI-**INDUSTRY** MANUFACTURER SPX, with approximately US\$5bn in annual revenue, has been exhibiting regularly at ADIPEC for over 10 years.

This year, the company will be showcasing a selection of technology, all designed to offer safe. reliable, high



Bran+Luebbe double-acting double diaphragm pump head

performance operation. This will include the innovative Bran+Luebbe double-acting double diaphragm pump head. Designed specifically for offshore use, it offers increased pumping capacity and a muchreduced footprint compared with equivalent single-acting pumps with a leak-free design.

It will also be showing the GD Engineering Bandlock quickopening closure, which is a well-proven high pressure closure technology, setting the standard in reliability, safety and integrity. Several other SPX brands and products will also be on display including Plenty filter technology, mixers, waveguide dryers, APV heat exchangers and ClydeUnion pumps.

SPX experts will be at the venue to discuss its advanced capability in producing solutions which offer proven high performance, reliability, safety and sustainability. SPX will also be looking to develop strategic partnerships and alliances, network with new prospects and current customers, further deepen its understanding of the latest market drivers in the industry.

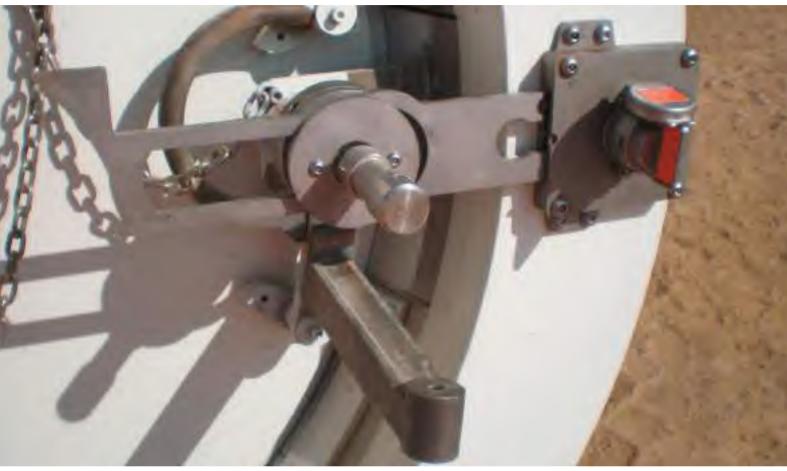
The company's highly-specialised, engineered products and technologies are concentrated in flow technology and energy infrastructure

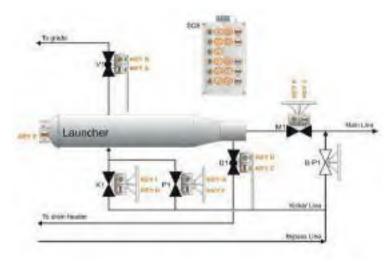
Many of SPX's innovative solutions are playing a role in helping to meet rising global demand for electricity particularly in emerging markets, and its products include critical flow components for oil and gas processing, power transformers for utility companies, and cooling systems for power plants.

Stand: 3240 (Hall 3)

ARE YOU LOOKING FOR PRECISE GASKET CUTTING? Non Asbestos Sheets. (CNAF) Graphite With thin Metal Inserts Ptfe Sheets **Rubber Sheets** Cork Any profile **INMARCO FZC** Accurate Optimal utilization of Materials PO Box 120284 SAIF Zone Short lead time Sharjah, UAE **INMARCO** We can use autocad Tel: +971 6 5578378 drawings provided Fax: +971 6 5578948 by customer Web: www.inmarco.ac Email: info@inmarco.ae We cut them on CNC based Router at no extra cost

ALCATRAZ INTERLOCKS MEETS THE HIGHEST STANDARD WHEN IT COMES TO THE SAFETY OF PIGGING SYSTEMS.







A mechanical key interlocking system assures a predetermined sequence to be followed while loading and unloading pig traps. Alcatraz Interlocks can be installed on the Closure doors. Main valves, Vent valves, Drain valves, Pressure valves and Kicker valves. The system also ensures that the outlet valves are fully open when a pig passes through.

ALCATRAZ INTERLOCKS SAFETY BY DESIGN

www.alcatrazinterlocks.com



Specialised

coating solutions

Gobal manufacturer of decorative paints, marine, protective and powder coatings. Jotun is set to demonstrate its coating solutions to leading industry professionals at ADIPEC 2014.

What does Jotun hope to gain from **ADIPEC 2014?**

ADIPEC is a strategic platform for Jotun protective coatings and we look forward to engaging with key stakeholders are this vear's event. Our continued participation at one of the largest petroleum exhibition and conference in the region is in line with our commitment to introduce and showcase our latest and customized innovations that have been developed specifically for the fast evolving Middle East region.

At this year's ADIPEC, we hope to meet with leading industry players in the oil and gas sector and demonstrate our specialised coatings concepts and solutions to key customers.

What new products are you looking to highlight at this year's show?

We will showcase our Jotachar JF750 meshfree Passive Fire Protection (PFP) product and demonstrate its key features and benefits, including efficient reduction in installation time and material costs in offshore and onshore facilities. We will also feature a diverse portfolio of anti-corrosion and fire protection products that have been designed for the oil and gas industry.

Recent testing has shown that Jotachar JF750 demonstrates exceptional jet fire performance in the ISO 22899 test - proving steel protection against jet fire for up to two hours without the need for any additional mesh reinforcement, which is an industry first. Jotachar JF750 has also passed critical four-bar blast overpressure tests without the need for additional reinforcing mesh. This proves that Jotachar JF750 withstands severe explosion and blast forces with no detachment. Key fire and blast resistance testing was witnessed by representatives of Lloyds Register of London.

Jotachar JF750 is also fully compliant with NORSOK M-501 Revision six, a global standard determining requirements for the selection of coating materials, surface preparation, application procedures and

inspection for protective coatings to be applied during the construction and installation of offshore installations and associated facilities. The NORSOK standard is considered by industry professionals as the most rigorous durability and corrosion standard.

When was the mesh-free PFP launched and how have customers responded to it?

We unveiled our Jotachar JF750 during last vear. It is the only mesh-free epoxy intumescent coating solution available in the market, where jet fire protection is required for safety critical steel structures, divisions and vessels.

Major yards and professional PFP applicators have immediately seen the benefits of this breakthrough technology. Jotachar JF750 ensures that both maintenance and repair becomes much simpler, therefore requiring less time and cost. We anticipate that Jotachar JF750 will be a game changer for them and the industry as a whole.

Which industries are you specifically targeting with Jotachar JF750?

The Jotachar JF750 has been developed to address the demands and requirements of local offshore operators, seeking stronger protection from jet fires for their offshore assets and ensuring compliance with stringent international offshore safety standards. Anyone working with meshrequiring systems knows that installation is a time and labour intensive process. Mesh installation involves stringent certification rules such as overlap measurement and installed depth within the system.

How is business in the Middle East and which markets hold the most business for Jotun?

The Middle East, India and Africa (MEIA) is one of the fastest growing geographies for Jotun's protective coating solutions and we are committed to develop customised



Jotun supplied its JotacharJF750 to RWE DEA Disoug Gas Refinery in Egypt

innovations that meet the specific needs of different industries in this region.

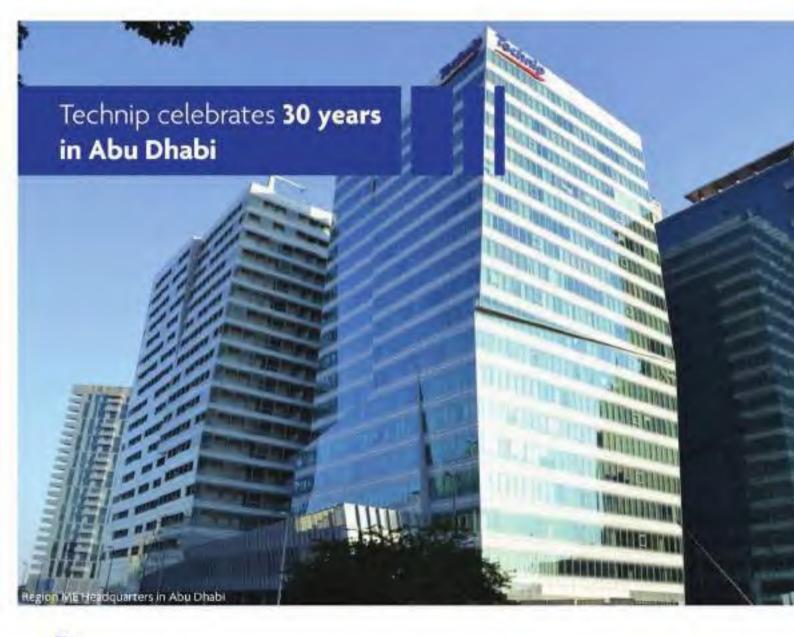
We've strengthened our presence in the Saudi Arabia and opened up our third manufacturing facility. We also have three factories based in the UAE and in Libva, and have plants in Oman, Yemen, Egypt, India and Pakistan. We've also placed an emphasis on entering emerging markets and increasing our sales capacity.

We've witnessed huge growth in structural steel and oil and gas segments as a result of the development of numerous offshore projects in the UAE and across the region. We also expect massive expansion projects to take place in Saudi Arabia, Kuwait and Qatar. In order to meet the growing market needs, we are currently operating 11 manufacturing units across the MEIA and work is underway to introduce two more manufacturing facilities, one in Egypt and another one in Oman.

Looking forward, how will business develop and progress over the next 10

For Jotun Protective Coatings, the MEIA region closely follows South East Asia, Pacific and North East Asia in terms of sales. Future prospects for Jotun protective coatings in the Middle East are bright, given the heavy investment in various infrastructure projects across key countries like UAE, Qatar and Saudi Arabia.

Stand: 9210 (Hall 9)



With 2000 employees in the Middle East

At Technip in the Middle East, our specialized workforce of 2000 multinational staff, equivalent to around 3,000,000 man-hours per year of high-end project services, is geared up to deliver ambitious energy infrastructure projects, Onshore, Offshore and Subsea with services ranging from Master plan developments, Feasibility studies, Conceptual, FEED, to EPCM, EPC and PMC services.

Safety as a value, quality at the core of everything we do, entrepreneurial attitude, and anticipation are at the very heart of how we are taking it further.

Visit us at ADIPEC 2014 10-13 November ADNEC, Abu Dhabi Hall 6, Booth # 6330

Contact us: +97126116100/6000 www.technip.com





Flexitallic ready to increase activities within the Middle East's oil and gas industry

INTERNATIONAL GASKET MANUFACTURER and sealing technology specialist, The Flexitallic Group, is increasing its investment in the Middle East as it looks to expand its operations in the region's oil and gas sector. The company, which will be exhibiting at ADIPEC 2014, will look to use the event as a chance to further develop its relationships with local industry ahead of its planned expansion in the region.

Flexitallic has already established itself within the UAE's sealing solution market where Flexitallic LLC is currently implementing a US\$2mn investment programme in new gasket manufacturing and testing equipment, while also trebling the size of its production and training facility in Ras Al Khaimah.

Flexitallic Middle East LLC, Flexitallic's Saudi Arabian subsidiary, is enjoying fast growth less than a year since it was established. The facility is already a fully-approved manufacturer by Saudi Aramco and SABIC for the production of its range of gasket technologies, enabling the company to establish relationships and secure work with end users and OEMs throughout the Kingdom.

Flexitallic is also in the process of growing its regional workforce to 50 and increasing its training operations throughout the Middle East. Flexitallic's Academy of Joint Integrity, an Energy Institute-approved training provider, delivers Engineering Construction Industry Training Board (ECITB) mechanical joint integrity programmes to support the skills development and competencies of engineers.

Phil Kelshaw, Eastern Hemisphere sales director for the Flexitallic Group, said, "To ensure the Middle East maximises the latest surge in oil and gas activity across the region it is essential that supply chain companies are well prepared to meet the requirements of the industry.



Flexitallic will be located in Hall 12 during ADIPEC 2014

"The investments we are making, along with the transference of our skills into the region, will ensure that Flexitallic is ideally placed to deliver innovative gasket products, supported by an established competency and training resource, which will provide significant benefit to the Middle East oil and gas sector."

Stand: 12315 (Hall 12)

CUSTOMER FOCUSED. PERFORMANCE DRIVEN.

- · Leading manufacturer of drilling rigs across the globe
- · Advanced mechanical and electrical rig equipment and control systems
- Rig repair, modifications and upgrades
- 24/7 field support and global project management
- Durable, cost effective and trouble free rig systems
- · After sales support service





Bentec is one of the world's leading manufacturers of drilling rigs and oilfield equipment. As a fully vertical integrated systems provider. Bentec offers a unique combination of resources, industry experience and expertise, maintaining the highest quality standards across all drilling rig systems, with an additional focus on HSE. Our rigs and equipment are custom built to perform in the most challenging environments across the globe, from the desert to the arctic.

Bentec GmbH Germany I LLC Bentec Russia I IDTEC LLC Oman Phone: +49 5922 7280 | e-mail: info@bentec.com | www.bentec.com/rig



Oil and Gas, Refinery, Petrochemical, Power... Whatever the process or industry, Yokogawa offers reliable solutions









BAHRAIN Tel: +973 17358100 / 17707800

SAUDI ARABIA Dhahran, Tel: +966 (13) 3319600. Jubail, Tel: +966 (13) 3429600. Yanbu, Tel: +966 (14) 3928882/3928883 **UNITED ARAB EMIRATES** Abu Dhabi Tel: +971 (2) 5101888 | Dubai Tel: +971 (4) 8049100 | Tel: +971 (0) 4301 9500 **QATAR** Doha Tel: +974 44452444 **OMAN** Muscat Tel: +968 24815462 **KUWAIT** Tel: +965 22 28 9888

Yokogawa – A Century of Automation!



Sandvik products for demanding applications

STAINLESS STEEL AND special alloys producer and distributor Sandvik will be showing its products at ADIPEC.

Haydn Eagle, Sandvik Regional Sales Manager EMEA (Europe, Middle East and Africa) said, "For Sandvik ADIPEC is of special importance providing us with the opportunity to demonstrate to visitors just how our innovative products, technical knowhow and extensive stock range can benefit their businesses and processes.

"Our worldwide production and renowned R&D expertise, linked with operationally proven corrosion resistant materials, means we are able to advise on the best material choice for a given application. The combination of high strength and superior corrosion resistance in our



Sandvik piping products

duplex and super duplex stainless steels means it is possible to design and install lighter and longer lasting materials especially when it come to heat exchangers, production tubulars and casings and even coiled tubing for control and chemical injection lines."

Examples of Sandvik's extensive range of stainless steels and special alloy seamless tubes for hydraulic and instrumentation, heat exchanger, high temperature boiler and fertilizer plants will be on display. The company also supplies a comprehensive range of seamless pipe, welded pipe, butt weld fittings, flanges, screwed and socket weld fittings.

This allows the company to offer a complete package building service to customers, supplying the requirements for a total piping system, all from one source and delivered direct to site ready for installation. A complete range of associated services are available including: full project management, testing and certification, bevelling, cutting, colour coding and marking, PVC coating and full import & export documentation. On the company's website there is a useful technical section, the materials centre, where you can view and download technical data sheets and pressure calculation tables: http://www.smt.sandvik.com/en/materials-center/.

Of particular interest for upstream and downstream oil and gas operations is that the company works closely with plant operators and fabricators in the supply of advanced corrosion resistant alloy seamless tubes developed for the most aggressive environments. These offer considerable advantages such as extended operational life, reduced servicing and full life operational savings.

For component manufacture Sandvik also supplies Sanmac™ duplex and super duplex stainless steel bar and hollow bar with increased machinability that maximises productivity, allowing increased cutting speeds combined with reduced tool wear.

Stand: 3220 (Hall 3)

Ensuring pipeline security

OPTASENSE, A QINETIQ COMPANY and global leader in Distributed Acoustic Sensing (DAS) technology, has successfully prevented external threats to a natural gas pipeline in the republic of Yemen, according to a case study paper due to be presented by Total at ADIPEC. The paper notes "that since the pipeline intrusion detection system was installed, there has been a significant improvement in pipeline availability and regular LNG shipments."

The OptaSense system was originally installed as an integral part of the pipeline security operation in late 2013, on the 320 km long pipeline that runs LNG from Marib to Balhalf in the Republic of Yemen. The pipeline had previously encountered a number of incidents that disrupted product supply. The paper, originally presented by Total at Rio Oil & Gas trade show in September 2014, adds that "no attempt at intrusion on the pipeline resulted in damage to the facilities" as a result of integrating OptaSense with other security measures.

Magnus McEwen-King, Managing Director at OptaSense, said, "We are extremely pleased to work with Total and its local partners to ensure the availability of their pipeline. This project demonstrates that through the implementation of OptaSense into operations, it enables pipeline operators to reduce damage resulting from third party interference to zero. Ensuring pipeline integrity and availability is essential to enabling a continuous supply of product and therefore revenue from their pipeline assets."

The project requirements were to implement a security system to allow early detection of potential threats and to minimize the amount of new equipment installed in the field by making use of already installed fibre optic communications cable.

Stand: 12334 (Hall 12)



Plot No S50807, Jebel Ali, Free Zone (South) P.O. BOX 17729, Dubal-United Arab Emirates TEL: +9714-8865119 / FAX: +9714-8865118 Emergency Contact No: 0097150-3752010

Web: www.shreesteeloverseas.com Email: sales@sso.ae / info@sso.ae



INNOVATION. INSPIRATION. DEDICATION. IT'S ALL IN THE PIPELINE.

You can't afford mistakes. That's why CRC-Evans provides onshore pipeline services you can trust. From arctic terrain to jungle to desert, CRC-Evans lays the pipeline for success. We're consistent. We're reliable. We're there for you 24/7/365.

CRC-Evans offers a full range of onshore pipeline equipment and services, including automatic welding, bending machines, padding/crushing machines, weighting systems, field joint coating, heat treating, inspection, non-destructive testing. Our seasoned engineers, field service technicians and cutting-edge technology ensure that your pipeline is built with integrity and consistency.

WHAT'S IN THE PIPELINE FOR YOU?

See our full spectrum of onshore capabilities at www.crc-evans.com/onshore-construction

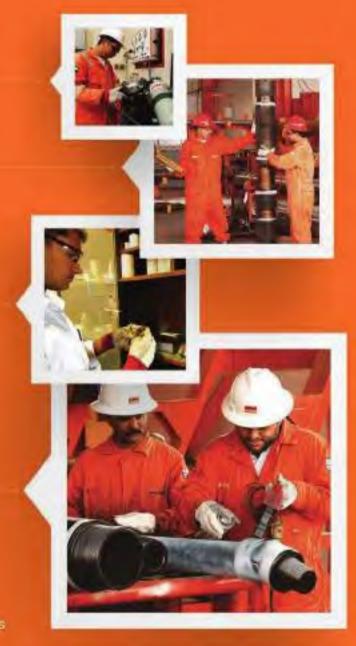




ALMANSOORI SPECIALIZED ENGINEERING

ALWAYS ALMANSOORI ALWAYS INNOVATING

- Production Testing & EPF
- Coll Tubing & Stimulation
- DST TCP Completion
- Slickline and Completion
- Open Hole & Cased Hole Lagging
- Work-over Brilling
- Tubular and Rip Inspection
- Directional Drilling
- H2S and Safety
- Technical and Safety Training
- Manpower Supply
- Oilfield Manufacturing
- Sponsorship and Representation of Companies



SUSTAINABLE EXCELLENCE in SERVICE with World Class Health, Safety, Environment & Quality

www.almansoori.biz

Tel: +971 2 815 7000 | Fax: +971 2 678 4638 | Email: info@almansoon.biz



Raccortubi Group companies exhibiting at upcoming fairs

A YEAR ON from its launch at ADIPEC 2013, Raccortubi Middle East will once again be presenting its services at the ADIPEC show from 10-13 November 2014. The Raccortubi Group subsidiary was set up to provide a local presence in the Middle East and respond to its regional customers' demands for piping materials. It offers clients pipes, tubes, fittings and flanges from stock in stainless steel (304/304L, 316/316L, 321/321H, 304/304H, 347/347H), duplex and superduplex (UNS S31803/S32205, UNS S32760 & UNS S32750), superaustenitics (6Mo, 904L), and nickel alloys.

The Raccortubi Middle East team said it was looking forward to meeting current and potential clients face-to-face at the Abu Dhabi National Exhibitions Centre. Mr Swami, managing director of Raccortubi Middle East, explains, "We can't wait to further reinforce and develop key relationships with our customers. Over the course of the past year, Raccortubi Middle East has grown extensively. We have added to our staff and are all relishing



Stock at the Raccortubi Middle East warehouse

the opportunity to take our business activities forward."

ADIPEC is not the only event at which Raccortubi Group companies will be present in the coming weeks. Raccortubi Singapore, the group's new subsidiary and hub for Southeast Asia, will also be exhibiting at OSEA in Singapore from 2-5 December 2014. With the establishment of three new subsidiaries during the last year, it is both a busy and exciting time for the Group.

Raccortubi Group's latest distribution points in Brazil, Dubai and Singapore are looking to portray the significant advantages that they can offer to customers. The Group's unique organisational

structure, consisting of both stockholding and manufacturing activities, enables Group companies to work in sync in order to maximise the services provided. All Raccortubi locations are able to respond immediately to urgent material requests from local stocks, whilst the integrated manufacturing plant offers support in the form of continuous stock replenishment and flexibility of supply. This represents an attractive prospect for many end users who are calling for such flexibility and quicker deliveries, the company maintains.

In addition, the group's internal specifications have been engineered to cover the

vast majority of end-user requirements, typically considered to be additional requests. Raccortubi locations offer certified products for the most demanding applications and remote destinations off-theshelf. They supply both single items and packages to a variety of industrial applications, from chemical, petrochemical and oil installations to power plants, shipvards and offshore platforms. Group companies also benefit from ISO, PED, NORSOK and Petrobras certifications, as well as featuring on a large number of vendor lists: evidence of the wealth of expertise within its structure.

The new locations in the Middle East, Singapore and Brazil are benefitting from the Group's experience so as to specialise in those products which offer their regional customers added value. To find out more, you can visit the Raccortubi Middle East stand 1330, Hall 1, at ADIPEC and the Raccortubi Singapore stand BG5-01 at OSEA.

Stand: 1330 (Hall 1)

HYDRA-CELL T-SERIES PUMPS

Looks like a Plunger Pumps, with drastcially reduced Life-cycle Costs (LCC)





- Seal-less design eliminates leaks, hazards and the expense associated with seals and packing
- Low NPSH requirements
- Can operate with a closed or blocked suction line and run dry indefinitely without damage
- Unique diaphragm design handles more abrasives with less wear than gear, screw or plunger pumps
- Hydraulically balanced diaphragms handle high pressures with low stress
- Lower energy costs than centrifugal pumps
- Rugged construction for long life with minimal
- Compact design and double-ended shaft provide a variety of installation options
- · Hydra-Cell T-Series pumps can be configured to meet API 674 standards - consult factory for details

THE WORLD'S FIRST API 674 TRIPLEX SINGLE HEAD DIAPHRAGM PUMP



Victaulic exhibits faster installations and new models

VICTAULIC, THE WORLD'S leading manufacturer of mechanical pipe-joining systems, will exhibit its complete range of products for the oil, gas and petroleum industry at ADIPEC.

The event will see the company display a new variant of the popular Series 727 Grooved End Ball Valve, a high-pressure, enhanced port, NACE-compliant valve for upstream oil applications. The groove by thread variant, on show for the first time in the Middle East. introduces even more versatility to the Victaulic

This male threaded version is designed for tank and equipment connections. The valve is offered bare or with lever handle, and will give customers the option to connect to any threaded tanks or equipment.

The Series 727 Ball Valve provides excellent flow characteristics and enables quick and easy installation and maintenance. Flow testing has demonstrated up to one-third better flow than competitive standard port ball valves, while the Series 727 weighs one-third less than equivalent flanged valves, easing handling and installation. Also on display will be a full range of Victaulic grooved products for upstream, midstream and



downstream applications, including the latest Victaulic Delta-Y Assembly, a combination of preassembled Victaulic cast grooved fittings, couplings and valves designed specifically for

bulk cement/barite systems on offshore oil drilling platforms and mud drilling systems.

Stand: 8311 (Hall 8)



宏华集团有限公司 HONGHUA GROUP LIMITED













Honghua Golden Coast Equipment FZE introduction

Honghua Golden Coast Equipment FZE (Honghua Dubai), registered in Jebel Ali Free Zone in Nov of 2006, is one of the sole corporations of Honghua Group in China(listed in Hongkong stock market in 2008). The total area of the workshop for Honghua Dubai is about 21,000m2, including 2800m2 workshop (owning lathe, boring machine, milling machine, plate shearing machine, welding machine and other equipments), 500m2 warehouse and a 17,000m2 commissioning yard.

Honghua Dubai will be the assembly, maintenance, refurbishment, spare parts supply, equipment leasing, after sales service and marketing center of Honghua Group in Middle East and Africa. In addition, new technology and new products of Honghua Group will be displayed here.



Honghua Golden Coast Equipment FZE.

(Branch Company of Sichuan Honghua Petroleum Equipment Co., Ltd) P.O.Box. 261868 Jebel Ali Dubai-U.A.E.

Tel: +009714 8807066 Fax:+009714 8807061 Website: www.hhcp.com.cn

www.hh-gltd.com



OilTec Division

Wear Resistant Materials and Technology

OTW Hardbanding for Drill Pipe Tool Joints

Non-MAG coating solutions for MWD/LWD Tools

> PTA, Laser, Hardfacing coating for Stabilizers

Stronger... with Castolin Eutectic

> **HVOF** coating system for MUD Motor Rotors

Coating solutions for Drill Bits and Hole Opener

OilTec Services globally ... And growing

China Dubai Iraq UK Singapore Mexico Norway Russia U.S.A.

www.otw-hardbanding.com www.castolin.com

OilTec division... please contact: OilTec@castolin.com



Marelli Motori opens new offices in the Middle East

BOOSTED BY A positive upwards trend for sales coming from the Middle East area, Marelli Motori the Italian designer and manufacturer of rotating electrical machines – has opened new offices in Dubai.

The Middle Fast area has made a significant contribution to Marelli Motori's growth in recent years, in spite of the general economic slowdown, so much that the company has decided to invest further in this strategically located

As a leading global manufacturer of generators and electric motors, Marelli Motori is developing further their extensive range of technologically advanced products suitable for oil & gas, industrial and power generation applications.

Marelli Motori will be present at ADIPEC. "We are very excited at the opportunity to showcase our latest technology at such an important



Marelli Motori ATEX motor for Oil & Gas applications

event," says Michela Mattiello, Communication Manager at Marelli Motori. "We have very recently extended our ATEX motor range

dedicated to oil and gas applications and will be displaying a medium voltage explosion proof motor specially developed for hazardous

areas such as refineries and offshore installations which are so typical of the Middle East region."

Always with a view to offer safe, efficient and reliable solutions to its global market, the company has recently acquired the IECEx certification for their explosion proof motor range, an additional feature which makes international trade simpler, faster and more cost effective.

Marelli Motori is also included in most of the major end user's vendor lists of the GCC area: Kuwait Oil Company, KNPC, GASCO, ADNOC, TAKREER, FERTIL, SABIC, Petroleum Development Oman, Sahara Petrochemicals, National Drilling Company, etc. Marelli Motori products are designed and manufactured in accordance to all major international standards including IEC, ISO, ATEX, QAR, EAC, etc.

Stand: 1414 (Hall 1)









Participating in ADIPEC 2014 at Stand 3220, Hall No. 3

POLYESTER ENCLOSURES

POLYSPACE KIOSKS

POLYSHADES FOR INSTRUMENTS

FOR THE POLYSPACE KIOSKS

POLYSHADES FOR INSTRUMENTS



ROOFING SYSTEMS

Giant Reinforced Plastic Industries LLC • P.O. Box 6373, Sharjah, UAE • Tel: +971 6 5574841 • Fax: +971 6 5574842 • E-mail: info@grpindustries.com



Synectics to showcase cutting-edge surveillance technology at ADIPEC 2014

GLOBAL SURVEILLANCE SOLUTIONS business Synectics is preparing to showcase its latest surveillance solutions at ADIPEC 2014. According to company officials, integration, IP networks and camera innovations are dominant trends affecting oil and gas surveillance in the Middle East. The energy production in the region is expected to expand by 37 per cent over the next 20 years. By 2035, the region's share of global oil will reach 34 per cent. With site expansions and new developments considered key to the growth of the economy, asset protection is of utmost importance. This has led to the emergence of different trends in the surveillance market.

Major projects in the region which would benefit from the latest solutions by Synectics include Shell Pearl GTL project, Phase II of IRP, BAB and ASAB, Shah Gas, Barzan and Karan. Graham Ashley, business bevelopment manager of Synectics Middle East, said, "The Middle East oil and gas market is growing, and such a market has changing needs. Our Dubai hub puts us at the heart of these changes and gives us 'on-the-ground' insight into what new projects are demanding from their surveillance systems."



With Middle East's oil and gas sector booming, surveillance aids are considered vital tools

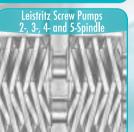
Project are moving away from multi-system arrangements to surveillance command and external control solutions. These help unify and comprehend data from several sources for greater levels of awareness, according to Ashley. With IP networked surveillance, it opens up opportunities for third party integration with benefits like centralised surveillance of remote

sites and reduced impact on site infrastructure. "The theme of this year's ADIPEC is Challenges and opportunities for the next 30 years. One of the biggest opportunities for Middle East oil and gas market is undoubtedly, working with the surveillance industry to develop solutions that meet changing needs and take advantage of new technological advancements." The need for surveillance has led to an increase in demand for high definition (HD) cameras. Ashley revealed that there is a need for HD camera stations with inbuilt IP capabilities that can transmit video signals to a surveillance command and control system. Accordingly, Synectics' C3000 range was enhanced. In addition, the company will also be conducting at ADIPEC 2014 live demonstrations of its flagship surveillance solutions for the sector, including its evolved command and control platform, Synergy 3, and C-range of COEX PTZ camera stations including the C3000 high temperature model with HD/integrated IP, and the C2000 TriMode for day, night and thermal imaging.

Stand: 102 (Hall 14)













Leistritz

LEISTRITZ PUMPEN GMBH

New: Leistritz Middle East FZE at SAIF-Zone, Sharjah opening in november 2014

Please visit us at ADIPEC in Abu Dhabi, Hall 8, Stand 8367

Leistritz Screw Pumps and Systems

Leistritz Pumpen GmbH, with its headquarters in Nuremberg/Germany, has been producing Screw Pumps since 1924.

Leistritz Screw Pumps are serving today's state of the art Oil & Gas processes. Leistritz runs both upstream and downstream application in the oil and gas sector. Terminal operations are using Leistritz Twin Screw, Triple Screw and Five Screw Pumps for loading, unloading, stripping, circulation, transfer, tank cleaning and transport of slops and drains.

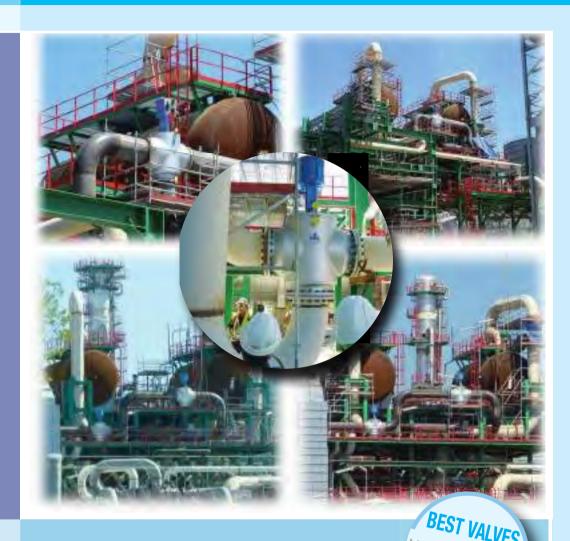
Capacity max.: up to 22,000 GPM (up to 5,000 m³/h)

Differential Pressure max.: up to 4,060 psi (up to 280 bar)

LEISTRITZ PUMPEN GMBH | Markgrafenstrasse 29-39 | D-90459 Nuremberg Phone: +49 911 4306 0 | Fax: +49 911 4306 490 | E-Mail: pumps@leistritz.com www.leistritz.com

Others simply sell a product — we offer a solution.

OHL Gutermuth A control and shut off technique you can rely on.







OHL Gutermuth switching- and metal seated butterfly valves are specified and accepted internationally, as the ultimate in reactor switching valves for Sulphur Tail Gas Clean-up Processes.

We offer an exceptionally rugged valve with a different concept. Optimize your production sequences, using a switching valve, which is providing an extremely low leakage rate, with a minimum pressure drop, as well as superb reliability. Available in sizes ranging from 1" through 80" with fabricated or cast steel body and heating jacket.

Literally dozens of plants and refineries, worldwide, using SULFREEN, MCRC and CBA processes, among others, have OHL Gutermuth hot gas switching valves and butterfly valves in their system "made in Altenstadt/Germany".

It's good to know where to find perfect valve technology.



OHL Gutermuth Industrial Valves GmbH



Delivering customer expectations

Abu-Dhabi based AlMansoori Specialized Engineering prides itself on its customer focus and local knowledge. Oil Review Middle East spoke to its Deputy CEO, Ibrahim Al-Alawi.

STABLISHED IN 1977, AlMansoori Specialized Engineering was the first locally-based service company to be established in the Gulf, and is now the leading provider of oilfield services in the Middle East with a growing global presence, employing a workforce of around 2,500.

It is the company's position as a locally grown company that is one of its key strengths, according to Al-Alawi, "We have a local presence in all the countries we work with, we bring the local knowledge and local content, we know the culture and have a network of contacts - this is an intangible asset that adds value," says Al-Alawi, "Many western and foreign companies overlook this aspect when they come into the region; they believe their technology alone will get them established. Understanding the local culture, and the importance of relationships in our culture, is crucial to success. This local understanding is what we offer as a service company and potential partner for foreign companies wishing to establish themselves here."

AlMansoori's main focus remains the Gulf, but it has a presence throughout the MENA region in countries including Egypt, Syria, Libya and Northern Iraq. Elsewhere, Al-Alawi highlights the large and growing

These are exciting times - there is so much activity planned over the next few years"



operation in India and the recent establishment of a presence in Turkmenistan. The company is also looking at East Africa as a stable investment destination for the future.

While the regional instability has had some impact on the company (its activities in Libya and Syria are currently very limited and the Kurdistan operation has been affected to a degree), the company's extensive footprint has meant that it has been able to redeploy its resources elsewhere throughout its operation.

"We see Abu Dhabi and Saudi Arabia as our largest growth areas for the future, and Oman offers promising opportunities as well," says Al-Alawi. "There is an increasing demand for our services, because a lot of our services are related to data collection. Whether related to aging fields or new fields the crucial element is data, because the reservoir management need the data to plan their activities. The

more data we collect, the more business we have"

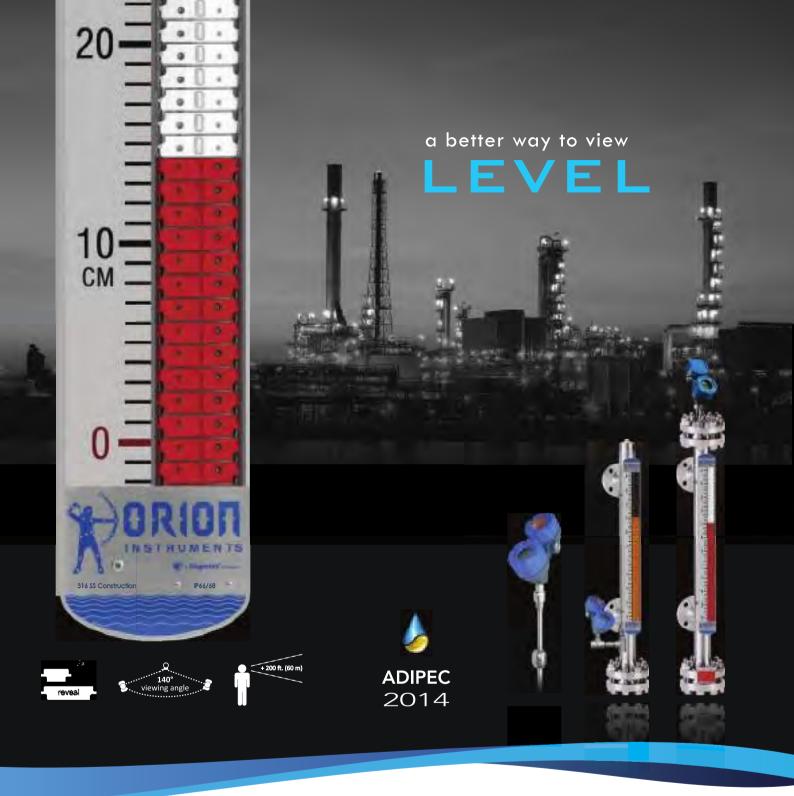
The future will be busy and challenging, says Al-Alawi. "These are exciting times, there is so much activity planned over the next few years," he says, "The focus now is on gas - not just in Abu Dhabi but also in Oman and Saudi Arabia - which is more dangerous, more high tech and more complicated.

"We're going to see more extended reach drilling - 20-30,000 feet wells, more multilateral and horizontal wells, and the use of inflow control devices (ICDs) to control the flow from multiple branches. The easy oil has been found - we're going to see more complex holes, and more complex reservoirs.

"A technique we're seeing used here is CO2 injection – driven more by economic than technical factors, as it enables gas to be freed up for use as feedstock in power plants and industry. Here in Abu Dhabi we are blessed with high pressure, high productivity wells - the Northern Emirates are not so lucky, and in Oman where the fields are small and weak, they are having to use EOR, where PDO is a world leader. There are strong relations between ADNOC and PDO, and co-operation on technology transfer and technology

With the mission 'to make world class health, safety, environment and quality a way of life within the company', AlMansoori was one of the first companies in the Middle East to have a certified, fullyintegrated HSEQ management system in place, which is implemented in every sector of the company. "We are continually addressing this issue and always trying to improve our procedures," says Al-Alawi. "This year were have started quarterly incident reviews, chaired by the CEO, to review incidents which have occurred in the last three months and share the lessons with everyone. We keep abreast with the latest in quality management, upgrading standards, ensuring compliance with our own procedures which are related to those standards. We don't have a big name to fall back on when things go wrong - we can't afford to make mistakes."

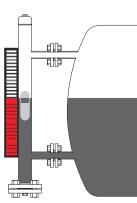
One of the main challenges the



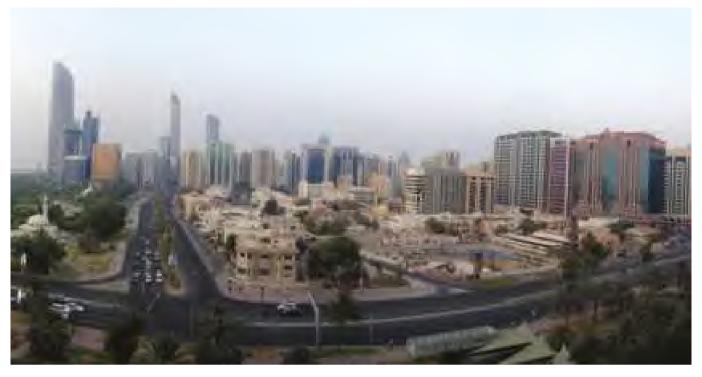


orioninstruments.com

High-visibility level indicators and transmitters from Orion Instruments are custom-engineered and built tough for the most demanding applications. Contact us to find out how maintenance frequency, cost of ownership, personnel safety, and reliability can all be improved over traditional sight glass gauges.







AlMansoori Specialized Engineering is based in Abu Dhabi

business faces, in common with many others in the oil and gas sector, is recruitment and retention. "This is a daily challenge, and one which we are constantly addressing," says Al-Alawi. "We

66 We are always looking for ways to help our customers meet the challenges they face, trying to stay ahead of the game as far as we can"

review the market every year to see what the going salaries are and try to match them. But equally important is the creation of a happy work environment. We strive to create a family type environment where employees don't want to leave, and try to retain that culture as we grow - so far we've managed to do so. So a competitive salary is key to attracting employees, while a happy working environment plays a big role in retaining them, we feel."

The main focus of AlMansoori is satisfying its customers and meeting their expectations, stresses Al- Alawi. The company is constantly adding to its service offering to its customers by introducing new technology. "We tie up with start-up companies offering unique or niche

technologies who look to partner with us to grow their own business," says Al-Alawi. "While we do not develop the technology ourselves - unlike some of our larger international competitors who can benefit from tax incentives to encourage investment in R&D - we actively seek out and find those who are developing the technology if there is a potential need for it, and try to help them introduce it to our markets. We see many opportunities for our existing services, and we are always looking for ways to help our customers meet the challenges they face, trying to stay ahead of the game as far as we can."■

Stand: 2410 (Hall 2)

Complete solutions for process control and metering systems



NATURAL GAS METERING STATIONS WATER INJECTION MANIFOLD



Stay ahead of the Curve

with SmartPlug® Technology from TDW.

State-of-the-art pressure isolation technology for onshore and offshore pipeline maintenance and repair applications.

> Easy, safe launching with bi-directional functionality.

> > Real-time pressure monitoring.

> > > Piggable, tetherless and remotely controlled with reliable accuracy.

To learn more about SmartPlug® isolation technology contact your nearest TDW sales representative or visit www.tdwilliamson.com.

NORTH & SOUTH AMERICA: +1 918-447-5000 EUROPE/AFRICA/MIDDLE EAST: +32 67-28-36-11

ASIA/PACIFIC: +65 6364-8520

OFFSHORE SERVICES: +1 832-448-7200



T.D. Williamson

Looking forward to the future

Marechal Electric Group is looking to expand its presence in the Middle Fast.

ARECHAL ELECTRIC GROUP, a worldwide leader in the field of electrical connectors, is readying to present its entire product range dedicated to the oil and gas industry and addressed at large EPC markets and contractors at ADIPEC.

Additionally, it will market the new dimension of its group following its recent acquisition of Technor Italsmea, specialised in explosion proof bulk electrical items. Technor is a worldwide technology company of Marechal Electric Group, with operational businesses in Italy, the UAE and Singapore.

Participating in Adipec for the second time in a row, Marechal Electric Group says taking part in this year's event was always a priority, believing it is the largest and most well-organised event in the region offering a very interesting window on the Middle East projects and customers of the oil and gas industry. "We chose to exhibit at Offshore Energy and Adipec as it is very interesting to strengthen our visibility in the market," said Alain Garric, group chief sales and marketing manager. "Our booth was really busy last year with very interesting leads / potentials as well as existing customers. The impact of these exhibitions on our activity is important and positively contributing to our business development in the Middle East. The quality of the visitors and exhibitors is very high and dedicated to the oil and gas industry where our business development is getting stronger. Furthermore, ADIPEC is an international show providing access to some of the challenging markets of the Middle East like Iraq and Yemen."

Marechal Electric Group has been a major player, over the past 60 years, for

We are very optimistic for the end of 2014 and 2015"



industrial electrical connections adapted to suit all areas of the industry. These include general manufacturing and process industry, premises and set-ups for the general service industry, all infrastructure as well as the oil and gas industry and those premises presenting a risk of explosion, referred to as hazardous areas.

"The group's know-how and technology permanently optimise the performance and life expectancy of Marechal plugs and sockets and Technor equipment and infrastructure in a potentially explosive atmosphere. The certification of our product ranges complies with the existing requirements and standards in the different markets and enables the group to position itself as a leading supplier for any type of industry activity throughout the world," said Garric.

Technor has a high level of experience in developing and designing Ex equipment for most applications. These include offshore oil installations, refineries, petrochemical plants, ships and FPSOs, chemical, pharmaceutical, food industries as well as other industries in which potentially explosive dust might represent a hazard, such as foodstuffs manufacture, grain silos and textiles. Products enable safe transport and application of electric signals and power in

hazardous areas. The core business is in the electrical, instrumentation and electronics fields. Technor's ranges satisfy the requirements of international and national regulations (Atex, IECEx and Gost) and each individual system's component is certified in accordance with specific Ex-certification requirements. Within its geographic locations it complements the ranges of the Marechal Electric Group, providing significant product and distribution channel synergies.

Admitting that the year has been full of challenges, Garric said, "The second part of the year has been very interesting for our development. We are very optimistic for the end of 2014 and 2015."

The company has been on an expansion spree over the last few years with acquisitions since 2012 including Marechal Australia, followed by Technor in 2013 and now Marechal Electric Asia in 2014.

Moving ahead, the company is looking at strengthening its operations in the Middle East. "Since beginning of the year, we have strengthened our position in the Middle East, opening new offices in Jumeirah Lake Towers, Dubai. Our plans for the coming years include the significant increase of our presence in the Middle East markets," Garric added. ■

SAUDI STEEL PIPE COMPANY **PIPES BENDING FACTORY**

LANGEST AND Specialist leader Wandle Factore Largest and Specialist Leader Manufacturer for Princes Rends in Middle Fast for Princes Rends in Mi

Size Range up to 64" OD for Maximum 10,000 mm Radius for different Angles

Carbon Steel Pipes, Stainless Steel and High alloy Steel Pipes

Highest Quality, Certified by SAUDI ARAMCO, Algnest Quality, Gertified by SAUDI ARAME.

And And And Company,

Out of the company, GASCO, ADNOC AND SHELL

CNC End Facing Machine

48" Hot Induction Machine

Heat Treatment Services



64" Hot Induction Machine

Final Packing

Head Office:

PO. Box 11680 Dammam 31463 **Kingdom Of Saudi Arabia**

Tel: 00966138122222

Fax: 00966 13 812 1005 Email: info@sspipe.com

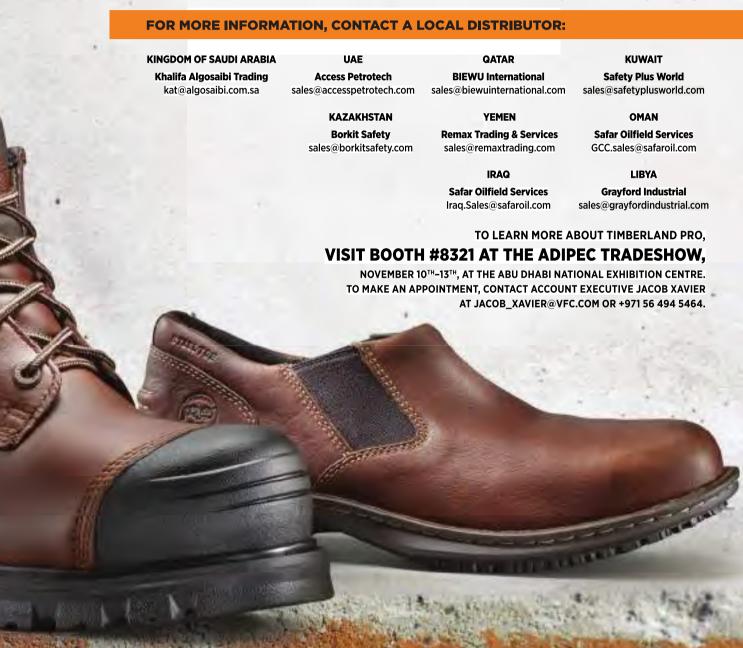


DURABILITY AND PROTECTION, MEET COMFORT.



INNOVATION AND TECHNOLOGY ARE BUILT INTO EVERY PAIR.

Timberland PRO® work boots stand up to the rigors of the worksite. With built-in comfort technology, electrical hazard protection and slip- and oil-resistant soles—they deliver optimal performance on the job all day long.



Timberland, 🚭, Timberland PRO and the PRO logo are trademarks of TBL Licensing LLC. © 2014 TBL Licensing LLC. All rights reserved. *Timberland reserves the right to end this promotion at any time.



Hydratight showcases joint integrity solutions

HYDRATIGHT RETURNS TO the Middle East's largest oil and gas event under a new agency agreement with distributor ADOS. The joint integrity specialist will have a dedicated display within the ADOS stand, one of the largest stands seen at ADIPEC.

Hydratight will be showcasing its Hot Bolting Services, which have been launched globally following a successful North Sea pressure test. The services will be of particular interest to offshore operators across the world with aging assets. In the Middle East alone, around 500 platforms have an average age exceeding 28 years (Source: Infield).

Hydratight is creating a custom pipeline which will form the centrepiece of its exhibit – in addition to a Hot Bolting clamp, the pipeline will comprise a range of operating products, advanced machining, hot



Hydratight's Hot Bolting clamp

tapping and flange facing services, including a 4" Morgrip® Mechanical Weldless Connector. Antony Crofts, Hydratight Regional Manager - Southern Middle East, said: "Rather than just display our products in isolation, we decided to do something a bit different. The pipeline will allow visitors to see how our products actually work together 'in-situ' to create a complete joint integrity solution."

Stand: 13210 (Hall 13)

Cable monitoring solutions

OZ OPTICS IS a Canadian supplier of fibre optic products for existing and nextgeneration optical networks. The company designs and manufactures fibre optic sensor systems for remote monitoring of oil and gas pipelines, wells, refineries, bridges, dams and other large structures as well as for security fences and fire detection. OZ Optics has spent many years developing its distributed strain and temperature sensors (DSTS); these provide an effective way to monitor the quality or working status of fibre optic cables or power cables carrying optical fibres, claims the company. A strain profile along the length of the cable can be provided by the ForeSight™ DSTS, which helps the manufacturer or operations company to better understand the status of the fibre optic cable or power cable.

OZ Optics says it has developed a number of innovative applications to meet special company and research institution requirements.

Stand: 3239 (Hall 3)



Unique Maritime Group

Strength in Depth

Unique Wellube's Specialised Engineering Solutions



SERVICES

■ Pipeline Rehabilitation ■ Hot Tapping & Line Stopping ■ On-Site Machining ■ Under Pressure Leak Sealing ■ "UniSeal" Pipeline Repair Clamps ■ "Uni-Test" On-Line Valve Testing ■ On-Line Valve Maintenance

■ Pipe Freezing ■ Portable Onsite Machine Rental Solutions

PRODUCTS

- Subsea Diamond Wire Cutter Hot Tap & Line Stop Fittings
- Extruded Headers Pipeline Isolation and Inspection Tooling Solutions



Before Re-Surfacing



After Re-Surfacing





Contact Unique Wellube for a professional solution. enquiries@wellube.com | www.uniquegroup.com/oil-and-gas India · Oman · Qatar · Singapore · South Africa · UAE · UK · USA





Terminating Cables is Our Business





www.cmp-products.com





Market leaders in Ex d, Ex e & Ex nR Cable Glands Ex d & Ex e Cable & Conduit Accessory range **New range of Flat Form Cable Glands** New ThermEx Seals rated to 200°C

Request your 2014 Cleat catalogue

CABLE

Including Conqueror - The Worlds Safest Cable Cleat New Stainless Steel, Aluminium & Nylon Cable Cleats Short Circuit Ratings to a Market Leading 196kA Third Party Certified to IEC 61914:2009

CONQUEROR

Request your 2014 Cable Gland catalogue

RAPIDEX

Cures more than 18 times faster than traditional compounds Installs in Seconds, Cures in Minutes, Seals Indefinitely The Fast Curing, Gas Blocking, Liquid Resin Seal **Compliant with IEC, NEC & CEC Wiring Codes**



Tel: +44 (0) 191 2657411 E-Mail: customerservices@cmp-products.com



Raytec light up ADIPEC

LIGHTING SPECIALISTS RAYTEC are excited to be exhibiting at ADIPEC for the first time where they are showcasing SPARTAN, a new range of ATEX/IEC Ex LED hazardous area lighting.

Designed and manufactured in the UK for all Zone 1 and Zone 2 applications, SPARTAN changes the way we look at lighting for hazardous area environments, providing the easiest installation and servicing, while combining huge energy and maintenance savings with the highest level of performance and

SPARTAN makes servicing easier, quicker and less costly thanks to its modular design with removable PSU and LED modules for easy access and inspection - perfect for isolated locations. The SPARTAN PSU can also be located remotely at ground level up to 100m away from the light fitting for ease of

maintenance in areas with limited access.

Launched as a full floodlight family available in three sizes, with white-light, infra-red (for surveillance applications), emergency and transportable versions, the SPARTAN range now also includes the SPARTAN Linear which acts as a direct replacement for fluorescent fittings, meaning you can upgrade



to a high performance LED light without complication. while keeping installation costs to a minimum. The SPARTAN range has been expanded further with the recent launch of SPARTAN Bulkhead, meaning there is now a SPARTAN suitable for any application

Stand CN22 (concourse).

Cabling solutions

OATAR INTERNATIONAL CABLES Company (QICC), the Nexans company based in Oatar, offers an extensive range of cabling solutions and services at every stage of oil and gas production, both onshore and offshore, as well as for refinery and petrochemical infrastructure. The company will contribute to the frontend design of cables and network planning, while at the delivery end, it can make use of its supply chain, global services and technical support network.

Innovative technologies include leadfree cables; sheathings resistant to sea salt, chemicals and mud; advanced fireperformance products: recyclable materias; and long-length deepwater power umbilicals for offshore applications.

Nexans' cables are being used in Qatar's new condensate refinery for the Laffan Refinery 2 project, construction of which began n December 2013, with completion expected in Q3 2016.

Hall 6 Stand 6230





Even the best laid plans can present unforeseen urgent challenges at your well site. Fortunately when it comes to well control equipment and support CANSCO is here to help.

From Individual components to fully integrated packages, from spare parts to full field support CANSO has the inventory and service response to meet your urgent, spot market well control equipment needs.

"Our vision, 'Cansco Integrity on Every Well' means giving well control equipment the priority it deserves, being there for our Customers' most critical, most urgent equipment and support needs, wherever and whenever they need us."

- Peter Ross Opmallom Manager



New products and tailored solutions

Safa Telecom, provides telecommunication solutions and services for those living and working in remote areas. Part of the IEC Telecom Group, it aims to supply hardware and services of communications worldwide for those working in areas where no terrestrial access

What do you hope to gain from ADIPEC this year and what new products will you highlight?

This year at ADIPEC we hope to consolidate our position as a leading company in the region providing telecom services for the oil and gas industry. We also want to update the market with the latest products, trends, and specially-designed offers to help the industry in improving effectiveness in oil production as well as health and safety (HSE) policies.

During ADIPEC 2014 we plan to showcase the latest offerings in High Throughput Satellites (HTS) and how that can help oil business in the region. We also plan to show our latest mobile satellite communication solution for use on rigs and oil service boats, which is an enhanced L Band solution that offers its user an experience similar to what you would get in an office environment.

How is business in the Middle East and what are some of the latest solutions you are offering customers in the region?

We can see that business in the region is growing after a slowdown in previous years and we hope that the political troubles in some countries as well as the drop in oil prices will not affect the production and the plans of our customers.

In addition to the satellite voice and data services we offer the industry, this year we are bringing new products and tailored solutions to our customers in the Middle East. We worked hard to develop our solutions and today we can offer more attractive solutions for maritime and offshore operations with the new Orion IP EDGE, which we are bringing to the market to allow maritime operations to enjoy a better user experience. This solution can reduce the cost of telecommunication services for some boats, with huge savings in capital expenditure and remarkable increase in services offered, such as more throughput, increased security, more control, and better cost management.

We are also offering new solutions over the Abu Dhabi-based satellite system Yahsat through their 'Yahclick' service that we consider a game changer in the oil and gas industry. It is an ideal and cost-effective solution for fixed usage for all fixed operations onshore

Our duty is to make this as easy and convenient as we can for the oil companies"



and offshore. It allows companies to think more about how to enhance their operations but also their HSE policies and welfare offer.

What sort of remote areas does Safa Telecom work in and what challenges arise from working in such areas in this region?

We work, 99 per cent of the time, in remote areas and there is no place in the region that we are unable to reach. Facing challenges in remote areas is our core business and are our daily work. We know through experience how difficult it is to work in remote areas and our duty is to make this as easy and convenient as we can for the oil companies. The aim of our solutions is to make the offshore environment as friendly as possible and we offer professional solutions to help make the offshore office closer and closer to the headquarters and to make the lives of the employees working there more sociable and easier. We also offer solutions for companies to better manage and control remote operations from their offices.

Can you tell me more about the company's rebranding and how this will affect the business in the Middle East?

As you know Safa Telecom is a part of IEC Telecom group of companies operating under different names in different regions. The rebranding is a way for us to be unified and look the same in all regions, but it is also bringing all the companies to the same level of offerings and services across the board. We want our services to be the same in Europe - namely in France, the UK, Norway and Sweden - in the Middle East, Central Asia and Singapore. It is a way to build a unique offering with European quality, but also bring flexibility to the region depending on the specifications of each market.

Stand: 410 (Hall 4)

بحَوْثُ مُحَرِّرُ الْعِجْ بَحَى Al-Ojaimi Group





Mohammed Al-Ojaimi Contracting Est.

Electrical Works
Mechanical Works
Civil and Site development works
Telecommunication Works

Al-Ojaimi Energy Services

Testing and Commissioning Services Automation and Control Services Engineering Services Trading Services











Mohammed Al-Ojaimi Industrial Group

Distribution Transformers
Transformer Substations
Distribution Panel Boards
Package and Unit Sub-Stations
LV Current Transformers
Cable Lugs & Connectors
Link Boxes
Insulated Wires
Copper Conductor









Preparing for exciting times ahead

From one man band to global business in the space of twenty years - Unique Maritime Group is guite a success story, and is now preparing to take its business to the next level. Oil Review Middle East received a warm welcome at the Group's headquarters in the UAE's Hamriyah Free Zone.

OUNDED IN 1993 by Harry Gandhi, Unique Maritime Group has, in response to customer demand and through a series of strategic acquisitions, evolved from a one man band renting survey equipment, to one of the world's leading integrated turnkey subsea and offshore solutions providers. The Group now has a local presence in the USA, UK, South Africa, India, the Middle East and Singapore, employing over 500 people worldwide.

Through its expanding network of companies, Unique Maritime Group is a specialist in the provision of services, and the sale and rental of equipment for the marine, diving, survey, oceanographic, oil & gas, inspection and NDT market sectors, with an established manufacturing capability for the delivery of customised engineering projects worldwide. Unique Maritime Group's extensive equipment inventory is backed by its relationship with some of the world's leading suppliers and manufacturers, in some cases through exclusive representation agreements. This means the company is able to supply, install, maintain and provide full support training for customers anywhere in the world.

Turning point

Unique Maritime Group is now poised on the cusp of a new phase of expansion, having recently secured a major equity investment from private equity firm Blue Water Energy. This will have a far-reaching impact on the Group's operations, as Ian Huggins, General Manager at Unique System FZE explains.

This represents a significant step change in what we can offer the market"

"This partnership will strengthen our financial capabilities, enabling us to look at higher value strategic acquisitions to increase turnover and extend our range of complementary services to the marine and oil and gas market - to fast track us to the size of the business we want to be," he says "We are also looking at geographic expansion – we have had our eye on the Far East for some time."

Huggins highlights the success of its Capetown-based diving business Unique Hydra, which specialises in building high tech saturation diving equipment. The company recently secured a \$US35mn contract from Ultra Deep Solutions (UDS) to design, build and integrate the dive system for a multipurpose Diving Support Construction Vessel (DSCV) – quite an achievement for a company of its size, and viewed by UMG as a vote of confidence in its technical capabilities and strength in project execution as well as its enhanced financial capabilities.



Harry Gandhi, CEO, Unique Maritime Group, receiving the Sharjah Economic Excellence Award

"This represents a significant step change in what we can offer the market," comments Huggins, explaining that this is the company's first contract for an integrated build, as opposed to the supply of a modular system, and could pave the way for further such business. "In the diving world we are starting to punch in a different league," he adds.

The Group's ability to undertake more challenging and complex diving related projects will be further strengthened by the recent appointment of a Global Project Director who will focus on managing and coordinating such projects, as well as driving forward the Group's QHSE agenda. The Group takes its responsibilities in promoting diver safety very seriously, and is represented on independent industry bodies through which it provides input into safety recommendations.

Prospering in the Middle East

Unique Maritime Group's operation in the Hamriyah Free Zone has prospered, benefiting from the attractive free zone tax incentives and well-established relationships with the free zone authorities. Unique System FZE offers the full range of the Group's services, which the Group is looking to replicate across all its operations, as well as providing diving related training and survey equipment training for third parties. While the workforce of the Hamriyah operation is mainly Indian, the Group is looking to contribute to Emiratisation, with plans to introduce a local graduate programme.

The Middle East remains the mainstay of the Group's business,



currently accounting for around 65 per cent of the Group's revenues, with Saudi Arabia offering particularly strong growth prospects. The Group is looking to strengthen its presence in the Kingdom, having won a number of contracts there, says Huggins. These have been mainly in the metocean sector, where the Group enjoys a dominant position in the region. Recent projects have included the installation of a sandstorm forecasting system for Dubai municipality, which predicted the July 2014 sandstorm; an airborne weather observation system for Ras al Khaimah International Airport; and metocean buoys for the Red Sea and the Gulf.

'One of our strengths as a team is that we are an integrator - we can take multiple products and put solutions together as a turnkey package, thanks to our principal arrangements with key industry players such as manufacturers of sensors, software writers etc," says Huggins.

A major part of the business remains the rental of survey equipment, of which the company claims to have the largest infantry in the region, ensuring a fast response and the

ability to provide a substitute for faulty equipment easily.

The Group is looking to expand and diversify the offering of its oil and gas business, Unique Wellube, which currently provides services such as under pressure leak-sealing, hot-tapping and line-stopping, pipeline monitoring and rehabilitation, and valve testing and maintenance. Most of the Group's business in Qatar revolves around the oil and gas division, which has seen its manpower double in the last couple of years, and the Group is looking to replicate this part of the business in other areas, notably KSA, India, the UK and West

The marine offering in the Middle East lies mainly in acting as agent for a number of principals, with Kongsberg, Trelleborg, Eltek (Honeywell) and Renishaw just some of the leading companies represented. Recent successes include the deepening of Unique

One of our strengths as a team is that we are an integrator"



System FZE's relationship with Teledyne TSS, specialists in marine sensors and controls, with its appointment as the authorised service centre for Teledyne TSS's Meridian Gyros in the Middle East, building on its position as authorised sales agent for TSS products in the region. The Group is seeing a particular demand in the region for DP (dynamic positioning) installations and upgrades to extend the life of an asset.

The key to success

So what is the secret of Unique Maritime Group's success? Huggins cites the company's unrivalled range of equipment and services, where it is in a league of its own. "No-one else is doing guite the range of things we do while matching the quality of our build processes," he says. Certainly no-one visiting the Group's headquarters can fail to be impressed by the vast array of equipment on display in its warehouse and yard, including a massive \$US3 million modular diving system; or by the passion, dedication and indepth product knowledge of key management and staff.

Key strengths are the technical skills and flexibility of the Group's engineers, thanks to the strong focus on training. "We are constantly looking at the skills matrix of our engineers and cross-training them





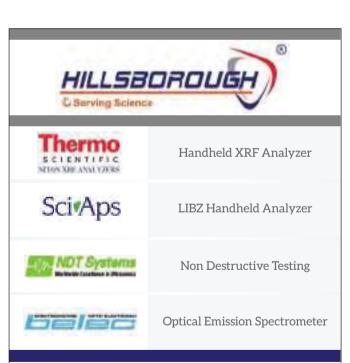
into unfamiliar areas," says Huggins. While the company has 'product champions', the aim is for all of its employees to have a thorough knowledge of the company's entire product range. Refresher courses and training on any new products acquired are provided to enable employees to keep up to speed with market developments.

66 We are looking inside the Group to see how we can improve our resources to provide effective solutions for our clients"

Huggins also highlights the Group's willingness to go the extra mile to meet customer expectations, and its reputation for customer support and backup. "I think if we polled our customers, they would say that Unique always back up their support if things go wrong," he says. Should the unexpected occur, no expense is spared to dispatch personnel, parts or spares to recover the situation.

Exciting future

For now, the focus of senior management is on synergising the Blue Water investment with the Unique operation as a family-run business, while continuing with the drive to restructure and strengthen the company and replicate its central structure throughout all its operations. As Huggins comments, Unique Maritime Group faces a dynamic short term future, which will not be without its challenges.



Hillsborough Scientific & Technical **Equipment Trading FZE** P.O Box: 16050, RAKFZ - UAE Tel: +971 7 2444620

Fax: +971 7 2444621

Hillsborough **General Trading LLC**

P.O Box: 81715, DUBAI - UAE Tel: +971 4 2807626 Fax +971 4 2807628

Website: www.hillsborough.ae Email: bala@hillsborough.ae • Mobile: +971 50 6559539



"We are looking inside the Group to see how we can improve our resources to provide effective solutions for our clients - this is critical to our future growth," he says.

One thing is for sure - exciting times lie ahead for Unique Maritime Group.

Unique Wellube to showcase products at ADIPEC

UNIQUE WELLUBE, A division of Unique Maritime Group (UMG). willbe exhibiting at ADIPEC. Unique Wellube offers specialist engineering services and associated products to a diverse range of industries. The services are focused on ensuring plant and pipeline operability and avoiding costly unplanned shutdowns by allowing intervention and plant critical maintenance work to be carried out in a safe and cost effective manner.

The range of Unique Wellube products and services can be summarized as follows:

- Hot Tapping & Line Stopping
- On-Site Machining
- Under Pressure Leak Sealing
- "Uni-Test" On-Line Valve **Testing**
- "UniSeal" Pipeline Repair Clamps
- On-Line Valve Maintenance
- Composite Wrapping
- Portable On Site Machining Sales & Rentals
- Custom Pipeline Fittings
- Pipeline Pressure Testers
- Wellhead & Platform Decommissioning Services

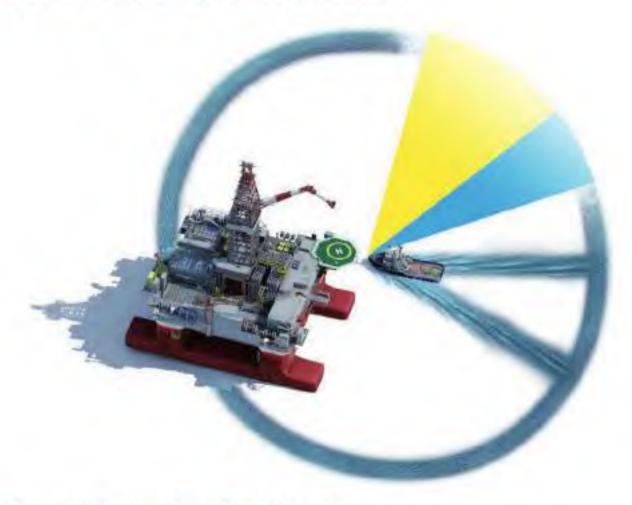


Uni-Test On-line Valve Testing

For general information, please visit http://www.uniquegroup.com/oil-and-gas.

Stand: 1332 (Hall 1)

Achieve a bigger slice of success



360° support for your oil and gas business

Whether seeking, developing or extracting energy resources, you need people who can take the strain and put technical muscle and skill at your service. GAC has the track record, global strength and specialised know-how to meet the stringent safety and quality standards of energy sector customers. Whether you're an operator, a surveyor, a driller or an EPC company, we make it our business to understand your core needs to deliver integrated ship agency, logistics and marine services. Our strategic hubs give us the reach to solve your problems and deliver your strategy worldwide.

Experience our energy at gac.com



Delivering your strategy.





Ansell's safety solutions against oil

ILS AND DEGREASERS are a common sight in a wide array of industries where removal of oil and lubricants from metal parts is part of the manufacturing or processing operations. While most people understand that oil is a chemical and requires hand protection, it also needs to be recognised that many degreasing agents may be toxic and contact with the skin should be avoided.

Degreasers that remove lubricants and machine residues from components are defined as chemicals, as are other liquids that clean metal by washing dirt, grease and oil from surfaces. Oil-based degreasers are often toxic and may contain dangerous chemicals found in traditional cleaners and degreasers.

Common chemicals found in degreasers include methyl ethyl ketone (also known as MEK, butanone, oxobutane or methyl acetone), acetone, toluene, glycol ethers, and other fluorinated and chlorinated solvents. Even where non-toxic degreasers are used, degreasers mixed with the material removed from metals often contain hazardous chemicals and need to be treated the same way as any other toxic substance.

Degreasers mixed with material removed from metals often contain hazardous chemicals

David Nicholls, marketing director of oil and gas at Ansell, said. "Maintaining a positive grip on slippery components due to lubrication coating is also important in terms of safety and productivity." The ActivArmr® 97-120 gloves incorporate revolutionary Ansell Grip Technology® and Ripel® to enable users to handle wet or oily objects with less grip force and more control.



The ActivArmr gloves enable users to handle wet or oily objects with less grip force and more control

"The unique Ansell technologies across our ActivArmr®. AlphaTec®, HyFlex® and Microflex® product brands offer better grip, liquid repellence and cut protection with increased flexibility and dexterity. This makes Ansell the ideal choice when working in the oil and gas industry." added Nicholls.

Ansell Worker Experience Innovation delivers solutions across core oil and gas tasks including support with global R&D, sales and customer service. Ansell is a partner to the industry and committed to delivering increased productivity through better comfort and increased comfort.

Stand: 1050 (Hall 1)

ProSep appoints general manager for Middle East

US-BASED OIL, GAS and water treatment specialist ProSep has appointed Ryan McPherson as general manger for the Middle East. McPherson has joined the company from the Industry Technology Facilitator (ITF), where he has been regional director for the Middle East and Asia Pacific, based in Abu Dhabi since 2011. Neil Poxon, CEO of ProSep, "The potential for ProSep technologies in the Middle East is significant as they are designed to address the myriad of challenges operators face in treating oil, gas and water. Ryan's appointment will help to drive our business forward and

production issues." McPherson was instrumental in launching ITF's Gulf Cooperation Council (GCC) cluster in 2012 to help establish a vision for collaborative oil and gas technology research and development for ITF members in the region. He was also a panel speaker at ADIPEC in 2012 and 2013 and is a committee member of the SPE Applied Technology Workshop 'Accelerating Technology Deployment' in Abu Dhabi. McPherson worked as a performance analyst with Grampian Police from 2000-2007 and holds a BA (Hons) in law and management and an MBA in oil and gas Management. He was the recipient of the Rising Star Award at the 2010 Scottish Offshore Achievement Awards and is a founding member of the Oil and Gas UK 'Next Generation' Task Force, where he was a keynote speaker during Offshore Europe in 2009. Prior to moving to Abu Dhabi, he spent four years with ITF in Aberdeen working as a senior technology analyst and also worked with global services company PSN as Business Improvement Lead.

Stand: 8324 (Hall 8)

promote the bespoke approach we take to solving complex

GENAVCO

Your Perfect Partner



YOU ARE THE MOST VALUABLE ASSET OF GENAVCO

Reinforce your business with the latest technologies offered by GENAVCO. Our customer support and service quality have been integrated into our system to enable you as our valuable partner to accomplish your mission and achieve your objective. Let's connect.

Best Quality . Best After Sales . Best Value

800 4362826
Dubai Sharjah Abu Dhabi Al Ain
W W W . g e n a v c o . c o m
Member of Juma Al Majid Group





Building on

big rig business

Lamprell, the energy sector construction company, is celebrating after a successful first half of the year.

HE OIL AND gas construction and engineering group Lamprell revealed that it has experienced strong operational performance in all of its core markets so far this year.

It announced that revenues for the first half of 2014 were up by US\$125.7mn compared to H1 2013 which the company claims is a result of high activity levels and phasing of construction activity.

Lamprell chief executive officer James Moffat said "Our continued focus on operational excellence has resulted in a strong first half performance that has exceeded our expectations."

He added, "We are making good progress implementing our refreshed growth strategy based on our core markets and are already beginning to see the benefits of a stronger balance sheet. While we anticipate lower revenues in the second half of the year, we expect the outturn for the full year to be ahead of our expectations."

The company announced that it has welcomed more than US\$900mn of new awards since January 2014, including multi-rig awards from Ensco and Shelf Drilling, as well

as an award from Petrofac for modules to be deployed in Abu Dhabi.

John Kennedy, Lamprell non-executive chairman, commented, "Lamprell has achieved a great deal in the first half of 2014. We have delivered a strong operational and financial performance, made good progress in converting our pipeline and successfully completed a rights issue and a major debt refinancina.

"The business is now well positioned to deliver on its refreshed growth strategy and create long-term value for all stakeholders."

In regards to the onsite safety of its employees, Lamprell proudly claims a worldclass safety record. A recent project to deliver the 13,200 mt production and utilities and quarters (PUQ) deck to Nexen, for example, saw Lamprell achieve 10mn manhours without a lost-time incident. In completing the project and successfully delivering the PUQ deck, commissioned by Nexen, Lamprell also achieved a world record for the heaviest load moved by self-propelled modular trailers.

"Our safety track record has been world class," Moffat stated. "In 2014, we are delighted to have rebuilt our order book,





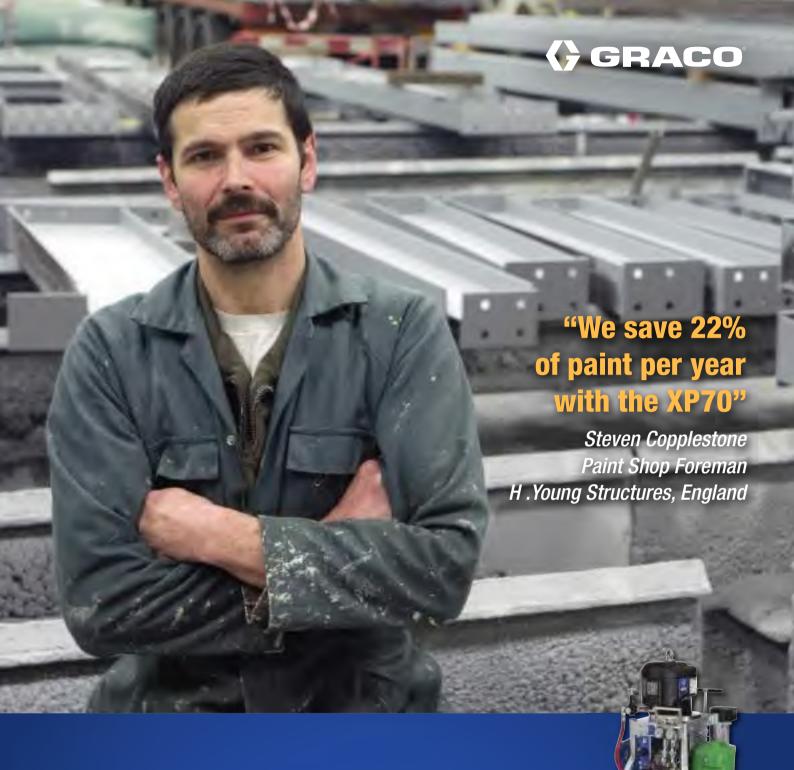
winning significant awards from both new and existing customers."

In October, Lamprell announced the successful completion of jackup drilling rig the 'Mercury', the second vessel it has built for the client. With delivery due before the end of the year, the rig will commence operations in the Caspian Sea alongside its sister vessel, the 'Neptune', which was delivered in November 2013.

Moffat said, "The project achieved nearly four million man hours without a day away from work, which is a world class achievement." Looking forward, the UAEbased oil rig business is set to deliver five new build jackup drilling rigs between November 2014 and March 2015, and has its order book rebuilt and now extending to Q2 2017. Having contributed to the Middle East energy sector for over 35 years, Lamprell is a leading provider of engineering and contracting services to onshore and offshore oil and gas and renewable energy industries. With facilities in the UAE, Saudi Arabia and Kuwait, its total facilities approximately cover 910,000sqm with 2.2 km of quayside. ■

Stand: 6210 (Hall 6)





2-Component Spraying for Protective Coatings

A smart alternative to hand-mixing

XP70[™] Benefits

- Less material waste
- Continuous on-ratio spraying
- ▶ No more hand-mixing



► More information on a9.xp70.graco.eu.com

Oil and gas fields get smart

Javier Díaz Lugo and Fahd Saghir on how new technologies will lead to an increasingly intergrated operations approach.

E USED TECHNOLOGY to change what we do, rather than optimise what we have always done." —Jim Williams, Chevron manager.

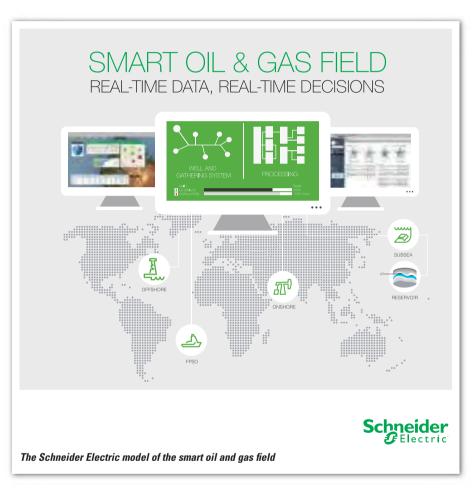
Oil and gas companies are applying the latest automation technologies not only to enhance exploration and production capabilities, but also to diminish risks to employees, preserve the environment and optimise daily operational methodologies. Present technologies have redefined how companies manage real-time data, automated workflows, analytical decisionmaking and corporate key performance indicators (KPI) tracking.

With the advent of smart wells and realtime automation technologies, oil and gas companies are looking at assets in a new light, which helps in making informed decisions while reducing risks. Such methodologies will not only improve overall operations, but will also allow companies to adapt data-driven operating models. However, the big question remains: how will these real-time data-driven models and new technologies shape the future of the oil and gas business?

The present

Developments in informational and operational technologies have been groundbreaking in the past decade. Our generation has witnessed this, with the average human easily adapting to the newest, state-of-the-art smart phones.

56 Technologies find ways into an oil and gas group through different channels and stakeholders"



This same philosophy is finding its way into daily business practices in the oil and gas sector. Producers have readily invested in such technologies and are now reaping the results.

Technologies find ways into an oil and gas group through different channels and stakeholders. For example, a production or reservoir team might bring in distributed thermal sensing (DTS), zonal flow control (ZFC), down hole gauges (DHG), and artificial lift systems (ALS) under its portfolio. On the other hand, an automation team might be working on bringing in smart sensors, telemetry and data communication systems. Finally, an IT team within the company will be responsible for providing data management and will assist with software and collaboration projects. All stakeholders

will then play key roles in bringing together the building blocks to construct a smart field model that best meets the company's unique requirements.

With the availability of real-time data and new insight in daily operations, oil and gas companies are now looking into further enhancements to automate - to some extent, if not all - key optimisation tasks. The development of innovative ideas resulting from present smart field initiatives will pave the way for new technological advances, which will define the future of oil and gas fields.

The future

The adaptation to smart fields has allowed the oil and gas industry to break away from silos

WHEN BUSINESS DEMANDS CONTINUITY, **KOHLER PUTS** YOU AT EASE



When your business is protected by KOHLER, your power stays on. Always. Designed to meet the industry's toughest testing standards, Kohler Power solutions represent the pinnacle of engineering and reliability and are trusted by Saudi Arabia's leading businesses and institutions every day.

KOHLER. Power Systems

SPECLYDUR JOH AT

WWW.KOHLERPOWER.COM/INDUSTRIAL powersystems.emea@kahler.com

→ Technology

and adopt an integrated operations approach. The outcome is new ideas that can be converted into future technologies specifically developed for the smart oil and gas field. Some technologies are already knocking at the door. Here is a look at what the future holds:

Internet of Things (IoT)

Recently, we have seen IoT being discussed in numerous papers and it is currently a buzz word among technology enthusiasts. Simply put, it is the idea of allowing inter-machine communication through embedded communication devices. It is an exciting prospect, as it will allow machines to provide detailed diagnostics and data while sharing key information about processes in real-time. Preventive maintenance reporting capabilities will be embedded directly at the source, allowing for immediate corrective responses, and thus minimising production loss. This will be particularly advantageous in scenarios where resources are scarce and assets are located in remote facilities. Adaptation of IoT in the oil and gas industry alone could improve maintenance, safety and optimisation.

However, as is the case with any internet service, cyber security becomes a key building block for IoT. It is imperative that while companies become more open to data connectivity, they also pay attention to cyber security infrastructure by following sound and proven industrial practices.

Robotics

Remotely operated vehicles (ROVs) have been used for many years at offshore production facilities. However, given that exploration is now being done in further inaccessible areas, using robots for conducting routine maintenance and inspection activities is becoming more attractive. Robots provide a 24/7 surveillance option to operators at remote offshore facilities. ROV tasks could range from running a routing visual inspection routine to conducting minor maintenance tasks. This would allow operating companies to save on travel and reduce exposure to health, safety and environmental factors.

Drones, on the other hand, are already a popular method for surveillance. In hazardous locations, such as flares and oil storage tanks, drones can be useful in providing real-time surveillance in hard-toreach areas. Equip a drone with an infra-red camera and you have a real-time, mobile

66 Automation and IT disciplines now better understand overall exploration and production dynamics"



ROVs have been used at offshore facilities for many years (photo: Ocean Networks Canada)

leak detection device at your disposal.

These technologies are already available and being used on a very small scale by a few oil and gas companies. However, it will be interesting to see how these technologies integrate into operational activities once applied on a larger scale, and if this changes the approach toward robotics in the oil and gas industry overall.

Multi-disciplinary workforce

With people from different disciplines increasingly coming under one roof to optimise production and improve daily operations, the trend will be towards companies adapting a multi-disciplinary approach.

Automation and IT disciplines now better understand overall exploration and production dynamics, and have become conversant with identifying gaps to improve the smart fields approach that caters to a company's core business of oil and gas production. Concurrently, production and reservoir disciplines have become more aligned with real-time technologies and can now assist in the selection of appropriate tools that will help enhance the smart field

A multi-disciplinary approach will have a positive impact on how companies collaborate in the future. This will allow better understanding across the board, and effectively enhance individual performance and boost company productivity.

Improved real-time fluid and petrophysical analytics

The reservoir is the oil and gas company's main asset, and the only money-source.

Ironically, the reservoir is the most unfamiliar place in an organisation. Principal data from petro-physical and fluid characterisation are used to build the reservoir model and determine the field development plan.

Most of the petro-physical and fluid analyses is carried out manually in laboratories. The complexity of protecting the in-field samples and reproducing reservoir conditions in laboratories, together with the costs involved, mean this kind of data is particularly precious to engineers in charge of models.

With the smart oil and gas field of the future, properties like viscosities, pressurevolume-temperature, chemical reactions between injected fluids and the diverse rock types in the reservoir could be monitored in real-time. It is necessary the oil industry invest in R&D to support this technology. Nothing should be more important to the oil industry than knowing what is in the reservoir.

Closed loop reservoir optimisation

The main dilemma in managing a reservoir is discovering how to increase the oil recovery factor of a field. Even by applying enhanced oil recovery, mature fields still keep too much oil at the end of the life-cycle of a reservoir. Current technologies do not make a total sweep of oil.

Today, reservoir management is limited to following field development plans with dynamic models that are updated sporadically due to the lack of new rock and fluid information. Future models need to be updated in real-time in order to react to dynamic reservoir conditions.





Moscow | Houston | Dusseldorf | Dubai

Closer to Client

Representing our new office in Dubai



SAWL and heavy plates

Rolled coil GP and HSS

Railroad wheels

Fittings and valves



53 RD EDITION

CELEBRATING 5 YEARS OF OFG

THU NOV 27

Bringing industry leaders together for 5 years
The leading oil & gas networking event in the region

November sponsor: Top Oilfield Industries is a leader in the field of land rig development, oilfield drilling equipment manufacture, repair, overhaul and modification.

To find out more about these monthly events and how to register please email off@ruthschris.ae or call +971 50709 1533







REGISTER NOW!

THE ADDRESS DUBAI MARINA

TEL +971 4 454 9538, HOT LINE +971 56 170 5116, E marina@ruthschris.ae

• RuthsChrisDubai, • RuthsChrisDubai www.ruthschris.ae

In addition to enhancing dynamic reservoir simulation, there is a large gap in how production technologies interact with automation technologies. With the number of smart completions increasing steadily, not all oil and gas operators are able to reap the full benefits from multiple smart well

technologies. DTS, ZFC and DHGs are working independently from surface-based automation systems. The value of these smart well technologies will increase exponentially if they are used as part of a closed-loop control with surface automation technology. The ability to manage water

IoT will not only optimise the way we produce, but will also radically change the way we operate an oilfield

55 The number of combinations is countless and requires an out-of-thebox approach"

injection by controlling motor-operated valves based on real-time DTS data can improve the injection regime throughout the reservoir. Tying in multi-phase flow meters with ZFC can allow operators to maximise production by optimising flow from each zone.

The number of combinations is countless and requires an out-of-the-box approach to merge production and automation technologies. Additionally, by combining realtime models with the above-mentioned approach, IoT will not only optimise the way we produce, but will radically change the way we operate an oilfield, thus really optimising the field development plan.

Javier Díaz Lugo is an upstream oil and gas solution architect and Fahd Saghir is a system and architecture expert at Schneider Electric.



OSFA

Date: 2-5 December 2014

Venue: Marina Bay Sands, Singapore



Unlocking the full potential

The 20th edition of the biennial oil and gas tradeshow OSEA is set to run from 2-5 December 2014 and welcoming international government representatives, industry thought leaders and business professionals.

IL AND GAS exhibition and conference OSFA 2014 has witnessed at least a 20 per cent rise in participation of international exhibitors compared to its last edition.

Based in Marina Bay Sands, Singapore from 2-5 December 2014, the 20th edition of OSEA will occupy 36,000 sq m of exhibition space and is set to welcome 1.600 exhibitors and 28,000 trade attendees from across 45 countries.

Chua Buck Cheng, project director of engineering events at Singapore Exhibition Services, said, "We are looking at a possible energy crunch in the foreseeable future. given the fast-rising global consumption of oil and gas. Consequently, the need to stay abreast of industry shifts and technological advancements has never been more important"

He added, "We have designed OSEA to pinpoint these trends and provide the industry with what's needed in order to advance and face the oncoming challenges."

Across four days and including 15 international group pavilions, OSEA intends to provide visiting business and trade professionals the chance to preview a wide showcase of new and improved back-end and field products and technologies, as well as gain access to interactive conference sessions.

L The region is likely to be a major draw for international and regional companies"

Exhibitors for the biennial offshore oil and gas show include the Association of Dutch Oil and Gas Suppliers (IRO), China Petroleum Technology and Development Corporation (CPTDC), Gazprom and Damen Shipyards Gorinchem.

OGmTech, the International Exhibition on Manufacturing Technology for Oil and Gas, is also set to make its debut this year. Running alongside OSEA, it will offer visitors a niche exhibition focussed on definitive manufacturing solutions, including precision engineering technologies and capabilities for the oil and gas industry.

Koh Sena Chee, executive director of Singapore Precision Engineering & Tooling Association (SPETA), stated, "Having a dedicated oil and gas manufacturing technology event at OSEA provides vast opportunities for our members in the precision engineering sector."

OSEA 2014 is targeting the global oil and gas industry, with continued endorsements from international groups and associations, such as Holland Marine Equipment (HME), International Marine Contractors Association (IMCA), Korea Association of Machinery Industry (KAOMI), and Norwegian Oil & Gas Partners (INTSOK).

John Westwood, group chairman of Douglas-Westwood, commented, "There is a keen interest in the Asia Pacific region and as offshore and building activities continue to grow in the future, the region is likely to be a major draw for international and regional companies. Industry expertise and knowledge should also grow along with these developments."

The OSEA 2014 conference will include



OSEA 2014 will be held at the Marina Bay Sands, in Singapore (Photo: Erwin Soo)

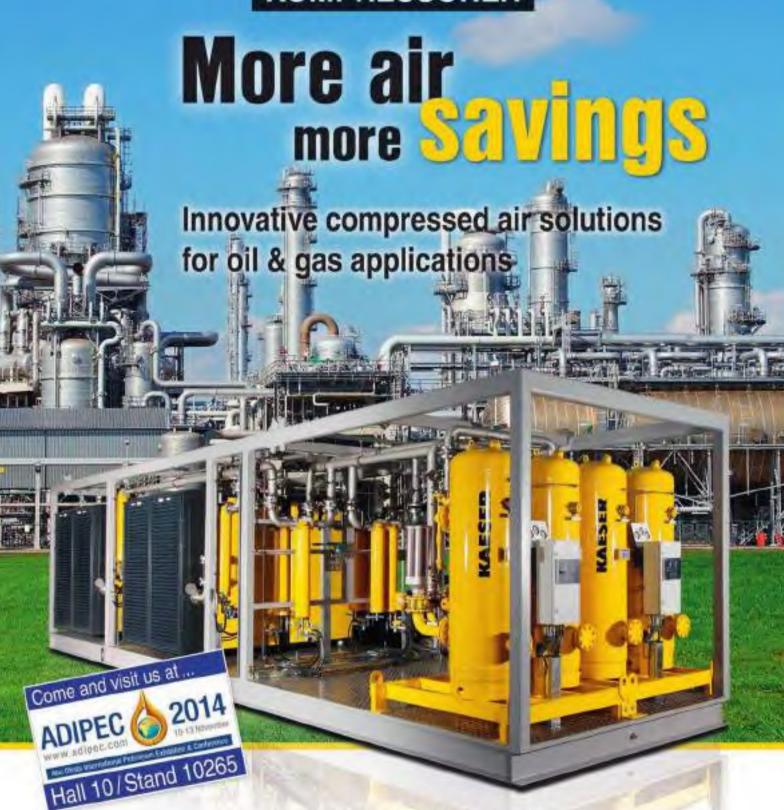
thought leaders and experts from around the globe and in-depth discussions based on the latest market trends. Featuring a new theme, 'Unlocking the Full Potential of Offshore Reserves with Innovative Solutions', the conference will address topics such as the future of oil and gas supply and exploration, resource management through oilfield recovery, and as the latest developments and technologies in unconventional and deepwater environments.

As part of the conference, there will also be two workshops looking at best practices in drilling and well design and asset integrity management.

At the last edition of OSEA in 2012, the conference saw more than 200 speakers and delegates from 30 countries in attendance. Speakers and delegates included Saudi Arabian Oil, Kuwait Petroleum Corporation, Total E&P, Gazprom International, and Lloyd's Register Group.

Looking at the overall show, OSEA 2012 welcomed a record 27,000 attendees, including visitors from the prominent IOCs and NOCs, such as Chevron International, ExxonMobil, and Halliburton Far East.

KAESER



KAESER KOMPRESSOREN FZE

P.O. Box 17485 • Jebel Ali Free Zone • Dubai • UAE

Tel: +971 4 805 0000 • Fax: +971 4 805 0077 – E-Mail: info.dubai@kaeser.com

www.kaeser.com

MAOK's coating solutions for screw joints in pipes

The Russia-based specialist, along with TMK group's team, has conducted active work on creating a coating for screw joints in the oil and gas industry for more than a decade.

AOK'S COATING SOLUTION for screw joints in pipes helps acquire gas tightness and aids expansion of casing strings with BUTTRESS thread.

Over the first ten years of the 2000s, MAOK, along with TMK group's specialists, has conducted active work on creating a coating for screw joints in the oil and gas industry for the purpose of solving several problems including:

- To remove preservative and sealing lubricants from the makeup process.
- To set up multiplicity of makeup:
 - for casing pipes not less than three times. - for oil well tubing not less than 10 times.
- To protect a screw joint from destruction due to exterior factors.

As a result, by 2011 a coating MAOK-PLAUN® was created, which not only overcame the above problems but also expanded the sphere of its application.



MAOK's general manager Aleksei Tokarev



The MAOK-PLAUN® coating test was done on BUTTRESS screw joints of API Spec5CT standard casing pipes. The BUTTRESS joint with the coating of casing pipe with 146 in diametre of strength group N80 during tests for gas tightness withstood a pressure of 600kgs/sg cm for 65 hours. Consequently, the BUTTRESS screw joint of strength group H40 withstood the recommended testing pressure of 300kgs/sq cm, the company said.

Constructive features of threaded connection BUTTRESS and liquid lubrication systems used for its screwing cannot provide gas tightness of threaded connections of casing pipes. Contrary to standard lubricants, the MAOK-PLAUN® coating provides gas tightness of these connections due to its unique properties.

That is to say that threaded connections BUTTRESS of casing pipes with the MAOK-PLAUN® coating can be regarded as analogue of 'premium class' connections.

Thread with MAOK-PLAUN® coating can endure more screwing efforts than a threaded connection with a lubricant. This is because liquids do not possess a rate of compression; they are not subject to compression. On the contrary the MAOK-PLAUN® coating is yielding and has a rate of compression.

With regards to lubricants, an effect of force expansion affecting a liquid surface is shown in Figure 1. A force vector acts linearly. When P_I reaches critical, conventionally 100 points, plastic deformation occurs with further destruction of a pipe's thread or coupling's body or both simultaneously.

Figure 2 shows how a force vector affects MAOK-PLAUN® coating. It is seen that a force vector due to the coating is yielding is resolved in space (not in linear surface).

Components of force vectors when meeting are mutually superimposed on one another and decrease force action up to 0 (zero) in some points. Therefore, the force affecting



Pavel Kasyanik, head of department of Saint-Petersburg State Polytechnic University

MAOK-PLAUN® coating equal to P_I gap or 100 points shall not deform and destroy a threaded surface with the coating as in case of application of liquid lubricants.

Possibility of destruction of threaded connection when screwing is much reduced when using MAOK-PLAUN® coating against to threaded connections with standard dopes that lead to extension of life expectancy of these connections. Therefore, threaded connection of tubings with MAOK-PLAUN® coating are screwed up 50 or more times and not more than five to 10 times if using standard dopes.

Today, companies working in area of development of lubrication-free systems work in a different direction, such as they change a thread profile in casing pipes like to 'dovetail' to get multiple screwing-unscrewing actions. Such improvements are only made in casing pipes with 'premium class' thread as a coating can ensure only multiplicity of coupling (up to four times) but its properties not allow making a threaded connection tight.

Air tightness, as before, is reached by sealing defined by a thread's design. These constructive changes result in appreciation of pipe systems in 'premium class' sector.

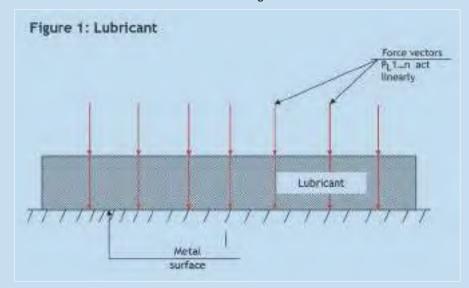
What new outlooks of application does the property of gas tightness of BUTTRESS screw joint with MAOK-PLAUN® coating open?

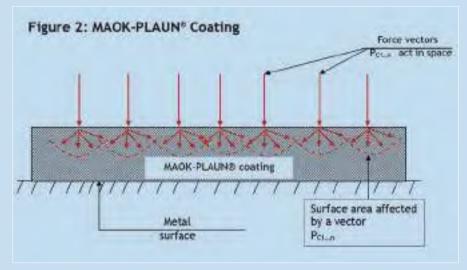
The key feature of the coating, MAOK said, is it can be used for casing into the well-site instead of 'premium class' thread, which also allows wells to be built with BUTTRESS casing pipes. For saving the screw joint of BUTTRESS casing strings from destruction due to high mechanical loads from the string dead weight, it is ideal to use pipes with a higher strength group in relation to pipes with premium thread. For instance, in construction of a well a casing pipe with 'premium class' thread and strength group H40 is provided. Here the BUTTRESS pipe with MAOK-PLAUN® coating and strength group N80 can replace the H40 pipe with 'premium thread', the company added.

Talking about cost-effectiveness. MAOK said that the difference in the increase in cost of BUTTRESS casing pipe with MAOK-PLAUN® coating in relation to a simple uncoated pipe is one per cent. Similarly the difference in the cost of a tonne of casing pipes with BUTTRESS thread and premium class thread is up to 300 per cent. Hence, the transfer to casing pipes with BUTTRESS thread instead of pipes with premium thread will allow the costs of construction of well sites, including offshore construction, to be greatly reduced, MAOK noted.

The coating is also hydrogen sulfide (H2S)resistant, which means that the coating will work efficiently when constructing and operating wells with the high content of H2S. MAOK-PLAUN® protects not only the coupling body on which it is applied, but also nipple

The effects for lubricant and MAOK-PLAUN® Coating are as follows





pipe thread ends connected with the coupling. This occurs because the coating has high plasticity, elongation being 13-18 per cent, and it tightly, without gaps or pores, encases the pipe nipple thread, making the joint tight in gas media. This is the case in both screw joints of casing pipes and screw joints of oil well tubing.

MAOK-GT® coating is applied on the external and internal surfaces of tubes. MAOK said, "And with additional use in protection of the pipe walls (both exterior and interior) of MAOK-GT® coating, which is designed to prevent them from being affected by H2S and CO, in combination with MAOK-PLAUN® coating, standard casing pipes H40 could be used instead of highly alloyed steel pipes, which also leads to a reduction of costs for oil and gas companies. The increase in the cost of a ton of the pipe with MAOK-GT® coating will be not above 0.4 per cent of the cost of the uncoated pipe."

One should also take into account that

MAOK-PLAUN® coating can also be used to protect threaded and sealing parts of couplings with 'premium class' threads. The rise in the cost of one ton of casing pipe with 'premium class' thread with MAOK-PLAUN® coating will be no more than one per cent of the cost of the same pipe without the coating.

In sync with nature

The use of MAOK-PLAUN® coating for casing pipes and oilwell tubing allows the ecological hazard to be reduced without investing additional financial, scientific, and engineering resources. The coating facilitates environmental improvement on sites of oil and gas extraction on account of eliminating lubricants from the boring and extracting processes, and also on account of gas tightness of screw joints.

To find out more about MAOK — which holds all required statements and certificates visit www.maok.spb.ru or contact office@maok.spb.ru



LED lighting

Dialight, a global supplier in LED lighting for hazardous environments, has launched a new range for the oil and gas industry that promises up to 80 per cent energy savings.

ED LUMINAIRE MANUFACTURER Dialight has introduced its ATEX certified luminaire range which, with various lumen and wattage packages, innovative levels of efficiency and carrying up to 10-year full performance warranties, it says will benefit the Middle East's oil and gas sector.

The unique range of CE-compliant LED luminaires includes products suited to a number of applications, particularly in hardto-access and high-risk areas. They are specifically designed for use in harsh and hazardous environments where potentially explosive gases and dusts may be present, making them ideal for the oil and gas industry.

Speaking to Oil Review, Dialight's general manager for the Middle East, North Africa and South Asia Region Steve Towler said, "Dialight's LED lighting is more efficient than conventional lighting and the long-life performance eliminates maintenance costs or vastly extends maintenance schedules. whilst also reducing the health and safety risks associated with accessing hard-toreach locations."

He added, "Certainly the oil and gas industry has embraced the products and will continue to because of the superior illumination, energy efficiency and long lasting performance. With health and safety being an imperative issue in oil and gas operations, the benefit of low maintenance and low temperature ratings on the fixtures is also extremely advantageous."

Working in a competitive market in which many companies still know little about LED lighting, the energy saving aspect of LED lighting is a key selling point for Dialight.

"A lot of our work is education, we're informing the client what they can do now," said Towler. "Many companies don't

understand that you can use an LED to replace lighting in oil and gas applications including refineries, oil and gas platforms, drilling rigs and FPSOs."

According to the hazardous lighting company, LED lighting can save a business between 50-80 per cent in energy and, more specifically, choosing to swap high intensity discharge (HID) lamps to LED can mean a 70-80 per cent power reduction.

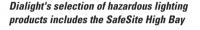
One way in which Dialight achieves these levels of energy saving is through heat reduction, which is also particularly valuable when working in the Gulf's high temperatures.

66 Many companies don't understand that you can use an LED to replace lighting in oil and gas applications including refineries"

"You could have 100 HID sources all hitting 4000°C and it becomes very uncomfortable for staff to work," explained Towler. "Our luminaires typically get up to around 500°C, which is a massive difference in temperature."

Towler added, "The lack of heat given off by LED lighting reduces the risk of injury from contact with the lighting and the better T-rating compared to conventional lighting solutions means they are safer to use in areas where there is risk of explosion."

According to the company, demand for Dialight products is ever-growing in the Middle East Region. Approximately 80 per



cent of its regional business is focussed on the oil and gas industry.

Having previously worked closely on projects with Abu Dhabi oil and gas companies, such as ADGAS and ZADCO, Dialight now sees Oman as a strong market for LED lighting and GCC countries, such as Qatar, as emerging potential business areas. Dialight boasts that another benefit of its LED lighting solutions is the considerable space and weight the lighting can save on drilling platforms.

"On an offshore platform if you reduce all your lighting maintenance you can save two beds," said Towler. "Removing two lighting guys gives them two spaces for mechanical engineering or welding etc., which as a result, improves productivity."

Towler added, "The products also have instant on/off ability, without compromising on the life of the lamp and this along with the quality of light improves productivity and the safety for the workers."

He also explained that Dialight, a global company with manufacturing plants in Latin America, the US and Europe, has the technology to reduce 50 per cent of the initial conventional lighting weight on a platform.

"We're saving tonnes of weight on a platform and that's a big deal," said Towler.

He also advised that there are also a variety of product options, including emergency, transportable and stainless steel ranges, available to meet the needs of even more oil and gas applications.

He concluded by saying, "It's great working for a company where we save customers money, energy and maintenance, while also reducing health and safety risks, there's so many benefits and there aren't a lot of products out there in any market that offer that many benefits to a client."





Gardner Denver

Your Ultimate Source for Pressure and Vacuum

Gardner Denver FZE, Office No. 18202, JAFZA View 18, P.O. Box 61146, JAFZA, Dubai, UAE

Tel: + 971(0) 4 881 17 44 Web: www.gardnerdenver.com

Email: enquiries.fze@gardnerdenver.com









Precision Digital Corporation introduces explosion-proof, multi-purpose Modbus scanner

PRECISION DIGITAL CORP, manufacturer of digital panel meters and control instrumentation, has launched PD6830X Modbus Scanner.

The PD6830X is a rugged, explosionproof, NEMA 4X/IP68 Modbus master, slave, or snooper (sniffer). A multi-purpose meter, it is designed for accurate display and quick access of information, locally or remotely, in hazardous areas or in the harshest safe area applications. It can accept up to 16 individually programmed process variables (PVs) from multiple devices: four math channels allow for calculations on multiple PVs. The unique SafeTouch® through-glass buttons allows operation without removing the cover. The pulse input accepts a wide range of flow transmitter signals, including mV input from a magnetic flowmeter, as well as high frequency signals. The PD6830X includes backlighting, two open collector outputs. and an analog output as standard. The scanner has FM, ATEX, CSA, IECEx, and CE approvals, enabling it to be installed almost anywhere. The PD6830X is housed in a



The PD6830X is housed in a durable, epoxy coated, cast aluminum enclosure.

durable, epoxy coated, cast aluminum enclosure.

Jeffrey Peters, president of Precision Digital Corp, said, "The versatile ProtEX PD6830X is loaded with features plant operators can appreciate. The meter is simple to programme using our ScanView EX software, displays critical information about their process, and can be seen from wide angles and at a distance."

The PD6830X is designed for readability and ease of use, from large character and Feet & Inches displays to automatic rate

conversions and data logging. In addition, it integrates easily into existing Modbus networks. The PD6830X Decimal Display models feature an upper display that is 0.7 inches high and shows five digits of information; the Feet & Inches models feature a level display that reads up to 399 feet. 11 and 15/16 inches and contains a 20segment tank level indicator. The bright LCD display is easily read under various lighting conditions and from viewing angles of up to +/- 40 degrees.

Four sensors in the PD6830X operate as through-glass buttons for programming and operation without removing the cover in hazardous areas. These SafeTouch® buttons include an energy saving mode to save power, extend battery life and prevent unintended triggers. It provides flexible power options, including battery, DC with battery backup, DC only, output-loop or output loop with battery backup. Its element-resistant enclosure provides three threaded conduit holes and integrated pipe or wall mounting holes. Operating temperatures range from -40°C to 75 °C.

Westmark introduces new product that contributes towards safer workplaces

WESTMARK BV HAS introduced a new 15-inch model to complete its Cablesafe range of safety hooks and has improved the design of the entire range, making them stronger. The company said it would be easy to suspend cables, wires and hoses with the Cablesafe hooks' simple. effective S-shape.

"Effective use of Cablesafe safety hooks completely removes the occurrence of hazardous working conditions caused by cables lying on floors and reduces the chance of them getting damaged," said a company spokesperson.

The safety hooks were developed specifically for the offshore oil industry, but are now also being used for other applications; refineries, chemical plants, shipbuilders and contractors have been applying them on decks, stairs, scaffolding and other structures. Use of the Cablesafe hooks also reduces time taken to install or decommission temporary

power and lighting infrastructures, said the company. Many companies demand the use of Cablesafe to conform to safety regulations: Cablesafe is standard safety practice with Shell, Akzo-Nobel, BASF, DOW, DuPont, Eon, ExxonMobile, BP and many other companies around the world, claimed Westmark.

The S-shaped hook can take loads up to 300 kg and withstand temperatures from -20°C up to 200°C (-4°F -392°F). They are available in four sizes (six inch, nine inch, 12 inch and 15 inch), are fire retardant, nonconductive and have very high UV resistance ensuring long lifetime. The hooks can be re-used many times and, together with the new design that uses less material, is a sustainable product. A hole in each end of the hook enables the user to secure and fix the cable hook itself by means of a cable tie wrap - cable hooks are suitable for bundled cables. The hooks have been extensively tested and approved.



visibly. better.





The control room of the future —today.

The Experion® Orion Console increases operator effectiveness over a greater scope of responsibility. Large ultra-high definition screens allow flexible display layouts for at-a-glance assessment, Operate closer to the optimum with operating limits and targets.

directly integrated into overview displays. Capabilities include touchpad use, pan and zoom, advanced alarm management and context-specific views. Dur advanced display technology combined with operator comfort and reduced fatigue increases situational awareness for faster response to changing conditions. Honeywell leads the way in utilizing process knowledge.

Honeywell

Experion PKS Orion

The Knowledge to Make it Possible. www.honeywellprocess.com

First subsea technology training academy opens in Scotland

ASHTEAD TECHNOLOGY HAS launched a stateof-the-art subsea training academy at Westhill in Aberdeen, Scotland,

The training academy will meet the global demand for improved competency in the configuration, operation and maintenance of increasingly sophisticated equipment required in more complex subsea oil and gas projects in

deeper waters and hostile locations around the world, according to company sources.

In a pilot scheme prior to the launch of the facility. Ashtead delivered several courses to a number of leading subsea companies, including a three-day acoustics course and a one-day introduction to offshore survey equipment course

Tim Sheehan, commercial director of Ashtead Technology, said, "Subsea survey, construction and maintenance companies must have the skills and competency to ensure systems are properly configured, operated and maintained. Ashtead Technology is well-positioned and resourced to fill the gap in the market for high-quality training."

BMW uses SABIC product in concept car

BMW-LED VISIO.M Consortium has used a Saudi Basic Industries. Corporation (SABIC)-made resin in the windows of its new ultralightweight electric car concept. The LEXAN resin, used as an alternative to conventional glass for the car's windows, reduces weight by over 13 kg and extends the vehicle's driving range by up to two kilometres for a single battery charge.

The lightweight urban electric concept vehicle was showcased recently at the Technical University of Munich. The announcement of the concept vehicle comes at a time when automakers worldwide are striving to improve electric vehicle range and efficiency.

SABIC's LEXAN resin, which is a polycarbonate (PC) material, helps keep overall vehicle weight to a minimum and contributes to important gains in energy efficiency and extended range, while also delivering other benefits like improved acceleration, vehicle handling and security.



FCI's flow meter helps meet EPA standards for flare gas

THE ST100 SERIES Thermal Mass Air/Gas Flow Meter from Fluid Components International (FCI) is an EPA compliant, rugged solution to measure flare gas flows at the wellhead.

As part of shale gas frack well drilling operations, there is often excess gas that returns to the surface. This gas is vented to a



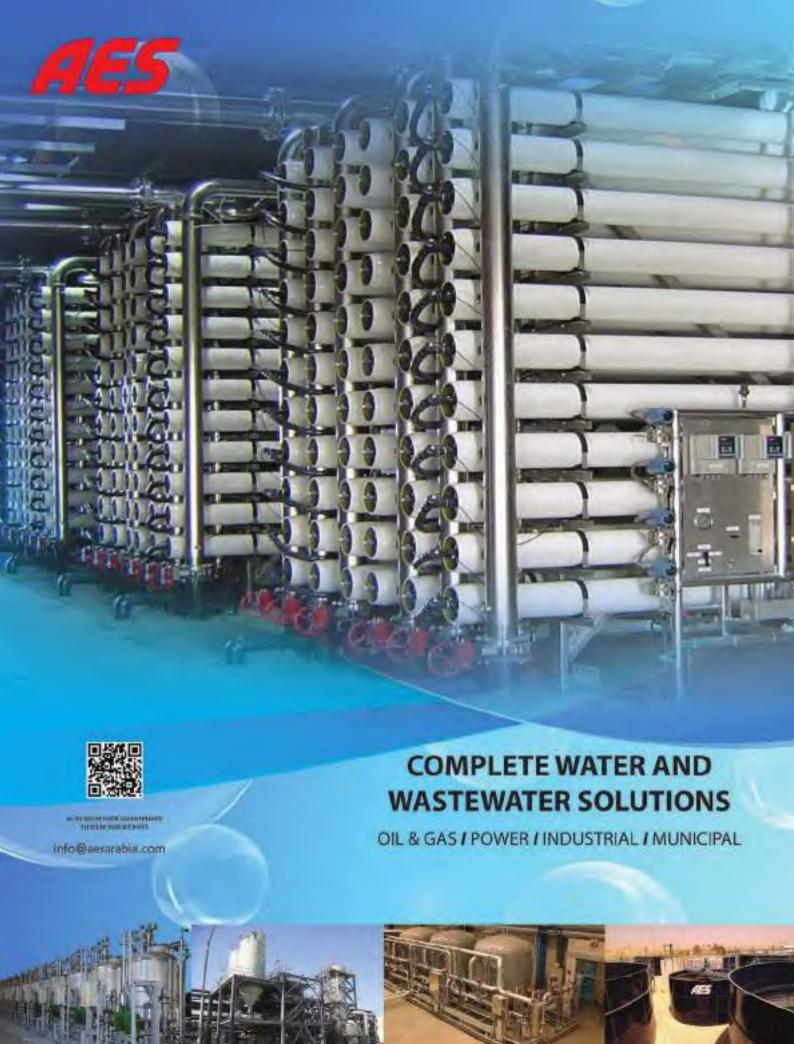
FCI's thermal flow meters can measure flow rates as low as 0.25 sfps and as high as 1,000 sfps with up to 1000:1 turndown.

flare and burned off. US EPA Directive 40 CFR Part 98 requires flow measurement and reporting of these flared gases, which can be difficult with very low flow rates of four to six mps, containing mixed gas compositions, potentially dirty gas, and at potentially elevated temperatures and wide pressure variation.

To tackle this, the flow meter includes a digital readout with totaliser, analogue or digital bus communications outputs and an on-

They are calibration-matched to specific mixed gas compositions and to the installation's temperature and pressure conditions, can store up to five unique calibrations and their accuracy meets the EPA's regulations.





Claxton wins Gulf contract

CLAXTON ENGINEERING, AN Acteon company, has been awarded a 12-month contract for multiple well slot recoveries in the Arabian Gulf, enabling a field operator to extend the economic life of its platform and well assets.

Claxton's Dubai office will perform diamond wire cutting and subsea drilling and pinning, and provide a surface conductor recovery package, including band saws and double drilling units. The project is scheduled to begin in early 2015.



Claxton supplies engineering and services for shallow water markets

Claxton used a similar package to recover a conductor during the first-ever rigless platform well abandonment in the North Sea, and has used it on many successful slot recovery projects globally.

Nick Marriott, Claxton Engineering region manager, Dubai, said, "Dealing with the challenge of aged conductors is a growing issue in the Middle East. Our field-proven slot recovery service enables new wells to be drilled from existing assets and is a cost-effective option for removing aged or damaged conductors."

2H Offshore supplies MPD system

2H OFFSHORE HAS been appointed by Weatherford Secure Drilling® services to manage the design and delivery of the riser equipment for its Managed Pressure Drilling (MPD) system.

2H's scope of work now includes the development and delivery of MPD riser stack equipment for the next two generations of Weatherford's MPD systems for offshore applications.

Despite the success that has been achieved using MPD offshore to date, there are still some



There are challenges with the ability of offshore rigs to accommodate MPD technologies

challenges with the ability of offshore, particularly deepwater, rigs to accommodate MPD technologies. Weatherford is developing a fully integrated MPD solution that can be easily incorporated into nearly any deepwater drilling vessel, improving the adaptability and implementation for deepwater MPD systems.



Upcoming Training Highlights for E&P Professionals

Nov 17-21, 2014 - Vienna, Austria Basin Analysis and Petroleum Systems (GG12)

Nov 19-21, 2014 - Istanbul, Turkey Play Fairway Mapping and Exploration Strategy (GG34)

Nov 24-28, 2014 - Vienna, Austria Advanced Drilling Technologies (DR14)

Dec 1-5, 2014 - Vienna, Austria

Pore Pressure, Fracture Pressure and Wellbore Stability Management (GG21)

Dec 1-4, 2014 - Vienna, Austria Petroleum Economics and Business (PBM02)

Dec 1-5, 2014 - Istanbul, Turkey The Experienced Manager Programme (SSM41)

Dec 14-18, 2014 - Doha, Qatar Basin Analysis and Petroleum Systems (GG12)

Feb 10-13, 2015 - Perth, Australia Rock Typing - Reservoir Characterisation and Quality from Drill Cuttings (GG33)



WATCH OUT FOR OUR 2015 TRAINING SCHEDULE AT http://hoteng.com/en/training/public_courses/complete_course_list/



Visit www.hoteng.com for further information and registration.

Expanding in the Middle East

BENTEC, A MANUFACTURER of customised drilling rs and mechanical and electrical components, is looking to expand its operations in the Middle East over the next five years, according to Thomas Kipker, head of product management at Bentec.

Bentec provides field proven solutions in the world's most challenging environments, from the desert to the arctic. Headquartered in Bad Bentheim, Germany, Bentec also has additional production and service workshops in Russia and Oman.

Founded in 1994 as an independent subsidiary of KCA Deutag, Bentec's history actually dates back more than 100 years, when the German drilling contractor Deutag was founded. More than a century of experience has enabled the company to use its extensive expertise to develop innovative solutions to meet the drilling industry's requirements.

Bentec supplies an extensive range of drilling equipment systems which enhance the safety and efficiency of drilling operations, as well as manufactures complete onshore drilling rigs.

The company has been operating in the Middle East since 2005 and is currently manufacturing three new land rigs in Oman for the BP Khazzan development.

Kipker said: "The climate and terrain are key factors when operating in the Middle East. Tailoring rigs to suit the demanding requirements of the environment is what we specialise in.

The Bentec Speed Rig is a highly efficient, light and fast moving land rig, specifically designed for the desert to deliver maximum safety and performance in a compact and highly mobile drilling package. With many innovative features and advantages, Speed Rigs achieve extraordinary gains in drilling efficiency.

"Our strategy is to focus on the reputation, quality and reliability of German engineering and workmanship. Bentec has been navigating the transition from being a rig assembler to becoming an engineering company that designs and engineers its own equipment, including drawworks, top drives, masts, electrical systems and mud pumps - acting as a one-stop shop."







API Q1, ISO 9001.2008, ISO 14001.2004, OHSAS 18001.2007, API 5CT (5CT-1435); API-6A (6A-1537); API 7-1 (7-1-099B); API 16A (16A-0384); NBBI NB Stamp; NBBI R Stamp (R-9048); NBBI VR Stamp (1158); ASME S Stamp (44,985), ASME U Stamp (44,986)









Oryx Engineering Solutions LLCP.O.Box 23912, Doha – Qatar.
Tel: +974 4015 9888, Fax: +974 4015 9899

Hydra-Cell T-Series pumps lowers lifecycle costs

ORIGINALLY CONCEIVED TO handle severe pumping applications in the oil and gas industries. Hydra-Cell® T-Series pumps from Wanner International are claimed to have the lowest Life-cycle Cost (LCC) of any high pressure pump in their class.

With options that meet the requirements of API 674, Hydra-Cell T-Series seal-less pumps feature hydraulically balanced, multiple diaphragms in a single pump head. They are designed to replace packed triplex plunger pumps and their associated problems. They provide zero leakage, can run dry indefinitely without causing damage to the pump and can pump abrasive fluids effectively.

The issue of costly seal maintenance is eliminated and since the plungers in the Hydra-Cell pumps never come into contact with the pumped liquid, they have a far longer service life than those in plunger pumps. Having no dynamic seals, they can also accommodate the hot liquids that damage the packings and seals in

In Hydra-Cell T-Series pumps, the crank oil and process liquid is completely separated by the diaphragms, eliminating oil



contamination and the

need for frequent oil changes. The T8045 version is able to deliver liquid flows up to 170 litre per minute at 207 bar, whereas the T8030 is rated at 345 bar and 98 litre per minute, with API 674 options available for both.

The pumps' unique design offers lower costs of ownership and maintenance, and longer life than their packed plunger pump counterparts; all adding up to lowest Life-cycle Cost (LCC).

GE launches next gen variable speed drive for electric submersible pumps

GE OIL & Gas has launched the next generation Vector Plus (TM) variable speed drive (VSD) surface control system for electric submersible pumps (ESPs).



ESPs are a widely used form of artificial lifts that utilise centrifugal force to pump hydrocarbons to the surface, enabling high flow and enhanced production. ESPs and other artificial lift pumping applications are used in 94 per cent of the roughly one million oil-producing wells around the world, helping lift hydrocarbons to the surface in reservoirs with low pressure and improving the efficiency of naturally flowing wells.

These devices are widely used to aid production with high-volume wells and operate, on average, 1,828 metres below the surface. GE provides two ways to control the ESP motor from the surface using either a

switchboard or a VSD system such as the company's new Vector Plus VSD and its predecessor, the Vector VIITM VSD. While switchboards allow the operator to turn the motor on and off, GE's new Vector Plus VSD allows the operator to gradually increase ESP motor speed and remotely adjust ESP speed from the surface with greater ease of use and improved intelligent control capabilities.

GE's Vector Plus VSD is compatible with other artificial lift products, such as Zenith Downhole Sensors and Field VantageTM Solution, and incorporates existing control technologies, enabling GE to offer customers a cost-effective, integrated solution.

GRP Industries keen to establish a strong presence throughout the Middle East

A PIONEER IN introducing glass-reinforced polyester enclosures and kiosks to the GCC, GRP Industries was founded in 1989 and has grown to be the largest manufacturer of these products in the region. The company has three manufacturing facilities within Shariah and is a registered approved vendor to GCC water and electricity authoritative bodies, including the Federal Electricity and Water Authority (FEWA), Abu Dhabi Water and Electricity Authority (ADWEA), Dubai Electricity and Water Authority (DEWA). The company's product range has expanded since its inception to include products catering to the oil and gas industry, such as battery boxes, shelters, polyester sunshades and instrument enclosures. Independent testing labs for IP ratings, UV stabilisation and fire safety are indicitive of the strict quality control procedures at the company. The company's strategy to follow best practices, GRP Industries has implemented the Integrated Management System certification that encompasses the ISO Quality Management System, OSHAS Occupational Health & Safety, and Environmental Preservation. GRP Industries infrastructure spans three manufacturing facilities stretching across 1,393 sgm in Sharjah, along with offices in Abu Dhabi, Dubai, Qatar, Kuwait, Oman, India, Pakistan and the US. The company plans to have a presence across the MENA region to service its clients in Egypt, Jordan, Iraq and Iran. GRP Industries' premier mission, however, is in the Saudi Arabian market and its venture to establish a manufacturing facility in Jeddah to gain market share in the local oil and gas industry.

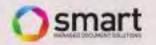


GRP Industries has three manufacturing facilities in Sharjah and specialises in making products specific to the oil and gas industry, such as battery boxes, shelters, polyester sunshades and enclosures



Cut through your print costs with our tailormade solutions.

With our Smart Managed Document Solutions we offer a bespoke service to meet the needs of your business print requirements while trimming 30% off your print costs. We affer print and document related processes as well as a portfolio of services underpinned by software, technologies and tools to offer solutions and cost savings for your business. The results are companies with optimised workflows who generate greater profits by being a cut above the competition. Now that's enterprising.



PRINT SMART, PRINT OKI.

Visit us @GITEX2014 stand D4-401

Sulzer's state-of-the-art technology for performance-critical applications

SULZER IS A global partner with reliable and sustainable solutions for performance-critical applications. It specialises in pumping solutions, rotating equipment maintenance and services as well as separation, reaction, and mixing technology. Combining engineering and application expertise, its innovative solutions add value and strengthen the competitive position of its customers. Sulzer is a leading provider in its key markets - oil and gas power, and water. The company is dedicated to creating longterm value and growing profitably. With its focused portfolio, Sulzer offers both performance-critical equipment and related services to its customers. It offers pumping solutions, related equipment and services. Customers benefit from extensive research and development in fluid dynamics, processoriented products and a global manufacturing and service network that ensures high-customer proximity.

Sulzer helps cover the global demand for oil and gas and the respective derivatives. Its solutions benefit customers in the upstream, midstream and downstream seaments. The company's oil and gas market drivers are global supply and demand of oil



and gas, exploration and production investments: global refinery capacity. utilisation, refining margins; growing need for pipelines, floating production, storage, and off-loading units (FPSOs). Sulzer offers solutions in pump systems, both onshore and offshore (including subsea) for the production and transportation of oil and liquefied natural gas; process components such as fractionation trays, structured and random packings, liquid and gas distributors, gas-liquid separators, and internals for separation columns: service of mechanical and electromechanical rotating equipment:

tray and packing installation, welding services, tower maintenance and plant turnaround projects; polymerisation technology for the production of PLA (polylactic acid) and EPS (expandable polystyrene).

The company has a global presence with a strong footprint in emerging markets that it says is vital for its sustainable success. With over 150 production and service sites worldwide, including the Middle East, and more than 40 per cent of sales in emerging markets. Sulzer is close to its customers. helping them overcome their challenges.

Spun concrete poles from Germany to Oman

EUROPOLES MIDDLE EAST, a joint venture between Europoles GmbH & Co. KG and Ray International LLC. Europoles supplies spun concrete poles for distribution and transmission of overhead lines, catenary for railways, floodlights, advertisement towers and communication towers.

Oman's Ray International Group provides innovative products and services for various industries including oil and gas, electrical, mechanical and civil engineering. Based in Germany, Europoles is a market leader in manufacturing poles, towers and columns made of concrete, steel, fibreglass and reinforced plastic. Prior to starting production in the Middle East, pre-stressed spun concrete poles were imported from Germany for field trials. A local manufacturing plant was established in Oman in 1999, which manufactures around 40,000 concrete poles per year. The poles range from five metres to 40 metres, and are used as replacements for wooden overhead power line poles. Furthermore,



Christof Nottbeck, CEO of Europoles Middle East LLC

Oman's proximity to the GCC region offers chances to enables easy export of other GCC countries. The Europoles factory is the only facility in the GCC that can manufacture spun concrete poles, the company says.

Pre-stressed spun concrete poles manufactured in Oman's Nizwa Industrial estate can be utilised for a variety of applications. Owing to a highly demanding climate in Oman, the most advanced production methods are being employed in the construction of concrete poles at the plant. The high performance concrete used is compressed with over 20g force during spinning and is highly resistant to environmental exposition; for example, to corrosive salt-breeze. Apart from preventing failures due to pole fires, the total cost of a power line can be reduced with spun concrete poles, as they require less maintenance, have a longer life expectancy and can be positioned further apart from each other, which reduces the number of required foundations, insulators and construction time.

Europoles Middle East has invested in the vocational training of the factory's workforce in Germany and has DIN EN ISO 9001:2008, DIN EN ISO 14001:2009 certifications.

Honeywell launches newgas detector

HONEYWELL HAS LAUNCHED the GasAlertMicroClip XL, the latest addition to the GasAlertMicroClip line of gas detectors. The multi-gas detectors are easy to wear, slim and compact and provide affordable protection from atmospheric gas hazards.

The new gas detector features an enhanced battery, with gas alarm capabilities of up to 18 hours; providing reliability and peace of mind over longer shifts. The detector also features allweather performance and operates in cold and harsh environmental conditions.

The GasAlertMicroClip XL offers affordable personal protection from hydrogen sulfide, carbon monoxide, oxygen and combustible gas hazards. It is applicable to a wide range of industrial applications, including confined space entry. In addition, the device is easy to operate thanks to its one-button functionality. It is equipped with green IntelliFlash for easy visibility and is reliable in extreme weather conditions too. For simple, cost effective management of records, calibration and bump testing, the GasAlertMicroClip XL is complemented by BW Technologies by Honeywell's MicroDock II automatic test and calibration system and Fleet Manager II software.



RELIABILITY IN OIL WELL CEMENTS

> Oil Well Cement (OWC) produced by Oman Cement Company (S.A.O.G) under accurate temperatures is an obvious choice for oil well cementing worldwide and now it is ready to face the challenges of highly specialized arctic and horizontal cementing:

Conforms to the American Petroleum Institute (API) specification - 10A Class-G- (HSR), Class-B- (HSR) and Class-A- (O) grades. Tested and used by worldwide cementing companies Easy to disperse resulting in considerable cost savings First choice of major oilfield companies Exported to GC Countries, Iraq, Yemen, Libya, Sudan, Tanzania, Turkmenistan, Ethiopia, Pakistan, India and Syria.

Oman Cement manufacturing facility operates on world class quality management system ISO 9001 and environmental management system ISO 14001. Quality control is online and laboratory automation systems consist of online x-ray spectrometers and robotic samplers, linked to process controllers and a raw mill proportioning system.

OCC has an enduring commitment to customer satisfaction, continual improvement and a stronger foundation for tomorrow.

Winner of His Majesty's Cup for the Best Five Factories in the Sultanate of Oman for 10 times.









Oman Cement Company (S.A.O.G) Corporate Office:

PO Box 560, Ruwi, PC 112, Sultanate of Oman Tel: +968 24437070 Marketing: Ext 145 / 444

Fax: +968 24437799

Email: admin@omancement.com Website: www.omancement.com

UAVs makes flare inspection more accessible

Sky-future is on the forefront of applying drone technology to the oil and gas sector, which makes flare inspection safer.

HE REGULAR AND effective inspection of a flare is paramount to ensuring the operating capability and safety of a production facility. The critical role of the flare to operating facilities means that it is one of the last process systems available for maintenance. as well as the first required to be back in service after a plant shutdown. Flares are inherently difficult to inspect due to the intense thermal radiation, the often difficult placement for access as well as their physical elevation.

Carrying out inspections of flares and other vital assets on and offshore has traditionally been the job of rope-climbers, scaffolding teams or even expensive manned helicopter inspections. The jobs are dangerous and heavily dependent upon the weather. In addition, for these kinds of inspections, assets are often required to be shut down whilst they take place. Typically stopping production on an offshore platform costs more than US\$4mn.

New techniques

Increasingly, companies are turning to unmanned technology for the inspection of on and offshore assets, putting the oil and gas industry at the forefront of the unmanned revolution.

Potential applications for 'drones,' or 'UAVs' have already been realised in sectors such as oil and gas, where they are already being used routinely for inspections of on and offshore oil and gas assets.

66 Increasingly, companies are turning to unmanned technology for the inspection of on and offshore assets, putting the oil and gas industry at the forefront of the unmanned revolution"

Sky-Futures is one such example of a company already proving the benefits that can be gained through utilising unmanned technology in the oil and gas sector.

UAVs (unmanned aerial vehicles) are able to capture data from the structure, in HD video, stills and thermal formats. Following the data collection, Sky-Futures' in-house experts, from CSWIP/ASME integrity inspectors and their own flare expert, write reports on the asset's condition.

Demonstration in Equpt

One recent inspection in Egypt demonstrates the efficiency gains of such inspection techniques. Sky-Futures provided five live flare inspections for a major oil and gas company in northern Egypt. The company had an urgent requirement to understand the conditions of the flares to decide whether a shutdown was required, what parts would need to be ordered and if any refurbishment was required.

Having flown the five separate live flare inspections in three days Sky-Futures provided a highly detailed report written by their in-house flare expert. The oil and gas company were able to effectively plan for the shutdown, identify the parts required and order the spares in good time. The potential reduction in shutdown time was five days, enabling the company to save US\$3.75mn.

Speeding up repair and maintenance

Sky-Futures flare expert David English explains the benefits of being able to assess the condition of live flares. "The engineer is able to understand and review the condition of individual components that make up the complete flare tip and, therefore, assess the overall condition of the system, establish its ability to continue in-service and enable an informed decision to be made for maintenance/ replacement during a planned shut-down. If the inspection finds there is a requirement for spare parts or components, these can be ordered quickly. Completely new flare tip assembly can have a lead time



UAVs (unmanned aerial vehicles) are able to capture data from the structure, in HD video, stills and thermal formats

of between four to six months, depending on the shop loading capacity of the supplier at the time of order placement, and so, the sooner orders can be placed, and the less shutdown time from initial inspections, the more cost-efficient it is for the oil or gas company."

Safety in flying the UAV is gained through Sky-Futures requiring operators to complete a thorough in-house training course. Their experience and safety-oriented training helps to keep the operations safe, but also allows the operators great experience in gaining the imagery and video needed for inspection reports. Sky-Futures already lists some of the world's largest oil and gas companies as their clients, and has been providing flare and asset integrity inspections to regions from the UK North Sea, the Middle East, and South East Asia. The Middle East provides an exciting platform for further developing their inspection technique, as operations director Chris Blackford added, "The market for inspections in the region is huge. Live flare inspections will be increasingly in demand, as companies in the region seek to manage their assets in a more efficient way."

SCORIS DE SERVICION DE SERVICIO REACTIVE DOWNHOLE TOOLS

LISITUS AT ADIDEC SHOW

Still letting your swellable packers call the shots?

Fluid change-outs cost time and money!

The REFLEX® HP H20 gives stable performance in fresh water AND brines up to 28% salinity with no loss of swell performance.

5000+ successful deployments in high salinity environments with no need to spot fresh water.

IIGH-SALINI ELLABLE PACKERS

WWW.REACTIVETOOLS.COM



Yokogawa releases FieldMate(TM) improved version

YOKOGAWA ELECTRIC CORPORATION has improved its FieldMate(TM) Versatile Device Management Wizard and released version R3.01. FieldMate is a software programme for configuring, adjusting and managing a wide variety of field devices used in factories and other production sites.

In addition to the device configuration. FieldMate R3.01 comes with new functions that facilitate the management of memos, photos and videos as well as the automatic generation of reports, making it ideal for routine maintenance tasks.

Digital communications standards are playing an increasingly important role in communications between central control systems and field devices such as transmitters and analysers. However, as the devices provided by different vendors rely on a variety of digital communications standards, there is a need for a versatile configuration, adjustment and management tool that can support all the major industrystandard communications protocols. The FieldMate PC software has been developed to meet this need.

Highly portable devices such as tablets and notebook PCs are now available that facilitate maintenance work in the field. To facilitate such routine tasks as device patrol and maintenance, this new release of the FieldMate PC-based software comes with several new functions.

HPHT Safe Cell safer way to test fluids

FANN INSTRUMENT COMPANY'S HPHT Safe Cell is a new high pressure, high temperature test cell for use in drilling fluids testing. Current industry standard chamber designs allow the operator to remove the cap from the cell while under pressure. The Safe Cell has a twopiece threaded cap design, improving safety by eliminating the operator's ability to open the pressurised vessel.

The product uses the CellTellTM Positive Pressure indicator to show pressure status at a glance, warning users when the cell is pressurised. The screw-in end cap allows the cell to be opened and closed by hand - no screws are required. No cell clamp is required because the cap cannot be removed while under pressure. The simplicity of the design saves time for technicians to assemble and disassemble the Safe Cell.

Geyad looks to expand

GEYAD FOR INDUSTRY and Contracting (formerly Geyad for Commerce and Import), a leading Saudi Arabian Saudi Arabian fabricator of structural steel, pressure vessels, storage tanks and pipe spools, is expanding capacity, having commissioned a new production unit in Dammam. The new facilities will enable it to increase steel production and to manufacture higher thickness pressure vessels.

Geyad's general manager Naif Ababtain said that the company's commitment to customer satisfaction was the secret of its business success as it is able to retain its customer base even in difficult times.



Geyad general manager Naif Ababtain

Established in 1980, Geyad is registered with SGS for ISO 9001:2008 and is accredited with ASME "U" stamp related to pressure vessel fabrication and "R" and "NB" stamps from the National Board of Boiler and Pressure Vessel Inspectors (NBBI), according to the company.

It has supplied shop-fabricated structural steel to Saudi Aramco and SABIC on many of their large projects. The company has also been a supplier to a water cooling project in Ras Laffan Qatar, as well as to National Chevron Phillips, Satorp and Sadara.

Gevad provides a comprehensive design and detailing facility for steel structures, tanks and pressure vessels, utilising state-of- the-art design software. Geyad operates on strict Quality Assurance and Quality Control (QA/QC) procedures for its manufacturing processes. Internal and external quality audits are carried out by certified auditors. Welding inspection is carried out by AWS qualified inspectors.

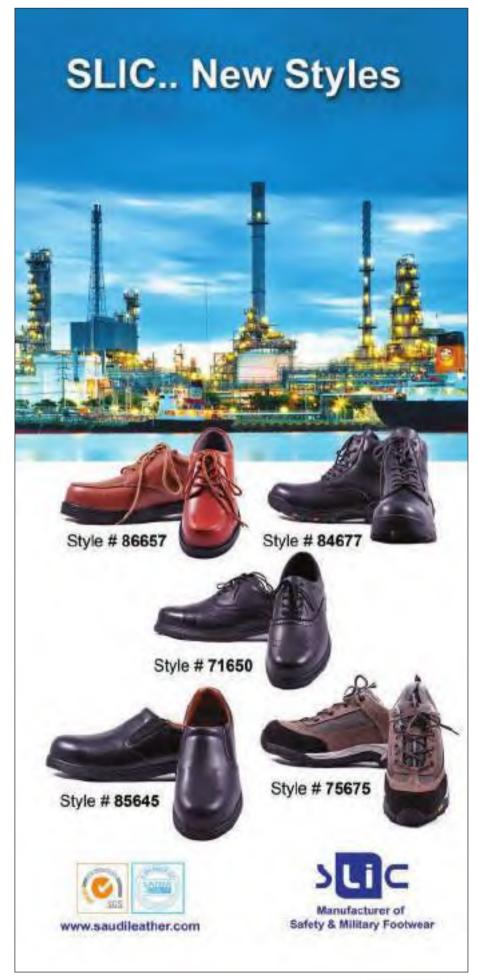
The company has an in-house NDT testing facility, carried out by certified Level II inspectors.

Geyad's product portfolio falls into five principal categories: structural steel; pressure vessels; storage tanks; pipe spools; and miscellaneous structures.

Manufacturing capabilities include plate rolling up to 50mm thick and 3m wide and CNCcontrolled cutting, drilling and coping.

Geyad is in the process of revamping its safety system and getting it accredited to OHSAS 18001: 2007.

The company is an approved vendor with Saudi Aramco, SEC, SABIC and MARAFIQ as well as with the Saudi Arabian Ministry of Defense and Aviation.



R. STAHL customises UPS systems for hazardous areas in offshore rigs

MANUFACTURER OF EXPLOSION protection and electrical products R. STAHL plans and implements individual, application-specific uninterruptible power supply (UPS) systems for oil and gas rigs.

It also supplies similar applications for the industry where 100 per cent power availability is imperative. In unmanned platforms, these systems ensure that crucial equipment like valves, pumps. navigation and signal technology such as GPS and flashing beacons continue to be operational for a defined period of time in case of an overall power failure. This enables users to retrieve and store data in a coordinated fashion before bringing the platform into a safe state.

Based on a versatile modular portfolio, R. STAHL designs UPS solutions in accordance with customer specifications. These systems can be delivered as turnkey package units on request.

In a recent project, R. STAHL supplied a custom-engineered compact DC UPS system for Ex zone 1 that was installed on a platform offshore Gabon in central Africa. This system is equipped with robust. corrosion-proof CUBEx housings manufactured from copper-free cast aluminium that are designed for extreme

environments. In this case, they withstand temperatures up to 50°C. The UPS provides up to 4.000W in operation and includes NiCd batteries with a 300Ah capacity in an Ex e (increased safety) battery container, a central control module with all required specification- and standard-compliant UPS components, along with a DC energy distribution board to protect the connected loads.

Redundant charging technology is an integral part of the enclosed system, which achieves excellent thermal power loss

management with reliable dissipation from the pressurised chamber, said the company. The UPS features a software-free design and contains no rotating parts like fans. Temperature-compensated charging, power diodes for voltage adjustment, and Ex LEDs to display the UPS status ensure very reliable operation and excellent safety, added the company.

R. STAHL's integrated Ex UPS guard monitors the standard-compliant operation of the system according to European standards EN 60079 ff.



Bend stiffeners receive API certification

TRELLEBORG'S OFFSHORE OPERATION in the UK has been certified for a design review under the American Petroleum Institute's (API) specification for flexible pipe ancillary equipment (API 17L1 Ed. 1 2013) for its high performance dynamic bend stiffeners.

The review was completed by Lloyds Register EMEA, acting as an independent verification agent. API 17L1 is an industry standard that determines the minimum requirements for the design. material selection, manufacture, documentation, testing, marking and packing of flexible pipe ancillary equipment. Trelleborg's offshore operation now has certificates of compliance for API 17L1 in all three areas: design, materials and manufacturing.

Trelleborg's bend stiffener is a polyurethane moulding with a conical external profile and a central hollow cylindrical section allowing it to slide over the end of the flexible pipe (riser, umbilical or cable). The bend stiffener has an internal steelwork housed at its base which forms the interface between the polyurethane cone and the termination point.

Bend stiffeners are designed to ensure the manufacturers recommended minimum bend radius is not infringed during the life of the flexible pipe, umbilical or cable, preventing catastrophic failure at



its termination point. The bending stiffener is also designed to transfer load via a suitable path from flexible pipe to the fixed structure. Its conical shape provides a gradual transition in stiffness, hence preventing over bending at the termination

Each bend stiffener is uniquely designed for its environmental application under defined tension and angle combinations.

New drilling tool

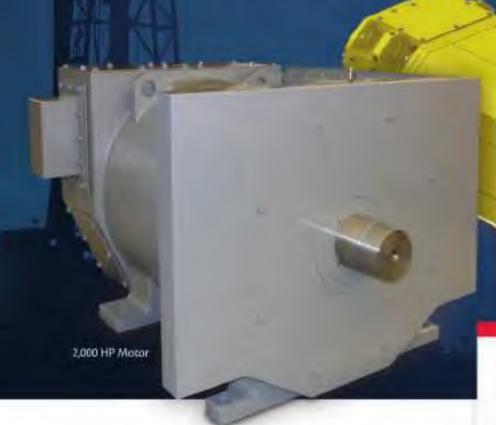
CHURCHILL DRILLING TOOLS, the provider of innovative dart activated drilling tools, has launched the revolutionary HyPR™ (Hydraulic Pipe Recovery) system for the rapid and costeffective recovery of stuck pipe.

Stuck pipe situations cost operators hundreds of millions of dollars a year in wait times. The HyPR™ tool can cut that cost significantly by enabling operators to get back on track much more guickly.

The HyPR™ tool developed by the Houston and Aberdeen-located company offers the simplest method to recover the drill pipe rapidly and to begin sidetracking right away. It also delivers a clean cut for operators wanting to maximize BHA recovery options. The HyPR™ system consists of a robust full strength sub, strategically positioned in the drill string. It is severed in around an hour by launching and pumping through a HyPR™ jetting dart, which lands inside the sub.

The dart takes only a few minutes to arrive and, with a relatively short period of pumping, will part easily under a small loading, simultaneously producing a perfect fish-neck for subsequent operations.

Setting New Industry Standards for 400-2,000 HP Motors



Built to Perform in Harsh Environments

For over 120 years, Ward Leonard has been setting new standards for manufacturing excellence. Today, our oil & gas customers drill deeper, longer, in a smaller footprint, and with more power than ever before. From super-charged motors to drop-in replacements for TDS-11's, our custom engineering solutions are developed to satisfy your requirements.

Combined with Ward Leonard MotorCare", the industry's only dedicated services program, and our team of dedicated on-call engineers, Ward Leonard is the new benchmark in performance, productivity and durability.

To learn more visit wardleonard.com or call 860.283.5801.



Custom Drilling Rig Solutions When You Need Them

400 HP Motor

- . Top drives
- Mud pumps
- Draw works
- Rotary tables

Contact one of our engineers today.



Ambitious

expansion plans

Asad Igbal Khan, manager of business development at AES Arabia, a total water and waste water management and solutions company, spoke to *Oil Review* about expanding business and the opportunities available in the region's oil and gas market.

How has business for AES Arabia developed in the Middle East, and the UAE in particular?

The Middle East is a very dynamic market for us, and there is substantial growth in conventional as well as in unconventional energy sectors, particularly in the oil and gas, and power industries. We offer customers solutions in their process for the oil and gas, petrochemicals, industrial, power and municipal sectors.

We have a proven track record of success in Saudi Arabia and for challenging projects across other Middle East and North Africa (MENA) countries. We have set up a fullscale operation with head offices in Riyadh and fully-fledged sales and service offices in the central, western and eastern regions of the Kingdom. This has played a major role in the development of the water and waste water business.

Now we have turned our focus onto other countries in the Middle East and are determined to develop our business in the region. We have been involved in several upstream and downstream projects in which stringent water quality is required from the influent containing high levels of hydrocarbon contaminants.

Are there any particular countries in the region where you are see good growth prospects?

We have executed a few projects in Iraq with some leading concession owners, such as Eni and Exxon. Our major Middle East clients include Saudi Aramco, GASCO, PDO, SABIC and Sonatrach. Furthermore, we are working on some challenging projects, which are yet to be delivered.

A recent project in Yemen is also a success story for AES Arabia; we delivered a produced water plant for an upstream company. Exploring the Caspian Sea region is one of our ambitious expansion plans in coming years.



AES Arabia manager of business development Asad Igbal Khan

What are the main challenges and drivers creating demand for new technology and innovation in water and wastewater solutions in the Middle East?

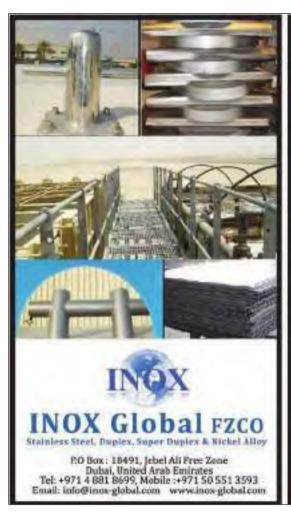
The region is scarce in water, whether that is water to be consumed by the domestic market or by industries. There are only a few sources of water available in this arid region. The Middle East depends mostly on desalinated water from the sea and this can lead to contamination from the brine, which again is subject to certain regulations involved in draining the brine.

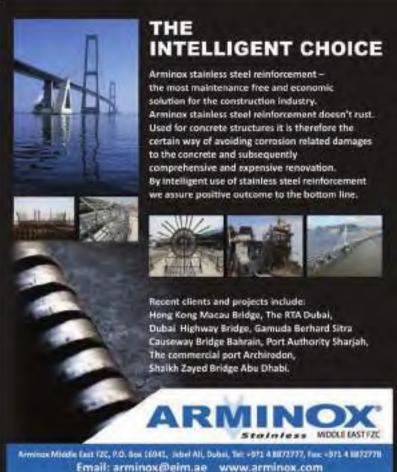
The scarcity of water has forced technology providers to come up with a solution where the waste water or the effluent from industries, refineries, or human waste can be recycled to use it in several phases during industrial processes and

How many staff do you employ, and do you find recruitment and retention an issue?

We employ more than 300 experienced and dedicated engineers and technicians, and we are on the verge of a determined recruitment plan to suit our ambitious expansion strategy.









P.O Box 20820, New Industrial Area, Ajman, United Arab Emirates

Tel: +971 6 7432221 Fax: +971 6 743 2225

P.O Box 25424, Dubai, United Arab Emirates

Tel: +971 4295 6614 Fax: +971 4295 6617

Seeking a bright future in the Middle East

MERICAN BLOCK MANUFACTURING Company is a worldwide leader in the design and manufacturing of oilfield and marine equipment, Founded in Texas, USA, American Block manufactures and provides quality drilling products from its state-of-the-art

It has over 90,000 sq ft (with a further 20 acres under development) equipped with capabilities to machine, weld, fabricate, assemble, and test to customers' requirements. American Block has engineered and manufactured a vast array of customised products such as riser tensioners, winches, personnel transfer bridges, and chain jacks. Today, its main products are related to the drilling industry, which include drawworks, mud pumps, traveling blocks, hooks, hook block combinations, rotary tables, swivels, deadline anchors, reset relief valves and sheaves, as well as flowline items like plug valves, manifold fittings, integral pup ioints, fittings, cementing hoses, swivel joints, hammer unions and ring gaskets. In addition, it has a division of technicians, engineers, and manufacturing personnel, who are highly skilled at repairing drilling equipment. Over the years, the company has developed an excellent staff with tremendous



American Block Manufacturing Company makes a host of products like drawworks, mud pumps, traveling blocks and fittings for oilfield equipment

experience in both domestic and international projects. The professionals are capable of handling unique projects worldwide, as well as integrating with a client's project team to increase efficiency, improve quality and

reduce projected overheads. Its support team is composed of some of the world's finest engineers, machinists, welders and service staff

By cultivating long-term relationships based on the highest level of service. American Block has developed a very loyal customer base, which includes all the major offshore and onshore drilling contractors. It consistently strives to improve design and manufacturing processes, and reduce costs to better serve its customers. Whether it is a special design or delivery requirement, it strives to satisfy the customer's needs. American Block believes customer satisfaction as the core of its business.

The quality standard of American Block is of the highest degree, upon which it continually improves through strict quality control. ISO 9001 certified and holding API licences, it strictly adhere to the requirements and guidelines outlined in its quality manual. All of its designs undergoes extensive critique and are scrutinised using the latest FEA software to ensure that the products a customer invests in meet or exceed the technical requirements set forth by that particular specification. Below, Rajani Shah, CEO of American Block Manufacturing Co., answers our questions.

In which markets do you see the greatest growth prospects this year?

Pemex deregulation will open many doors for us in Mexico not only for the supply of drilling equipment but also for the potential for our own manufacturing efforts in Mexico.

How big a part do customised products play in your portfolio? Is there a big demand in the industry?

Customised products play a small but significant role in our line of business. As an engineering company, we pride ourselves in providing solutions for difficult customer requirements.

What specific challenges are you presented with working in a hot and dusty region like the Middle East?

We decided to venture into this part of the world in 2005 as it has a huge calling for the oil and gas industry. That is when the local

arm, ABCO - Middle East FZE, came into the picture. They are based in the Jebel Ali Free Zone and have effectively spearheaded our growth for the past nine years.

This region is one of the most important markets for our products after North America and we are very optimistic about the future in the Middle East. There may be day-to-day challenges but heat and dust are not on of them.

Can you discuss any recent contract success?

The company has worked on several key projects over the past year. The SBM project for Shell Oil Company required a special winch and rotary table for an FPSO Project for installation in Brazil. This FPSO is the first of its kind utilising an onboard winch and rotary table.

The company has also been awarded a major contract to supply 32-1600

Horsepower Triplex Mud pumps and 14-27.5" Rotary Tables for Nomac Drilling Company of Oklahoma.

Are there any plans to seek a partner to help increase business opportunities?

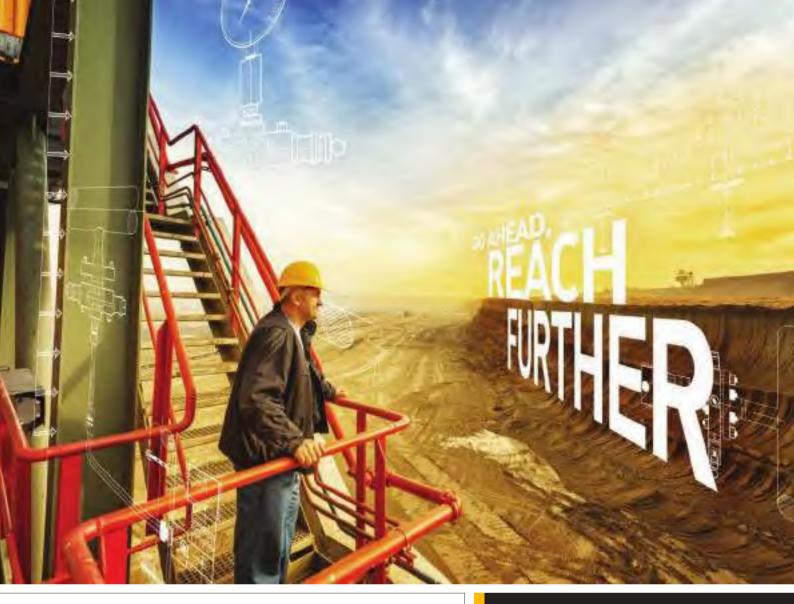
Our local arm in the Middle East - ABCO-Middle East FZE with its own distribution network in the region is doing good work in promoting our products.

Expansion will be limited to North America in the near future in three different areas:

- Nisku or Calgary Canada
- Oklahoma City, Oklahoma
- Villahermosa, Mexico in the South of Mexico or Monterrey, Mexico in the North of Mexico

What is your vision for American Block?

The continued expansion of our product line and extension of our local arms throughout the continents



Parker offers around one million products to nearly half a million customers across more than 1,000 markets. All from just one single source. Five decades of experience in the Oil & Gas industry has given us the ability to create high performing technologies and innovations that meet the past, present and future challenges of this demanding industry. From improving corrosion control and materials' durability, to reducing installation and break down times, Parker's products and solutions are increasing productivity, profitability, and most importantly, safety.

At ADIPEC 2014, Parker brings together integrated systems and solutions with a high performance team. Visit our stand, where 70 experts from six product group areas and the ParkerStore will be on hand to share their knowledge and expertise. Go ahead, reach further with Parker at ADIPEC 2014.

Reach more at:
Hall 6 – Stand 6110
10th – 13th November 2014
adipec.com





ENGINEERING YOUR SUCCESS.

To find out how Parker can support your business, contact us today:

Parker Middle East FZE
P.O. Box 262193, JAFZA VIEW 19, Office 2201
Jebel Ali, Dubai - UAE
Tel: +971 (0)4 8865400 Fax: +971 (0)4 8865401
parker.me@parker.com
www.parker.com

Tracerco relaunches awardwinning nucleonic technology

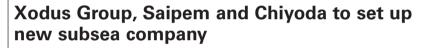
OIL AND GAS service provider Tracerco, part of Johnson Matthey. has relaunched its award-winning LevelFinderPlus patented technology following a rebrand. The nucleonic instrument will now be known as Optimus . The product uses propriety, unique processing algorithms to provide oil and gas companies with unparalleled insight into vessel operating conditions.

Optimus[™], which won an Institute of Physics Award for Innovation in 2013, is the first and only instrument to able to make accurate measurements of liquids in a vessel even in the presence of deposit build up and vapour density fluctuations.

The innovative technology is designed for liquid level and interface measurements as well as solids monitoring in a wide range of process vessels. It is suitable for the most challenging oil, chemical and petrochemical industry applications and provides accurate level measurement even in the presence of build-up and pressure changes without the need for any additional instruments, the company said.

Andy Hurst, MD at Tracerco said, "The rationale for updating the name of our awardwinning LevelFinderPlus instrument was to create a brand name that was both memorable and helped reflect the product's fantastic array of customer benefits and features."

Key benefits of Optimus[™] include reduced unplanned shutdowns, improved product quality, process optimisation, operator confidence to increase production and maximise throughput, monitor deposit build up and redundancy of measurement.



INTERNATIONAL ENERGY CONSULTANCY firm Xodus Group has launched a global subsea engineering company Xodus Subsea in partnership with oil and gas contractor Saipem and downstream oil and gas explorer Chiyoda Corporation.

According to Xodus Group, the new organisation plans to challenge the largest Tier One subsea engineering companies for a share of the global market. It will be headquartered in London and have a presence across Europe. Africa, the USA, Middle East and Asia Pacific.

Xodus Subsea engineering services is expected to take a unique approach to technical subsea challenges by bringing together Xodus Group's front end engineering capability, Saipem's turnkey engineering, procurement, construction and installation expertise and Chiyoda's experience in managing large-scale international projects.

Colin Manson, CEO of Xodus Group, said, "The launch of Xodus Subsea marks a new era of subsea engineering support to the global oil and gas industry. For the first time operators can choose a subsea engineering company that is backed by world-leading contractors without being exclusively tied to them.

Xodus Subsea engineering services cover field development, projects including FEED and detailed design, and lifecycle consultancy with a focus on working with partners to support the development of new technologies. The company provides knowledge in deepwater engineering, pipelines, trunklines and export systems, riser systems, subsea processing and enhanced oil recovery.

3M's new centre to train next-gen innovators

TECHNOLOGY DIVERSIFIED COMPANY 3M has launched its Customer Engagement Centre (CEC) in Aberdeen, which will help nurture the next generation of scientists and engineers, following a significant investment.

The facility has been created to encourage collaboration across the oil and gas sector — a hub where business partners and customers can develop innovative ideas.

The CEC showcases a wide range of inventive products where schools and colleges will be encouraged to visit to learn about the international technology company's inventions.

Kirstie Heneghan, digital marketing executive for 3M Oil and Gas, said, "Our organisation is full of curious minds and great technologies. We place a huge emphasis on collaboration and the CEC gives us the opportunity to work closely with our customers to provide the solutions and technology for tomorrow. "We will offer visitors the opportunity to learn more about our wide-reaching technologies. These products include Glass Bubbles by 3M, specialist tapes, abrasives and Novec1230 Fire Protection Fluid by 3M as well as an extensive suite of personal protective safety equipment."



The LevelFinderPlus has a new name — Optimus'

Non-magnetic packaging solution by Kvocera

KYOCERA'S INNOVATIVE CERAMIC packaging is based on established HTCC (high temperature co-fired ceramics) technology, which is currently used with specific non-magnetic piece parts and plating options.

The new type of HTCC comes with platinum metallisation on the top surface and in ceramic multi-layering. Besides the non-magnetic property of platinum metallisation, this technique and choice of materials also allows for use in high temperature applications up to 1.000°C. For instance, the wireless SAW temperature sensor of the company Vectron, which can be used to screen temperatures up to 600°C, has been developed based on Kyocera's component package. Furthermore. customised packages for individual applications can be delivered, according to the company.

With this new packaging solution, the company aims to meet the new demands of various business sectors and in a broad range of applications for which hyperfine position sensing is fundamental. Among others, these include highly sensitive medical equipment such as magnetic resonance tomography: electronic applications in aeronautics including atomic clocks and sensors; vacuum equipment in electron microscopy; as well as other industrial processes like down-hole drilling for exploration purposes.

Shigeru Kovama, president of Kvocera Fineceramics GmbH, said, "In any field where extremely sensitive technology is responsible for smooth operation, the non-magnetic characteristics of this product will be highly valued.

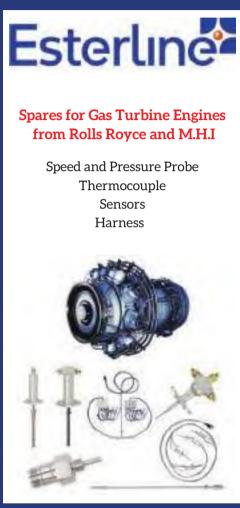
"It is always important for us to offer our clients from different sectors new opportunities with our technology," Koyama added.

This new offering from Kyocera's semiconductor components division complements the broad range of electronic packaging solutions the company offers for a wide variety of applications based on ceramic, metal and organic material technologies. This range comprises ultra-high vacuum products, opto-electronics, broadband telecommunications, mobile and satellite communications, surveillance system, sensors - including image sensors and MEMS — automotive electronics, medical devices as well as computers and consumer electronics.

Products And Solutions For Oil & Gas

Al Rumaithy Establishment supplies high quality products and solutions to Oil & Gas Sector







Al Rumaithy Establishment

P.O. Box: 4356, Abu Dhabi United Arab Emirates Tel.: +971 2 5550990 Fax: +971 2 5550885 Enquiry: rumaithy@eim.ae Website: www.alrumaithy.com



مؤسسة رميتي ص.ب:٤٣٥٦، ابوظبي، الإمارات العربية متحدة. تلفون: ٩٧١ ٢ ٥٥٥،٩٩٠+ فاكس: ٩٧١ ٢ ٥٥٥،٨٨٥

A member of Al Rumaithy Investment Group ()

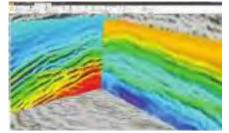
Schlumberger's new software drives multi-disciplinary collaboration

SCHLUMBERGER HAS RELEASED the 2014 versions of its industry leading software platforms — Petrel E&P software platform. Techlog wellbore software platform. Studio E&P knowledge environment and Ocean software development framework enhance multi-disciplinary integration, collaboration and productivity.

Uwem Ukpong, president of Schlumberger Information Solutions, said. "E&P investment decisions are increasingly driven by digital models that enable rich analysis of physical data through the application of workflows reflecting industry best practices

"The Schlumberger 2014 software platforms are designed to deliver a productivity and integration step change for multidisciplinary teams working along the entire hydrocarbon pathway — from pore space to production facility."

Petrel 2014 features a new ribbon-based interface design configured in a logical. workflow-driven layout to boost productivity. Key tools are presented in context, enabling a more focused user environment. In addition, new 'perspectives' help



The 2014 platform releases deliver a new user experience for a productivity step change

geoscientists or engineers select a particular display that prioritises relevant domain technologies and tools.

The new interface — tested in partnership with more than 30 Schlumberger customers — reduces users' cursor travel by 30 per cent and clicks by 35 per cent, enabling an average of 30 per cent more time to be focused on data and workflows, the company claimed.

Multidisciplinary integration with Techlog, Studio and Ocean 2014 introduces new modules for rock physics, cement pipe integrity, distributed temperature sensor

(DTS) plotting and shale reservoir evaluation, while bringing disciplines together in a shared wellbore approach. Schlumberger said that the customers can now standardise workflows across the hydrocarbon pathway — supporting their ability to make more informed decisions with a clear understanding of both opportunities and risks

Studio 2014 is delivered with the Petrel platform and drives multi-disciplinary collaboration. Users can find data in context, and optimally share and manage this information. New content display tools allow the preview of search results, and indexed Petrel windows are now available.

The 2014 Ocean software development framework release introduces Ocean for Studio. Leveraging the development framework with the Studio platform, best-inclass data workflows can be created and customers can design their own knowledge management systems.

Schlumberger is supplier of technology, integrated project management and information solutions to customers working in the oil and gas industry.

Emerson introduces 3D Solids Scanners for accurate measurement of bulk solids

EMERSON PROCESS MANAGEMENT has introduced the Rosemount 5708 Series of 3D Solids Scanners for the continuous measurement of level, volume and mass of bulk solids and powders in large vessels, bins and silos. The new series uses acoustic measurement and 3D mapping technologies to provide accurate and reliable results, even when measuring uneven or sloping surfaces under dusty conditions.

The scanners are the first of this kind in most of the Middle East and Africa markets and provide highly accurate measurements of stored content for improved process and inventory control.

The new Rosemount 3D Solids Scanners are part of Emerson's comprehensive range of level measurement devices for many applications across a range of industries. 3D solids scanners complement Emerson's existing Rosemount 5400 Series of non-contacting radar level transmitters and the Rosemount 5300 Series guided wave radar for solids measurement in smaller vessels.

Unlike laser-based technologies that can take several hours to take measurements and require the process to be shut down, Rosemount 3D Solids Scanners provide continuous volume measurements that are representative of the material's surface. They can measure practically any kind of material, including difficult-to-measure fly ash and materials with a low dielectric that would challenge other technologies. The self-cleaning design requires low maintenance even when used in the dustiest environments, claimed the company.

The scanners are suitable for measuring solids in silos, large open bins, bulk solid storage rooms, stockpiles and warehouses. There are models to deliver either level data only or both level and volume data using intuitive monitoring software. The Rosemount scanner maps the uneven surface typically found in solids applications and can provide the minimum and maximum level, the total volume and a 3D visualisation of the surface.

The Rosemount 5708 Series includes level scanners for silos up to five-metre diametre and 70-metre height. There is also a version for larger vessels and silos up to 12-metre diametre and 70-metre height. Emerson can also supply systems of multiple devices to cover large areas such as 30-metre x 70-metre warehouses offering continues in this direction. "We are very proud of this new launch and being the first in the market with a 3D solids scanner," said Phillip Bond, VP of Emerson's Rosemount business in the Middle East and Africa.

Paradigm releases latest suite for better imaging

PARADIGM HAS RELEASED the latest extension of its Paradiam 14 solution suite — Paradigm 14.1 — that enables broadband processing, high definition (HD) imaging, quantitative interpretation. and advances toward HD earth modelling.

The new HD modelling improves the accuracy of production forecasts with models that are more closely representative of actual subsurface conditions that lets both seismic data and geology users to better quantify uncertainty in their reservoir, resulting in lower-risk reservoir management decisions and better production planning and forecasting.

Somesh Singh, chief product officer at Paradigm, said, "Our latest release enhances our model-driven solutions for HD exploration and development.

"Our customers have significant investments in both legacy and new seismic acquisitions and are now looking to focus Integrated display of data in the Barnett shale like seismic, horizons, geobodies, karsts, wells and microseismic. The advancements in SKUA-GOCAD to more highly refine earth models are a natural extension to the HD processing, imaging and interpretation capabilities we released in April this year," he added.



Aarvi Encon Pvt. Ltd.

ISO - 9001-2008 Company

ENGINEERING • MANPOWER • OUTSOURCING

ENGINEERING DESIGN

- Process
- Civil & Structural
- **Piping**
- **Electrical**
- Instrumentation
- **Draughting**
- Modellers

- **Field Engineering**
- Project/Site Planning
 Supervisors
- **Procurement**
- Inspection & **Expediting**
- Material / Stores
- Safety

COMMISSIONING /

- Process Engineers
- DCS / Panel
- Plant & Process Operations
- Maintenance Engineers
- Maintenance Technicians

SHUT DOWN

- **Planning**
- Safety
- OA/OC
- Maintenance
- Inspection
 - Painting / Coating
 - API / NON API

INDUSTRIES

Oil & Gas, Refinery, Pipelines, Power, LNG Terminals and IT Our Esteemed Clients:

















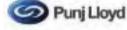


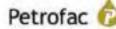


















SIEMENS

Aarvi Encon Pvt. Ltd.

B1-603, Innova, Marathon NextGen, G.K. Road, Opp. Peninsula Park, Lower Parel (W), Mumbai - 400013. India. Tel.: 022-4049 9999, Fax: 022-4049 9998

Email: info@aarviencon.com, www.aarviencon.com

Tercel launches MicroCORE™ cutting system

TERCEL OILFIELD PRODUCTS has released its Patented MicroCORE™ Cutting System, its newest PDC Drill Bit innovation. The MicroCORE cutting system is a revolutionary PDC drill bit design that redistributes high energy consumption from the center of the drill bit to the more efficient areas of the cutting structure and was developed in collaboration with international oil and gas company Total.

Replacing the inefficient compression failure mechanism in the center of a traditional cutting structure, the MicroCORE system delivers more energy to the cutters, higher ROPs (Rate of Penetration) and better quality wellbores to Tercel customers.

The launch took place at the Society of Petroleum Engineers Annual Technical Conference & Exhibition held in Amsterdam from 27-29 October 2014.



Stevens Supply International signs major contract

BLH-DOM INTEGRITY SOLUTIONS has signed an exclusive multimillion dollar contract with Stevens Supply International. The contract was signed in Singapore on the 1 August by



Stevens Supply International's managing director, Bobby Stevens, and BLH-DOM Integrity Solutions chairman, Klaus Myklebust. The contract has an estimated value of NOK172mn (US\$26mn) over a five-year period.

Stevens Supply International has its headquarters in Dubai and operational offices in Doha, Muscat, Mumbai and Singapore. The company is the local distributor of BLH Stop Drop Barricading in UAE, Oman, Qatar, Saudi Arabia, Bahrain, Kuwait, India and Singapore.

PIM supplies software to Maersk Qatar

PLANT INTEGRITY MANAGEMENT (PIM), a leading integrity management consultancy for the oil industry, has deployed its innovative pressure safety valve software, PIM Relief, in the Al Shaheen field for Maersk Oil Qatar.

Working with Maersk Oil Qatar, PIM is now providing both PSV management and corrosion management systems on 33 platforms in Qatar. PIM Relief facilitates the efficient management of PSV workflows, including the scheduling of inspections, data management, electronic recertification and assessment of valve condition to assign new risk-based inspection intervals. It will be used to increase efficiency, reduce risk and maximise performance through increased uptime.



Steve Plant, managing director PIM

The Al Shaheen field contains a large number of further development opportunities and, as such, Maersk Oil Qatar's primary focus is exploration and appraisal activity.

Steven Plant, managing director of PIM, stated, "We want to drive industry leading integrity standards for our clients and are delighted that PIM Relief is now being used by Maersk Oil Qatar. By reducing risks and optimising performance in the Al Shaheen field, we hope to strengthen further our long-term working partnership with Maersk."

DSL continues to improve services

DSL. A PROVIDER of products and services associated with land and offshore drilling structures, has successfully completed thousands of projects for clients based around the world, from the supply of replacement parts through to complete rig refurbishment.

With more than 30 years' experience, its API 4F and 8C licences, API/IADC. OPITO and IRATA accreditations and 'hub' offices in Dubai, Brazil, Houston, India, UK, Indonesia and Singapore, DSL is one of the most experienced companies in this sector, with services offered covering rig design, manufacture and analysis, Cat III/IV inspections, repairs, upgrades, recertification, accessories, DROPS and training, said the company.



DSL provides products and services associated with drilling structures

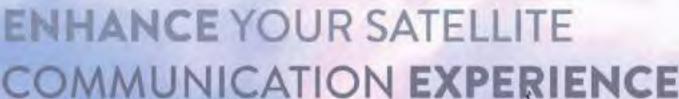
Using its API and IADC accredited training academy and 'drill structure' based training modules, DSL inspectors are trained and qualified in the correct methods and procedures for API 4G Drilling Structure Inspection, providing a further level of competency assurance.

Striding for industry improvement and realising that a gap existed for drilling structure inspection training, DSL has developed an 'E-Learning' training course which enables drill crews to be trained and qualified to undertake Cat I and II Drilling Structure inspections, in accordance with API 4G - improving crew competency.

DSL also developed its 'Rig Central@' system, a flexible, adaptable and user friendly inspection and asset management database - uniquely bringing to the actual point of inspection all relevant information such as procedures, drawings, documents, specifications and historical inspection reports.

'Rigcentral@' provides total flexibility, integration, 3D trending, certification, report storage in one central location, scheduling and automatic issuing of expiry alerts - making rig and asset integrity management simpler and more effective.







New OPITO International MD to drive forward common safety training standards

FORMER RAF AIRCREW, Colin Griffiths, is joining OPITO International as managing director to lead the roll-out of common safety training standards across the global oil and gas industry.

Griffiths will take up his new appointment, based in Dubai, at the end of October 2014, replacing out-going managing director lan Laing who is retiring after seven vears in the role.

Funded by industry, for the industry, OPITO has a proven track-record in responding to the global oil and gas industry's training needs. Having successfully designed and monitored safety training standards in the North Sea for many vears. OPITO created an international organisational structure to support its global roll-out of safety standards and workforce development. Today around 250,000 people in 40 countries are training to those standards every year, helping to improve safety and competency in oil and gas.

Griffiths joins OPITO from Talisman Sinopec in Aberdeen, where he was Operations Superintendent responsible for day-to-day operations of two North Sea assets. Prior to this he spent eight years front line flying with the RAF followed by 12 years with Shell in engineering contracting and projects and operations.

Commenting on his new role, Griffiths said, "The success of the oil and gas industry depends on achieving the right balance between optimising production and ensuring the safety of our people. Safety therefore features in everything we do. Wherever we are in the world, we need to



set standards in training and competency before we send people offshore or into other hazardous environments. OPITO aims to make sure that every oil and gas worker anywhere in the world is totally focused on safety, with the right training and competence to carry out the task. I am privileged and excited to be taking up this international role with OPITO - the standardbearer for our industry."

Group chief executive of OPITO, David

Doig, said, "Colin's passion for the challenges ahead of us as we seek to embed the OPITO standards framework in every oil and gas province around the world, will ensure we continue to effectively engage with employers, governments and regulators to deliver high-value long-term change in relation to safety."

For more information contact Zoe Ogilvie on +44 (0)1224 211045 or +44 (0)7973983243

Middle East companies win British Safety Council awards

MIDDLE EASTERN COMPANIES leading the way in transforming the safety and wellbeing of workers have been recognised with awards from the British Safety Council. Seven organisations from the Middle East are among the organisations from different industry sectors across the world who have been awarded the British Safety Council's Swords of Honour (for health and safety management excellence) and Globes of Honour (for excellence in environmental management).

Alex Botha, chief executive of the British Safety Council, commented, "The Middle East needs to do more to improve the health and wellbeing of its workers. Too many injuries and illnesses go unreported and more can be done to manage and reduce the risks that workers are exposed to. However, these seven award winners - and, in particular, Dubai Electricity & Water Authority and Qatargas which both won Sword and Globe of Honour awards demonstrate that anything is possible. By taking responsibility to manage the risks they create, businesses thrive and benefit from more productive workers."

The winners had achieved the maximum five stars in the British Safety Council's audit scheme in the period August 2013 - July 2014. They have demonstrated to an independent panel of experts that they are excellent at managing their health and safety and/or environmental risks throughout the organisation - from the shopfloor to the boardroom.

The Middle East award winners were: Drydocks World, Dubai, UAE; Dubai Electricity and Water Authority - Dubai, UAE; Emirates Technical Associates (ETA), Abu Dhabi, UAE; L&T Modular Fabrication Yard LLC – Sohar, Oman; Marafig (Power & Water Utility Co) -Yanbu Industrial City, Saudi Arabia; Qatargas Operating Company Limited, Commercial & Shipping Group – Doha, Qatar; Sohar International Urea and Chemical Industries (SIUCI) - Sohar, Oman.



Thanks to Onis, I can achieve a **100**% safe and efficient POSITIVE ISOLATION



LINE BLIND

ONIS USA

One Riveway Suite 1700 - Houston, TX, 77056 Tél. : (1) 713 840 6377 • sales@onislineblind.com

ONIS MIDDLE EAST

P.O. box 4058 - Abu Dhabi Mall East Tower, 6th Floor - Abu Dhabi • sales@onislineblind.com



The Timberland PRO brand is expanding internationally, with special adjustments made to the footwear produced for the Middle East.

IMBERLAND PRO HAS quickly grown to be one of the leading safety footwear brands in North America. The brand is expanding rapidly internationally, including in the Middle East, and the company recently hired a local Middle East account executive to better serve this growing market.

The Timberland PRO brand was created in 1999 to better serve the safety footwear needs of professional tradesmen by offering footwear that was comfortable, durable and protective. The brand's foundation was built on the simple, vet important, understanding that professional tradespeople consider their footwear an essential tool for their jobs. This understanding, coupled with the brand's innovative and technical mindset, has broken the mould of what safety footwear can be.

Key adjustments

The Middle East is an exciting, yet challenging, market, as the climate and terrain are unforgiving, requiring safety work boot consumers to select footwear that provides maximum breathability and air-flow. Timberland PRO offers unique solutions to help those consumers mitigate the discomfort and risks related to heat stress.

66 Another critical safety consideration for the Middle East tradesperson is outsole protection"

The designers and developers have made deliberate adjustments to the construction of footwear produced for and distributed within the Middle East. Some of those key adjustments, specifically related to heat management, are outlined below:

- Moisture-wicking linings help move water away from the foot, thereby keeping it as dry as possible
- 3D spacer mesh linings, which are air channels, allow for improved air circulation
- Spot cement construction, rather than glue, allows the work boot to breathe better both on and off the foot
- Open-cell polyurethane foot beds, which are more breathable than conventional EVA or poured polyurethane foot beds.

Finally, Timberland PRO tests its work boots in a process called Footwear Performance Indexing, which includes measuring for drying times.

Another critical safety consideration for the Middle East tradesperson is outsole protection, specifically related to punctureresistance and slip protection. Work terrains can differ dramatically, even over the course of the day, depending on task changes or shifting weather patterns. Making proper choices related to outsole compound and tread pattern is critical to avoiding slips and falls. Timberland PRO® footwear offers consumers, no matter what climate or terrain they encounter, a variety of outsole compounds to choose from, including:

Timberland PRO Rubber: Timberland PRO rubber's slip-, oil- and abrasionresistant properties make it a popular

- outsole choice for general use. Its proprietary formula was developed to be highly cut- and debris-resistant. It also stands up to high heat very well
- Vibram®: Standard industrial Vibram® rubber is available in some of Timberland PRO®'s work boot families. Industrial Vibram® has an additional carbon content that results in tremendous durability and excellent traction
- Goodyear® rubber: This high-traction solid rubber offers excellent slip and oil resistance and durability, allowing for confident performance in a variety of work conditions
- Polyurethane (PU) or Thermal Polyurethane (TPU): These outsoles are enhanced with additional compounds that give tremendous resistance to fuel absorption and perform well in work environments where there is regular exposure to diesel fuel and other hydrocarbons
- Cold-Formula Thermal Polyurethane (TPU): This compound offers the same protection as regular TPU with the additional benefits of providing enhanced traction on frosted-ice surfaces and maintaining flexibility in extreme temperature ranges
- Vibram® Fire and Ice: This rubber compound has great resistance to heat and extended range of flexibility in the cold.

Timberland PRO's slip-testing research has proven that even when a compound has high slip resistance properties, it will only





Fearnley Procter NS-1 Approvals:

- NS-1 Level 4 Facility Approval
- NS-1 Level 3 Design approval for DPM-DS55 and DPM-MT39
- NS-1 Level 3 Design approval and Facility approval for the manufacture of Sour Service Drill Pipe in conformance with Critical Sour Drilling IRP Vol. 1 Section 1.8.





Design and manufacture of Drill Pipe, Heavy Weight Drill Pipe, Drill Collars and Drill Stem Accessories

Visit us at ADIPEC 2014 in Hall 9, stand 9120

www.dpmaster.com.sg

Email: sales@dpmaster.sg

→ Health & Safety

perform well if used with the right outsole tread pattern. This insight led Timberland PRO to develop the SafeGrip® and GripMax™ outsoles to address the specific slip resistance needs of occupational and industrial workers. Additionally, the Timberland PRO® Rigmaster polyurethane outsole was engineered specifically to provide workers in the oil and gas industries with exceptional traction. It has triangular shaped lugs in a multi-directional pattern for a superior, mechanical grip.

Influenced by end-users

Timberland PRO has a strong reputation for comfort and fit. The development of its comfort technologies has been influenced by end users and refined through a commitment to on-the-iob testing, resulting in innovations that have reshaped the work boot market. Take the 24/7 Comfort Suspension System as an example. When most work boots were being made on flatbottomed lasts, the 24/7 platform was built based on the understanding that the bottom of the foot was not flat. Constructed with a contoured shock-diffusion plate and ergonomic arch support, the 24/7 comfort platform helped revolutionise the brand's technical position within the marketplace.

In 2004, Timberland PRO expanded its comfort technology platforms with the launch of the PowerFit Comfort System, designed specifically to give the boot 360 degrees of ergonomic comfort - under the foot, along the tongue, within the linings

The development of its comfort technologies has been influenced by end-users"



and, most importantly, around the toes. Thus, a new, asymmetrical toe shape was designed that, finally, fit the toes and feet correctly. The new shape accommodated left and right feet independently and took into account that the toes are asymmetric across the top - meaning more height was allotted for the big toe and more lateral room for the little toe.

Leap forward

In 2008, Timberland PRO made its next leap forward in comfort technologies with the launch of the Anti-Fatique Technology Comfort System. It was developed after the Timberland PRO product team visited a jobsite where a safety manager expressed concern about floor mats leading to trips and falls, as well as being a big expense. Timberland PRO's Anti-Fatique Technology Comfort System, takes the floor mat

properties and incorporates them directly into the footwear - thus, providing a solution even closer to the foot, while also eliminating the cost of and tripping-risk associated with floor mats.

Timberland PRO has justified its technical position within the marketplace by continuing to develop real footwear solutions for the professional tradesperson whether it be lining construction, outsole protection or comfort systems. While many of those solutions stem from advanced research and technology, one of the less technical, vet highly important, elements of a classic Timberland PRO® work boot is the premium, quality leather used. Leather has long been a mainstay of work boot construction, and Timberland PRO believes that the quality of a work boot is dependent on the sourcing and treatment of the materials.

Timberland PRO sources its leather from North America where harsher winters lead to hardier steers with thicker hides, thus yielding better durability and aesthetics. Whatever the leather - whether it's full-grain. tumbled, nubuck, suede or Timberland PRO®'s extremely abrasion-resistant Ever-Guard™ leather - the materials chosen are based on the end use and how the worker uses their footwear to serve as an extension of their toolbox.

Timberland PRO built its reputation on its dedication to quality, craftsmanship and innovation. It continues this heritage by constantly assessing the unmet needs of those who work in the most demanding environments, then developing solutions that deliver ultimate comfort, durability and protection.

To learn more, please contact Jacob Xavier, email: jacob_xavier@vfc.com or telephone: +971 56 494 5464.



Managing risks associated with fire hazards

A FREE CONFERENCE, organised jointly by the Energy Institute (EI) and the Institution of Fire Engineers (IFE) takes place in Abu Dhabi on 12 November. It will examine how local organisations manage the risks associated with fire hazards in today's rapidly developing Middle East market. It will address issues such as:

- Is there a disaster simply waiting to happen because effective safety culture and good Process Safety Management models have not been implemented within local industry?
- What has changed in both the downstream and upstream sectors to ensure that process hazards are being regularly reviewed?
- How prepared is the UAE to respond to an emergency? Can we



be sure that we are operating safely and managing all our risks effectively or have we just been lucky today?

The event is held with the support of the Higher Colleges of Technology (HCT), Abu Dhabi Men's College and of their sponsors.

Speakers will include Peter Stephenson, Chairman of the Institution of Fire Engineers, UAE; Graeme Ellis, Principal Consultant, ABB; and David Charters, Committee Chairperson for the British Standards

The conference is being held at the HCT, just a short distance away from ADIPEC, at 9am on 12 November 2014

For further information see the website at https://www.eneravinst.ora/events/view

New data released to enhance CO2 pipeline design

NEW DATA RELATING to the depressurisation of CO2 pipelines is being made freely available through industry cooperation. This will help fill knowledge gaps associated with the safe and reliable pipeline transport of CO2 and result in cost efficiencies through a significantly improved design basis for CO2 pipelines.

With energy security and climate change high on the international agenda, Carbon Capture Utilisation and Storage (CCUS) is again gaining momentum. The DNV GL-led CO2PIPETRANS joint industry project (JIP) that is now releasing new data focuses on the transportation component of CCUS projects.

Computer simulations of gas dispersion are used to assess the consequences of an accidental release from a pipeline. "Previously, CO2 pipelines have been designed using unvalidated computer simulations of CO2

dispersion due to the lack of experimental data. This uncertainty contributes to an unnecessary gold-plating of the pipelines," says Project Manager Jock Brown, DNV GL - Oil & Gas, speaking at the GHGT-12 conference in Austin, Texas.

"This new data is one step in the right direction. It builds on the success of previous experimental data released by DNV GL and can be used by the CCS industry and designers to validate computer simulations used in CO2 pipeline design, thus optimising the design process," he continues.

The datasets contain the results of depressurisation tests on a CO2 pipeline collected at the DNV GL Spadeadam test site in the UK as part of the second phase of the CO2PIPETRANS JIP started in 2011. The data and other material supporting the use of the data can be downloaded free of charge from DNV GL's website.

In addition to making datasets for model validation publicly available, the JIP also involves work to improve the understanding of CO2 pipeline propagating cracks and corrosion rates with various CO2 stream impurities.

The CO2PIPETRANS JIP consists of 15 partner organisations: Arcelor Mittal, BP, DNV GL, Endesa, ENI, E.ON Ruhrgas, Gassco, Gassnova, Health and Safety Executive (HSE) UK, Maersk Oil, Petrobras, Petroleum Safety Authority (PSA) Norway, Shell, V&M Deutschland and Vattenfall.

The data can be downloaded here: http://www.dnv.com/industry/oil_gas/services_a nd_solutions/technical_advisory/process_integri ty/ccs_carbon_capture_storage/co2pipetrans/In dex.asp



Fighting fire with FR

Safety is a top priority for the energy sector, but Bulwark's Derek Sang argues that more can be done to ensure the safety of employees onsite.

ONSIDERING THE HIGH-RISK nature of an oil and gas working environment, which is particularly vulnerable to fire hazards, adopting an effective and up-to-date health and safety policy is often quoted as a top priority for many companies working in the industry. As such, these companies continue to utilise advanced technology to reduce the risks, such as more remote solutions, which literally remove workers from some riskier areas.

Despite these efforts fire hazards, such as flash fires, still pose a significant and real risk to those individuals working on oil and gas facilities. In September 2012, for example, 26 people were killed at an explosion and fire at a Pemex gas plant in Mexico. In the Middle East this year alone, a refinery in Irag's Erbil City caught fire and Kuwait National Petroleum Company (KNPC) was investigating a fire that occurred at the Mina Al Ahmadi 466,000 bpd refinery.

A flash fire is generally understood as a sudden fire that spreads by means of a flame front moving rapidly through diffuse fuel such as dust, gas, or vapours that are flammable, caused by an accidental hydrocarbon release ignition.

According the Bulwark, the US-based provider of flame resistant (FR) protective garments, a number of companies in the oil and gas industry are not doing enough to ensure the safety of their employees in the face of such hazards.

Bulwark technical training manager Derek Sang said, "We all understand easily that if stuff can fall from the sky and hit us on the head our employer is going to hand us a hard hat or helmet."

"But if something can explode and ignite our clothing for some reason when it comes to FR clothing many say 'maybe'."

By wearing clothing made of conventional fabrics, including cotton and poly-cotton blends, a worker is arguably at a greater disadvantage than someone wearing the correct FR kit when faced with a flash fire or similar hazard. This is because these non-FR fabrics can burn and melt, which can increase the extent and severity of the injury.

"Every non FR fabric has an ignition point. If I apply enough energy to what you're wearing you're going to ignite and continue to burn and you're going to get hurt," Sang explained.

"Arc flashes and flash fires do not kill people, clothing igniting and continuing to burn is what kills people."

The key to FR clothing is that, once the ignition source has gone, it self extinguishes. Often, such as with in the case of flash fires, the source of ignition is only active for a minimal time and the real damage

Arc flashes and flash fires do not kill people, clothing igniting and continuing to burn is what kills people"



Wearing conventional fabrics when faced with a flash fire can increase the severity of injury

and injury are a result of clothes catching fire and continuing to burn.

By issuing and ensuring employees wear correct FR clothing, a company can increase the safety of its staff. It can also mean that it avoids the considerable hospitalisation fees that can arise from severe burn injuries.

According to Bulwark, an incident resulting in 50 per cent or greater body burn can cost towards the region of one million US dollars, due primarily to the extended time spent undergoing specialised medical treatment.

Sang stated, "There's no cost justification not to provide the correct PPE [personal protective equipment]."

He also argues that providing workers with the correct FR garments as well as efficient training, companies will benefit from a high level of on-site productivity. Obviously a flash fire will have a negative effect on the productivity of a site, in terms of the structural damage caused and the operational downtime caused by worker injuries.

If workers are correctly trained and wearing the relevant FR clothing presumably less time and capital is lost as a consequence of employee downtime.

"From a training and safety standpoint, we say take the time to train them to do it right and eventually they will be more productive than trying to force them to be productive when they don't know what they're doing," said Sang
He concluded, "Look for proven products that have been

designed for the hazard, that are certified for the hazard, tested to the hazard. Know what those certifications mean, understand what the test protocol is, and if those standards are not met don't let it on your facility."



HAVE YOU CHECKED YOUR LABEL LATELY?

We are all too familiar with misleading claims but are you aware of misleading labels in FR garments? NFPA mandates strict labeling requirements and not everyone follows the rules.

Visit our stand during ADIPEC with your FR Apparel, our experts will be there to assist

VISIT US AT STAND 8320

ADIPEC 2014 NOVEMBER 10-13

Abu Dhabi National Exhibitions Center Abu Dhabi, United Arab Emirates



dGB Earth Sciences launches OpendTect 5.0

DGB EARTH SCIENCES announced the latest version of its open source seismic interpretation software OpendTect 5.0 at the Society of Exploration Geophysicists 84th Annual Meeting in Denver, USA. OpendTect 5.0 comes with significant advances to dGB's HorizonCube and sequence stratigraphic interpretation capabilities for enabling interpreters to better understand structural geologies.

Key features include a new interactive HorizonCube tracker workflow for 2D seismic. This can track single horizons and create 2D HorizonCubes through a dip-steered tracker in which the user picks horizons at multiple seed positions in both the structural and the Wheeler domains.

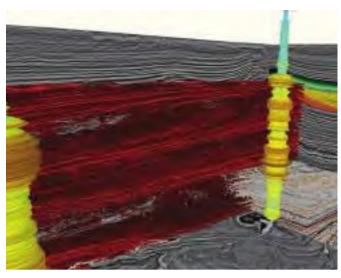
The correlated geologic time lines created through HorizonCube and OpendTect 5.0 will provide new ways of analysing seismic data, thereby increasing interpreter understanding of their depositional history and improving the ability to find stratigraphic traps and build accurate geologic models.

"That's why OpendTect 5.0 is such a milestone release for us as we look to achieve fully interpreted seismic volumes and provide the end user with a complete picture of the subsurface through open source and free software," said dGB Earth Services CEO, Kristofer Tingdahl.

Many of the new features have emerged out of the dGB-led Sequence Stratigraphic Interpretation System consortium that includes sponsors such as Saudi Aramco, Statoil, OMV, MOL and RocOil.

Other features include:

- New graphics library with multi-touch interaction capabilities.
- Close integration with MATLAB®, the high-level language and interactive environment for numerical computation, visualisation and programming.
- Application of post-stack attributes to pre-stack and multi-component datasets and creation of multi-attribute outputs to pre-stack or multicomponent volumes, thereby improving the end user's seismic interpretation capabilities.
- Access to new texture attributes through a link-up between dGB and Austrian-based research institute, Joanneum and Austrian oil & gas company, OMV Aktiengesellschaft.



dGB Earth Sciences has released new seismic interpretation software

OpendTect 5.0 will also include significant enhancements to the OpendTect commercial plugin, SynthRock. With SynthRock, interpreters combine forward modeling, rock physics and inversion to create and use forward models in qualitative and quantitative seismic interpretation studies. New SynthRock features within OpendTect 5.0 include the ability to generate synthetic gathers from input volumes of Density, and P- and S-wave velocities.

dGB says OpendTect is the only open source seismic interpretation platform used in the oil and gas industry today that allows the visualisation and interpretation of multi-volume seismic data. OpendTect is available at no cost under the GNU GPL license.

For more information visit www.dabes.com.

SIGMA³ introduces new 3D earth modelling and anisotropic velocity analysis tools

SIGMA³ HAS INTRODUCED a new generation of 3D earth modelling and anisotropic velocity analysis tools, enhanced processing and higherresolution event location algorithms to improve the reliability of microseismic survey results. This should help operators extract more from their data and have greater confidence in their microseismic events, resulting in more reliable completion decisions, says the company. The announcement was made during the Society of Exploration Geophysicists 84th Annual Meeting in Denver, USA.

"Drawing on software and technology that is already used in 3D seismic processing, we have developed new 3D earth modelling and anisotropic velocity analysis tools to help microseismic acquisition design and processing groups to do their jobs more efficiently," says Jorge Machnizh, CEO of SIGMA3.

Unconventional reservoirs have highly complex anisotropic velocity fields, and an accurate velocity field is critical for producing results that can be used to better understand the subsurface. In microseismic data analysis, the seismic raypaths often have a significant horizontal component of travel, so anisotropy for both P-wave and S-wave velocity fields must be accounted for in addition to the 3D structure.

Starting with the survey design phase through processing of perforation shots and microseismic event location, the new unified anisotropic velocity modeling workflow enables geoscientists to update models near real-time for efficient and reliable interpretation. This improved event location correlates better to ground truth, providing geo-engineers with greater confidence in the microseismic response to pumping curves, geologic features, completion strategies and reservoir characterisation.



The new software could result in more reliable completion decisions

Additionally, new auto detection and auto location algorithms deliver microseismic mapped events in half the time for a significant reduction in project turnaround time and improved real-time decisions.

Even without 3D seismic data, operators can perform rapid 2D Well Trajectory Imaging and 3D Borehole Seismic Image and then integrate the results with 3D structural data. This integrated workflow collapses the most significant sources of uncertainty in microseismic mapping. For more information visit www.sigmacubed.com.



Patented Underwater Anti-Corrosion Technology

Applications:

- Splashzone Jetty Pile Protection
- Subsea Pipeline Repair
- Offshore Jacket Leg Protection

Features & benefits:

- Adheres under water & offers extremely high specific electric resistance
- Training in cooperation with Falck Nutec at Seal For Life's Technology Centre
- Quick & easy to apply by trained divers and approved application companies





www.sealforlife.com















Adopting advanced software solutions in oil and gas

The Middle East's IT sector has gradually evolved, as oil and gas companies look to software providers

AUNCHING NEW SOFTWARE solutions to support oil and gas activities in the Middle East is independent developer of softwareenabled solutions to the global oil and gas industry, Paradigm. The company has announced it has entered a new long-term contract with Chevron Energy Technology Company, a division of Chevron USA. Inc., who offers access to a developed Paradiam product portfolio.

Chevron has rolled out the Paradigm's modelling solutions globally over the past seven years and this new agreement integrates Paradigm solutions for formation evaluation and access to licenses for seismic processing and imaging, and drilling engineering, the company said. Both firms will work alongside each other to build new workflows and increase functionality within the Paradigm solutions suite to support its company's worldwide operations.

Paradigm offers easy-to-use technology and workflows to enable customers to have better understanding of the subsurface by bringing together science, high-performance desktop and cluster computing, and scalable data management, ensuring highly improved results and productivity without compromise, the company said.

Also providing support to oil and gas activities in the Middle East is DNV GL. The company's Phast software for process industry hazard analysis offers new features, which promises to increase efficiency, improve the understanding and communication of results and support rapid decision-making, it said.

Some hazards may arise for process industries that can have a severe effect on life, property and the environment. Phast software is used to assess these hazards so that the damage usually left behind can be managed or reduced by enhancing the design of the process or plant, amending existing operational procedures or putting in



Phast 3D Explosions aims to make customers aware of potential threats and hazards in the oil and gas sector

L DeltaV Virtual Studio is designed mainly for process control systems

place other mitigation measures.

"The improved visualization in Phast 7.11 will allow results to be viewed and understood more effectively, leading to better and more rapid decision-making," stated Nic Cavanagh, director of operations, process safety, risk and reliability at DNV GL

"The new default explosion model means that results will typically be more accurate, with more conservative predictions, particularly as you move further away from potential sources of explosion hazards," added Cavanagh.

DNV GL customers, who have tried and

tested the improved model at user conferences, gave positive reviews about the enhanced visualization capabilities. With the latest version of Phast, customers can view flame shapes in radiation contour graphs, insert a side view image, see the bund and release direction in the context of predicted hazard ranges, try out new default models with options for using the Multi Energy explosion model, the company said. Phast also allows customers to carry out a more realistic and detailed evaluation of explosion hazards. Phast 7.11 offers enhanced functionality for this module, as well as better calculations and new model

"With our new release of Phast, we have taken another step towards realizing our vision of porting our entire suite of QRA software products to the nextgeneration architecture by 2015," stated DNV GL software managing director Are Føllesdal Tjønn.



Delta V provides customers a simple solution for virtualised control systems

Emerson's virtual machines all have standard DeltaV system" operating settings

"Going forward, we will add new features and extensions to the entire suite of products and benefit from the economies of scale of a single software architecture," added Tjønn.

"Phast 3D Explosions is the latest advancement that will help our customers in the process industries understand potential threats and hazards, so they can ensure that barriers are in place and maintained," said Tjønn.

Offering more solutions to support companies in the Middle East's oil and gas sector is industry and automation expert, Emerson Process Management. The DeltaV Virtual Studio v2.3 from Emerson provides customers a simple solution for virtualised control systems. offering options for system availability and disaster recovery. With this new software solution, Emerson has extended the virtualisation capabilities in the DeltaV distributed control system (DCS) to improve its implementation and management of online production and offline development, test and training programmes. DeltaV Virtual Studio is designed mainly for process control systems. It uses a workflow and feature set that is intuitive and familiar to automation

Virtual machine templates that have already been created offer easy virtual machine creation without software installation. Emerson's virtual machines all have standard DeltaV system operating settings. In addition to this, all network connections have already been installed, enabling consistent configuration and implementation.

The DeltaV Virtual Studio v2.3 release offers improved availability and disaster recovery options, new architecture and hardware solutions enabling facility managers to pick the level of availability required by their system in response to any possible disruptive event; while also the ability to live-migrate critical applications from affected hardware to minimise downtime during system maintenance or hardware upgrades.

Emerson's chief strategic officer, Peter Zornio, stated that ensuring their customers understand why virtualisation for workstation consolidation is important and how systems can be maintained easily. According to Zornion, those benefits are a neccessity for customers so Emerson has ensured to not make the system difficult to use and that it has little or no system downtime. The latest DeltaV Virtual Studio to be launched allows companies to quickly and easily create virtual DeltaV workstations without the complexity that in the past needed specialist support.



مجموعـــة شركــات البــسام Al Bassam Group Of Companies

Dommam, Saudi Arabia

Provides Professional Solutions to Oil, Gas and Petrochemical industry.







olah & Museed Mr. Al Desert colours Sendomand Co.

APECO

Manuaguerd + king & Corn -Ditt & List Pipes - Countale Gauges

-Florges & fittings - Yalves etc.



Of the second second second second Technical persons for furbunders

- A.W between Euro Nechnology Sauril Alabia (ESACII) & Al-Bassam Group
- + All approved,
- . OK Theading of Lasing/Tehno and DritiStem
- + One-stop-stop for Theoding N Frishing Services
- Premium (NKK, WGT, WAX, GRANT PRIDECO) THURST etc.) Cornections
- Completiensive Dread inspertion Station. Magnetic and Penetrant Inspection
- Repair of Rosary Shookkeed Lawrectows Inchesting Child Pille Child Collans, Diffling State
- Margaritem of Di Fimil Equipment like X-Divers, Sever Subs., Blanger, Specifs, Pup. Mints.



Institutional Supposer Services Company

Material Testing Laborites

- 190/HL Certified, SASO According Saudi Acerson Approved.
- Jesting Services for Physician Products. Transferver D.E. George
- Jestry Service for Water, Metallury and Construction Marena, Environmental





Indicated Separat Services Company

Non-Destructive Testing

- . Offers all liges of Impection and MITTERING
- Tudopratic leave, Magnetic Particle leaves. leak lieterion, Ultraumic Festing
- Peneturing & Hardness-Terring, Tube hyperios, Pipe Line Inspection. Tink Bottom, Pping NOT





- 150 9001-2000 Approved
- Producer of Pressure Vessels, Roactions. Critimos, three-Exchangen (stiell &Tube)
- Waste Host Bollery, Chillers, Condomen & Euposaton: Ar Fin Cholen
- American of Storage Tests, Spicts. Chimery, Duct, Silm
- Plying Heavy Smicrosof Works and Rabilication, Role Special



- Specialist for Water and Wasescoler Treatment, Sewage Treatment System.
- Continenzed Water Reaconord Decalination Flants, Manicipal Water Treatment
- Drinkling Water Treatment Plants, Ima World & Baddiff Witer Despination



AL-BASSAM GROUP OF COMPANIES

Head Office (Dammam-Saudi Arabia) Tel: +966-13-8051313, Fax: +966-13-8053110 Web: www.albassamgroups.com E-mail: Info@albassamgroups.com



Ambitious plans for pipelines

Nicholas Newman looks at prospects for pipeline developments in the region.

ESPITE ONGOING POLITICAL turbulence in the Middle East, opportunities and prospects for new investment in pipeline construction remain promising. The GCC region has significant plans to develop both domestic and export pipeline networks. Current and planned construction was reported in a Zawya newswire dated January 2013 to have underpinned an order for at least 5.3mn tonnes of steel piping costing US\$7.2bn over the next five years. In Saudi Arabia, pipeline construction companies are working at breakneck speed to develop a national oil and gas pipeline network to supply the country's booming cities and growing industrial complexes. Likewise, there is an ambitious proposal to develop a new pipeline export corridor, with a network of new subsea and onshore pipelines from the Iranian South Pars gas field in the Gulf to Mumbai in India via

Many of the new oil and gas infrastructure projects are directed eastwards, designed to transmit Middle Eastern oil and gas to Asian markets rather than to Europe or North America. Already Asia is the leading market for Middle Eastern oil and gas. ExxonMobil's report, The Outlook for Energy: A View to 2014, forecasts that Asian demand for oil and gas will increase by 35 per cent between 2010 and 2040. It is this expectation of growing Asian demand that will likely sustain pipeline construction in the Gulf region for many

Asian demand for oil and gas will increase by 35 per cent between 2010 and 2040"



New production is driving pipeline infrastructure construction

years to come. However, the recent collapse in global oil and gas prices alongside an uncertain rate of economic growth in Asia's emerging markets and China may slow down the pace of development.

Pipeline projects in the Gulf region

Saudi Arabia is constructing a national gas grid linking the Ghawar, Safaniya, and Zuluf gas fields with major cities such as Jeddah, Riyadh and Tabuk, power stations such as Qurayyah IPP and Shuqaiq 2 IWPP as well as the industrial cities of Jubail and Yanbu. New production is also driving further pipeline infrastructure construction. For example, Aramco's Red Sea oil and gas field development will require a \$25bn investment in a network of subsea pipelines joining Aramco's new Ahmar-1 gas field, located some 25 km offshore, with a gas processing plant at Dubai. Once built, the gas will be delivered along planned gas pipelines to gas users in the Red Sea cities of Jeddah and Mecca.

In May 2014, the Saudi and Bahrain governments gave the go-ahead for a new

105 km crude oil pipeline to connect the oil distribution grid of Saudi Arabia with Bahrain at an anticipated cost of US\$350mn. The project will consist of 74 km pipeline onshore with the remaining 31 km on the seabed. Its purpose is to transport 230,000 barrels of crude per day from Saudi Aramco's Abgaig plant, the world's largest oil processing plant, to Bahrain's crude oil refinery at Sitra. In the meantime, Bahrain plans to increase the processing capacity of the Sitra refinery to 500,000 bpd at a projected cost of some \$6bn. It is anticipated that construction contracts for this new pipeline will be tendered by the end of this year, reported the Saudi Gazette in May 2014.

Subject to United Nations sanctions for the past decade, Iran's government, in anticipation of a thaw in relations with the West, has given the go-ahead for several long planned ambitious projects. The strategic 1,400 km Iran-Oman-India (IOI) pipeline will require an investment of



The growing demand for energy resources means that exploration, drilling, production and distribution operations are extending further into remote regions. In such locations, Thuraya mobile satellite communications provides voice and high-speed data links that ensure your people, systems, and facilities stay connected.

Wherever the search for resources takes your team, you can depend on Thuraya EnergyComms to significantly boost field effectiveness by enabling affordable voice calls and Internet services that support security feeds, field-to-field coordination, location and geological reporting, as well as tracking of assets. Thuraya's satellite network enables your employees to stay connected with their colleagues and families, and ensures your production keeps up with global demand.





FARHAN COMMERCIAL CO. (FCC)
474 King Abdulaziz Road, Alsulymania,
Riyadh 11555, Saudi Arabia
Tel. +966-11-466-4666 Fax: +966-11-466-0066
E-mail: info@farhan-hicap.com

www.farhan-hicap.com



www.thuraya.com



US\$5bn, reports The Diplomat Newswire, March 2014. Around 31mn cubic metres of gas per day will flow through underwater pipelines from Iran's offshore South Pars gas field, located near Qatar, to Oman and then across the Indian Ocean to India. Preliminary studies are currently underway, reports The Times of Oman, March 2014. There are also plans to increase pipeline capacity in order to access European markets, as well as tentative plans for pipelines to link Central

Oman announced ambitious plans to build a gas pipeline to import Iranian gas"

Asian gas fields to markets in Europe via Iran and Turkey.

In February 2014, Oman announced that it had ambitious plans to build a gas pipeline to import Iranian gas for domestic use and as feedstock for its new LNG export terminals at Qalhat, Sur. A Memorandum of Understanding to import Iranian gas was signed in August 2013. If realised, it would be a US\$60bn, 25-year supply deal beginning in 2015 and will connect the two countries via a pipeline under the Gulf of Oman. Oman reportedly plans to consume over 350 bcf per year of the contracted volumes for domestic purposes, such as power generation and to process additional volumes of Iranian gas for export from its LNG terminals.

Iraq

Despite the conflict in its northern territories Iraq has approved plans to expand its domestic oil and gas pipeline network as

well as to integrate with its neighbours' pipelines by 2020. In July 2014, the Iraqi Parliament gave its approval for two schemes. The first is to secure gas supplies for Basra's gas power station by connecting it to the Iranian gas network. Currently under construction by the Iran Gas Engineering and Development Company, it should deliver 40mn cubic metres of gas per day to customers in Basra, reports Iranian newswire Press TV. June 2014. The second project envisages the building of a US\$18bn oil and gas export pipeline to Jordan to meet domestic demand, and via the port of Agaba, export Iraqi oil and gas to third markets. This 1,680 km double pipeline will pump one million barrels of oil and around 258mn cubic feet of gas a day from Basra on the Arabian Gulf to Agaba Port in Jordan. However, given the current state of affairs in the region, this project is likely to be delayed, reports Iraq Business News, Julv 2014. ■

IRM Systems expands in response to global demand

IRM Systems, which designs emergency pipeline repair systems (EPRS), has expanded its staff to meet the growing demand for its services. The three new employees are senior engineer Firdaus Hadi, engineering consultant Derek Enhao Lee, and junior engineer Saad Wahid, who are based at the company's headquarters in the Netherlands.

Over the course of this year, IRM Systems has landed four new clients, and has had new work contracted with existing ones. Since its foundation in 2011, IRM continues to support an increasing number of clients, taking on additional staff and expanding its range of services within pipeline integrity. The company offers an experienced in-house capability that is primarily focused on

designing EPRS. (EPRS are the plans, procedures and equipment in-place to ensure minimum possible downtime following an unplanned emergency). An effective EPRS will ensure the greatest post-repair integrity at the best possible cost, the company said.

"We use a structured approach to designing each of these systems, and the breadth of experience we have now generated in this specialist area is significant," said Ralph Hassall, consultant for IRM Systems. "Our work covers the operational aspects of the task, such as isolation and re-commissioning, and not just the repair engineering. We have also got a very detailed and current understanding of the repair market, so we are able to put together an EPRS that is the best value that the market can offer."



"The New Age of Dropped Object Prevention"

REDUCE YOUR INJURIES TODAY





Stevens Supply International

Exclusive Distributor For MENA & Asia Email: Sales@stevenssupply.com www.stevenssupply.com

Making your industrial network safer

One approach to industrial security is Defense in Depth, based on the standard zone and conduits model.

PPLYING THE RIGHT cyber security measures in industrial networks can improve safety, reduce downtime and increase productivity. Just because there is a firewall protecting the edge of a network does not mean the plant network is secure. Since many cyber security incidents originate from within industrial networks, additional security measures need to be taken in order to harden control networks.

Over the past few years, there have been a number of high-profile, advanced malware threats that have attacked the energy sector. While these are significant threats that need to be taken into account in the oil and gas industry risk assessments, the fact is they account for a low number of overall threat

Most cyber threats are unintentional and originate from within the industrial network itself. Industry research shows that the biggest threat sources are from device and software failure and malware (see Table 1).

Industrial networks are susceptible to internal incidents because many PCs on the network run 24 hours a day, seven days a week, and do not have antivirus protection. In addition, there are many ways for malware to enter control networks, such as USB keys, maintenance systems and visitor laptops. Controllers designed for real-time

I/O (input/output), and not robust network communications, may not respond well to malformed messages or high levels of traffic. Finally, many industrial networks are 'wide open', with no isolation between subsystems, making it easy for problems to

Why IT solutions do not work for plant networks

IT professionals have been successfully dealing with cyber security threats for years. However, these same solutions cannot be applied to control and SCADA (supervisory control and data acquisition) networks. This is because:

- Control devices cannot be secured with automated third-party tools.
- Patching or updating PLCs (programmable logic controllers) is usually not practical.
- Manufacturing networks cannot be shut down for testing, configuration and maintenance, as is done with business networks. Instead, industrial security products must be set up and maintained while the plant network is running.
- Industrial networks use unique communication protocols not seen in the IT world and not addressed by IT security
- Plants require hardened equipment that can survive harsh electrical and

GG Industrial networks are susceptible to internal

- environmental conditions.
- Also, plant networking equipment needs to work for decades, whereas IT gear has a lifecycle measured in years.

Finally, engineering staff need cyber security solutions that are simple to use. While you could be an expert in making products or programming PLCs, you are not likely to be a cyber security expert. Thus, industrial cyber security solutions need to be easy to use in order to minimise human error in set-up and ongoing use.

Defense in Depth

One approach to industrial security is Defense in Depth, whereby there are multiple layers of defense and types of security that work together to prevent network incidents or to contain them if they do occur. A key best practice for Defense in Depth is to implement the zone and conduits model as defined in the ISA IEC 62443 (formerly ISA99) standard. While not a regulation, this standard provides practical guidance that leads to more robust cyber security. It recommends defining 'zones' within networks and allowing the zones to communicate only through secure 'conduits.' With this method, only the minimum necessary network traffic passes between zones and unusual traffic generates alarms and is blocked.

The zones and conduits model provides a framework for network segmentation that prevents cyber security incidents from spreading. In brief, a security zone groups logical or physical assets that share common security requirements. For example, the network could have a controller zone and a supervisory zone. Each zone has a defined border that can be either logical or physical and delineates which elements are included and which are excluded.

Communications between zones must be via a defined conduit. A conduit is any pathway of communication that enters or exits a security zone. The conduits are the perfect 'choke points' where security measures, such as industrial firewalls, can be implemented to ensure that only the traffic needed by the plant is allowed to pass. These security measures can

Threat source	Industrial network	Incident type
	incidents (%)	
Hackers and terrorists	9.4	Intentional
Insiders	10.6	
Human error	11.2	Unintentional
Malware	30.4	
Device and software failure	38.4	
Source: The Repository of Industria	al Security Incidents, 2011.	

Table 1: Threat sources (Source: The Repository of Industrial Security Incidents, 2011)

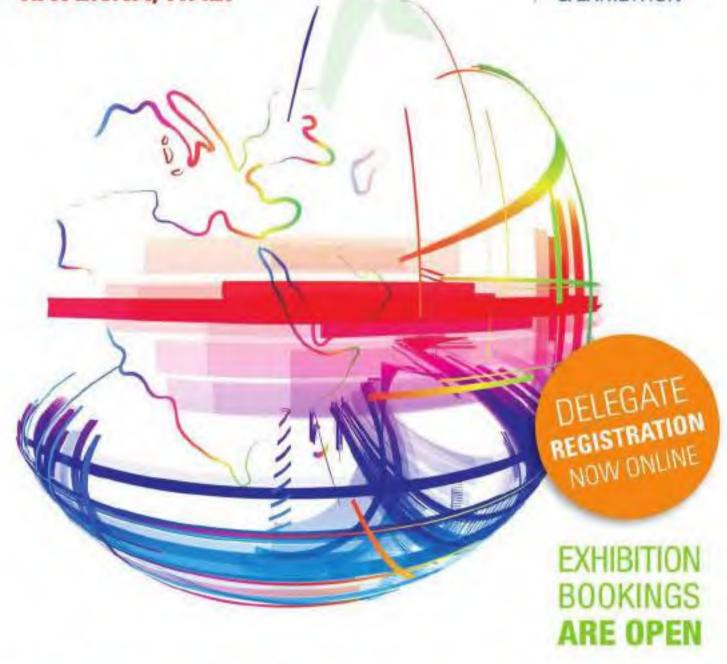
Focus on Change: Planning the Next 20 Years

Diversifying choices, increasing opportunities

25-27 March 2015 RAVENNA, ITALY

OMC 2015

OFFSHORE
MEDITERRANEAN
CONFERENCE
& EXHIBITION









compensate for the devices they protect not having sufficient built-in security.

In addition, focusing on conduit mitigation is typically far more cost effective than having to upgrade every device or computer in a zone to meet security requirements. In fact, it is often not even feasible or possible to upgrade industrial devices, such as PLCs and RTUs (remote terminal unit), as it can take years for updates to become available for them. Furthermore, such updates can often only be applied during a plant shutdown - an infrequent occurrence, which may not be easy to line up with needed security updates.

Below are examples of how this approach was applied by Belden to protect different oil and gas applications.

For an offshore platform

An offshore platform is a complex facility with many networked devices. In considering how to approach cyber security related to the oil and natural gas processing operation, a few core principles were determined:

- PLCSs are critical assets
- PCs (especially those with humans in front of them) are threat sources
- Networks we don't control are untrusted.

Using these principles, a preliminary zones and conduits analysis was done. While determining many of the zones was

66 A security zone groups logical or physical assets that share common security requirements"

Assess Perform risk assessment and gap analysis (existing) Implement Establish Zones & Conduits (Z&C) Design Z&Cs to meet traget Security Levels Determine appropriate Security Level tragets Validate and test Determine the achieved Security Level Maintain Conduct periodic vulnerability assessments Test & deploy patches Implement additional security measures (if necessary)

Chart 1: The security lifecycle (Source: Belden Design Seminar 2014)

relatively straightforward, a question arose as to how to handle the I/O server that connected to both the business network and the control network.

The solution was to create a 'demilitarized zone' (DMZ) which allows dual access to a shared resource, but not direct access through it. This can be accomplished using two 2-port firewalls or one multi-port device

In a refinery

Like the offshore platform, an oil refinery is a complex operation and many of them have more than one process underway at any given time. In this example, each process had its own master zone, with supervisory, basic control and process zones within the master.

After a first pass at determining zones and conduits, the proposed plan was

reviewed again and a risk analysis performed. This highlighted that one of the major risks that could lead to process stoppage was the accidental or intentional tripping of an emergency shutdown. Based on this realisation, the zones and conduits were revised to include separate safety integrated system zones from the process control system zone.

For pipeline infrastructure

A pipeline system includes the pipeline itself, pump stations and connections to one or more WANS (wide area networks). There are usually several points in the system where custody transfer of the resource occurs, with the resource being measured with flow meters.

One approach is to focus on securing the critical assets only. For example, a Tofino security appliance could be a conduit to the control network in the pump station.

Another approach would be to take into account that flow meters connect to two networks for custody transfer, and one of those networks is not a trusted network. In this situation, the flow meter could be put into a DMZ and all zones separated with a multi-port EAGLE firewall.

This article was based on a session focusing on cyber security at a Belden Industrial Ethernet Infrastructure Design Seminar held in Houston earlier this year. Belden provides endto-end signal transmission solutions to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. The company's security hardware and software solutions include increased customisation capabilities with improved ease of use. The enhancements of its nextgeneration products allow for the easy installation of upgrades on live systems with minimal configuration, says the company. For more information visit www.belden.com

Belden's industrial cyber security solution

BELDEN'S PRODUCT LINE supports security at many levels of communication, including at the physical level, with high-reliability cables and, at the data level, with switches that have many builtin security features. At the network level and higher in the OSI (Open Systems Interconnection) model, Belden's security-specific products include EAGLE routers and Tofino Security appliances.

In general, the EAGLE family of routers and firewalls can help secure the edge of networks. They are layer 3 routers with firewalls and stateful packet inspection and have VPN (virtual private network) capabilities for securing connections between untrusted networks.

Use of the Tofino family of products can secure the core of industrial networks. The Tofino security appliance is a Layer 2 bridge with no IP address that can be installed without disrupting live networks and with no changes to network design. It provides high levels of security using a

'whitelist' approach that allows for simple deployment, says the company.

The Tofino product line also includes modules that do content inspection (also known as deep packet inspection) for popular industrial protocols, such as Modbus TCP, OPC Classic and EtherNet/IP. This capability inspects messages and only allows approved types of messages through. For example, allowing read messages to pass through the firewall, but blocking write messages.



23 - 25 November 2014 Habtoor Grand Beach Resort & Spa, Dubai, UAE

Addressing the talent crunch

in the oil and gas sector through improved talent management and leadership development



Key Discussion Topics:

- Addressing The Threat Of The Growing Talent Gap
- · Managing An Internationally Mobile Workforce
- Recruitment, Selection And On Boarding
- Talent Management, Leadership Development And Succession Planning

Practitioner-led Training Workshops:

- Dealing With Difficult People Gain practical skills to become more comfortable in dealing with difficult people facilitated by Kuwait Energy
- Behavioural Styles And Communication Identify behaviour styles which help/hinder communication with others facilitated by Saudi Aramco

Key knowledge-sharing presentations

SAUDI ARAMCO • GAZPROM INTERNATIONAL • KUWAIT PETROLEUM COMPANY

RELIANCE INDUSTRIES • ZADCO • MUBADALA PETROLEUM

THE PETROLEUM INSTITUTE • BAIN & COMPANY • DELOITTE & TOUCHE

KUWAIT ENERGY • MCDERMOTT INTERNATIONAL • ADCO • GASCO

VIEW THE FULL AGENDA & BOOK YOUR SEAT

www.hrforumoilandgas.com

T: +971 (4) 4489 260 **E:** enguiry@oilreview.me

Organised by:



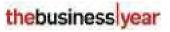
Media Partners:











Knowledge Partner:





Middle East & North African

The Baker Hughes Rig Count tracks industry-wide rigs engaged in drilling and related operations, which include drilling, logging, cementing, coring, well testing, waiting on weather, running casing and blowout preventer (BOP) testing.

		THIS MON	TH	VARIANCE	LA	ST MON	TH		LASTYEAR	₹
Country	Land	OffShore	Total	From Last Month	Land	OffShore	Total	Land	OffShore	Total
Middle East										
ABU DHABI	21	9	30	0	23	7	30	19	8	27
DUBAI	0	2	2	1	0	1	1	0	0	0
IRAQ	94	0	94	5	89	0	89	80	0	80
JORDAN	0	0	0	0	0	0	0	0	0	0
KUWAIT	34	0	34	0	34	0	34	30	0	30
OMAN	59	0	59	1	58	0	58	45	1	46
PAKISTAN	20	0	20	-3	23	0	23	21	0	21
QATAR	2	5	7	1	2	4	6	2	7	9
SAUDI ARABIA	89	19	108	10	78	20	98	64	19	83
SUDAN	0	0	0	0	0	0	0	0	0	0
SYRIA	0	0	0	0	0	0	0	0	0	0
YEMEN	4	0	4	0	4	0	4	4	0	4
TOTAL	232	35	358	15	311	32	343	265	35	300
North Africa										
ALGERIA	47	0	47	-2	49	0	49	46	0	46
EGYPT	45	11	56	-9	45	10	65	47	11	58
LIBYA	11	1	11	3	8	0	8	15	0	15
TUNISIA	0	0	0	0	0	0	0	3	1	4
TOTAL	103	12	114	-8	102	10	122	111	12	123

Source: Baker Hughes

Project Databank

Compiled by Data Media Systems

OIL, GAS AND PETROCHEMICALS PROJECTS - UAE

Drainet	Facility	Dudget (# UC)	Ca.u	Chahua
Project Projec	Facility	Budget (\$ US)	Country	Status
ADCO - Bab Far North CO2 Injection Pilot Project	Oil Field Development	305,000,000	Bab Habshan	Construction
ADCO - Bab Gas Compression Project (Phase 2)	Gas Production	500,000,000	Bab	Construction
ADCO - Bab Habshan 1 - Field Development (Phase 1)	Exploration	400,000,000	Abu Dhabi	Construction
ADCO - Mender Field Development	Oil Field Development	200,000,000	Abu Dhabi	FEED
ADCO - Nitrogen Gas Injection (NGI)	Gas Production	50,000,000	Abu Dhabi	Construction
ADCO - North East Bab (NEB) - Phase 3 (Al Dabbiya)	Oil Production	500,000,000	Abu Dhabi	EPC ITB
ADCO - North East Bab (NEB) - Phase 3 (Rumaitha-Shanayel)	Oil Production	500,000,000	Abu Dhabi	Engineering & Procurement
ADCO - Rumaitha North CO2 Injection Project	Oil Field Development	500,000,000	Rumaitha	EPC ITB
ADCO - Sahil Field Development - Phase 2	Oil Field Development	800,000,000	Abu Dhabi	EPC ITB
ADCO - Sahil-Asab-Shah (SAS) Full Field Development - (Asab Field)	Oil Field Development	2,300,000,000	Abu Dhabi	Construction
ADCO - Sahil-Asab-Shah (SAS) Full Field Development - Overview	Oil Field Development	3,750,000,000	Abu Dhabi	Construction
ADCO- Bab Integrated Facilities Project	Oil Field Development		Bab	FEED
ADCO- Bab TH-F Peripheral Development	Nitrogen	400,000,000	Abu Dhabi	FEED ITB
ADGAS - Das Island Flaring & Emission Reduction (Package 2 & 3)	Gas Production	100,000,000	Das Island	FEED
ADGAS - Das Island Pentane Storage Facility	Gas Storage Tanks	65,000,000	Das Island	Construction
ADMA OPCO - Nasr Full Field Development - Package 3	Oil Field Development	150,000,000	Das Island	EPC ITB
ADMA OPCO - Nasr Full Field Development - Phase 2	Oil Field Development	1,700,000,000	Nasr Field	Engineering &
(Package 2 - Platforms)	·			Procurement
ADMA OPCO- Nasr Full Field Development - Phase 2 (Package 1 - Wellheads and Pipeline)	Oil Field Development	1,000,000,000	Nasr Field	Engineering & Procurement
ADMA OPCO- Nitrogen Plant Upgrade	Nitrogen	55,000,000	Abu Dhabi	EPC ITB
ADMA OPCO-Umm Shaif Oil Network Expansion-Phase 2	Oil Field Development	300,000,000	Abu Dhabi	FEED
ADMA-OPCO - 100 MBD DAS Facilities Upgrade Project	Oil Field Development	48,000,000	Abu Dhabi	Construction
ADMA-OPCO - Das Island Flares Modifications - Revamp Project	Gas Processing	50,000,000	Das Island	Construction
ADMA-OPCO - Nasr Full Field Development - Phase 1	Oil Field Development	500,000,000	Nasr Field	Construction
(Early Production Facilities)		, ,		
ADMA-OPCO - SARB Offshore Oil Field Development - (Overview)	Oil Processing Facility	2,000,000,000	Abu Dhabi	Construction
ADMA-OPCO - SARB Offshore Oil Field Development - Package 2	Oil & Gas Field	500,000,000	Abu Dhabi	Construction
ADMA-OPCO - SARB Offshore Oil Field Development - Package 3	Gas Pipeline	300,000,000	Abu Dhabi	Construction
ADMA-OPCO - SARB Offshore Oil Field Development - Package 4	Gas Processing	500,000,000	Abu Dhabi	Engineering & Procurement
ADMA-OPCO - Umm Al Lulu Field Development - (Overview)	Oil Field Development	2,000,000,000	Umm Al Lulu	Construction
ADMA-OPCO - Umm Al Lulu Field Development - Package 1	Oil Field Development	500,000,000	Abu Dhabi	Construction
ADMA-OPCO - Umm Al Lulu Field Development - Package 2	Oil Field Development	500,000,000	Umm Al Lulu	Engineering & Procurement
ADMA-OPCO - Umm Shaif Infield Pipelines Replacement	Oil Field Development	500,000,000	Umm Shaif	FEED
ADMA-OPCO - Zakum Facilities for 4 Gas Injectors	Gas Production	100,000,000	Abu Dhabi	Construction
ADMA-OPCO- Lower Zakum - Oil Lines Replacement (Phase 1)	Pipeline	950,000,000	Zakum	Construction
ADNOC - Bab Sour Gas Field Development	Gas Processing	8,100,000,000	Abu Dhabi	FEED ITB
Adnoc - Shah Accommodation and Administration Complex	Mixed-Use Development	55,000,000	Abu Dhabi	EPC ITB
ADOC - Hail Offshore Oilfield	Oil Field Development	00,000,000	Abu Dhabi	FEED
Al Hosn Gas - Onshore Shah Sour Gas Field Development (Overview)	Acid Gas	12,000,000,000	Shah Field	Construction
Al Hosn Gas - Onshore Shah Sour Gas Field Development	Acid Gas	47,000,000	Shah Field	Construction
(Package 1 - Gas Gathering Facility)				
Al Hosn Gas - Onshore Shah Sour Gas Field Development [Package 5 - Pipelines]	Acid Gas	250,000,000	Shah Field	Construction
Al Hosn Gas - Onshore Shah Sour Gas Field Development [Package 7 - Sulphur Handling Terminal]	Acid Gas	600,000,000	Shah Field	Construction
Borouge - Borouge III (Low Density Polyethylene-LDPE)	Low Density Polyethylene (LDPE)	500,000,000	Ruwais	Construction
Borouge - Borouge III (Non-process Buildings)	Aromatics	110,000,000	Ruwais	Construction
Borouge - Borouge III (Offsites and Utilities)	Offsites & Utilities	1,000,000,000	Ruwais	Construction
Borouge - Borouge III (Polyolefins)	Polyolefins	1,450,000,000	Ruwais	Construction
BOROUGE - Borouge III - Flare Gas Recovery	Gas Processing	150,000,000	Abu Dhabi	Construction
Borouge III (Overview)	Polyolefins	4,500,000,000	Ruwais	Construction
BPGIC - Fujairah Oil Terminal (Phase 1 & 2)	Oil Storage Tanks		Fujairah	Design
BRF - Food Processing Plant	Food Processing Plant	120,000,000	Abu Dhabi	Construction
Chemaweyaat- Tacaamol Aromatics Project	Petrochemical Plant	10,000,000,000	Abu Dhabi	EPC ITB
CONCORD ENERGY - Petroleum Storage Facility	Oil Storage Tanks	250,000,000	Fujairah	Construction
Dana Gas - Zora Gas Field	Gas Exploration	100,000,000	Sharjah	Construction
DPE - Al Jalila Field (Phase 2 - Offshore platform B and pipelines)	Oil Field	100,000,000	Al Jalila	Construction
Dubai Supply Authority - Jebel Ali Hassyan Fuel Gas Pipeline	Gas	150,000,000	Dubai	Construction
Ecomar- Fujairah - Petroleum Regeneration and Processing Facility	Refinery	70,000,000	Fujairah	Engineering &
, , , , , , , , , , , , , , , , , , , ,	·		•	Procurement

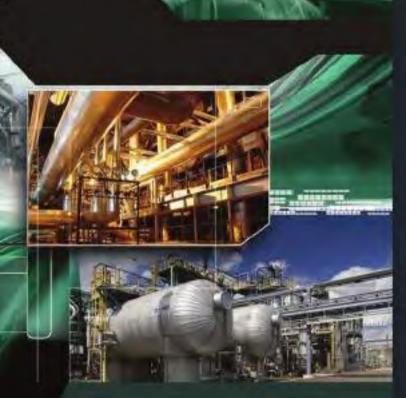
Project	Facility	Budget (\$ US)	Country	Status
Emirates LNG - Fujairah LNG	Liquefied Natural Gas (LNG)	1,000,000,000	Fujairah	EPC ITB
ENOC - Horizon Terminals - Falcon Jetfuel Pipeline	Bulk Storage	127,000,000	Jebel Ali	Construction
& Bulk Terminal Facilities				
ENOC - Jebel Ali Refinery Capacity Expansion	Refinery	100,000,000	Jebel Ali	FEED
Fujairah Port - Port Facilities Expansion	Oil Storage Tanks	100,000,000	Fujairah	Construction
GASCO - Black Powder Management	Gas Pipeline	00.000.000	Abu Dhabi	EPC ITB
GASCO - Bu Hasa - Bab - Thamama Pipeline	Gas	30,000,000 160,000,000	Abu Dhabi Habshan	Construction Construction
GASCO - Habshan Nitrogen Generation and Injection Project (NGI Package)	Nitrogen	160,000,000	Habshan	Construction
GASCO - Habshan Nitrogen Generation and Injection Project (Overview)	Nitrogen	400,000,000	Habshan	Construction
GASCO - Habshan to Ruwais - 16 inch Condensate	Gas Pipeline	90.000.000	Abu Dhabi	Construction
Replacement Pipeline	1 2 2	.,,		
GASCO - Habshan-Maqta-Taweelah Gas Pipeline	Gas	150,000,000	Abu Dhabi	Construction
Gasco - Integrated Gas Development (IGD) - Expansion	Gas Production	12,000,000,000	Abu Dhabi	EPC ITB
GASCO - Ruwais Sulphur Handling Terminal 2	Sulphur Recovery	300,000,000	Ruwais	Construction
GASCO - Shah Habshan Sulphur Granulation Plant	Gas Production	479,000,000	Abu Dhabi	Construction
GASCO - Thammama F Early Nitrogen Rejection Unit	Gas Processing	500,000,000	Abu Dhabi	FEED
GASCO - Yas Mina Zayed Gas Pipeline	Gas Processing	45,000,000	Abu Dhabi	Engineering & Procurement
Gulf Petrochem - Oil Storage Terminal Facility at Fujairah - Phase 2	Oil Storage Tanks	300,000,000	Fujairah	Design
IPIC - Fujairah Refinery (EPC 1 & 2)	Refinery	3,500,000,000	Fujairah	EPC ITB
Kismat International - Petroleum Terminal (Phase 1)	Oil Storage Tanks	50,000,000	Sharjah	EPC ITB
MASDAR & ADNOC - Carbon Dioxide Capture and Storage - Phase 2	Carbon Dioxide	300,000,000	Abu Dhabi	Engineering &
(Pipeline Network)				Procurement
MASDAR - Carbon Dioxide Capture and Storage - Phase I	Carbon Dioxide	280,000,000	Abu Dhabi	Construction
(Mussafah Steel Rolling Mill)				
MASDAR - Carbon Dioxide Capture and Storage - Phase I (Overview)	Carbon Dioxide	2,500,000,000	Abu Dhabi	Construction
MASDAR - Carbon Dioxide Capture and Storage - Phase I (Pipeline Network)	Carbon Dioxide	280,000,000	Abu Dhabi	Construction
Petrixo Oil & Gas - Fujairah Bio-Fuel Refinery	Biofuel Refinery	800,000,000	Fujairah	EPC ITB
Petrochem - Jebel Ali Chemical Storage and	Oil Storage Tanks	50,000,000	Fujairah	Construction
Distribution Terminal Expansion	on storage ranks	30,000,000	i ajanan	OUTSIT detion
Primestar Energy - Prime Tank Terminal & Jetty Pipeline	Oil Storage Tanks	165,000,000	Fujairah	Construction
Saif Al Khaili & KIZAD - Emirates Chemical Plant	Caustic Soda	76,240,000	Abu Dhabi	Feasibility Study
Sharafco - Hamriyah Free Zone - Storage Terminal	Oil Storage Tanks	Unknown	Sharjah	EPC ITB
Socar Aurora Fujairah Terminal - Fujairah Oil Storage Terminal - Phase 3	Oil Storage Tanks	100,000,000	Fujairah	EPC ITB
TAKREER - Ruwais Refinery Expansion (Overview)	Refinery	10,000,000,000	Ruwais	Construction
TAKREER - Abu Dhabi International Airport Expansion -	Oil Storage Tanks	200,000,000	Abu Dhabi	Engineering &
Aviation Fuel Depot TAKREER - Carbon Black Plant	Daluman	200,000,000	Ruwais	Procurement Engineering &
IANNEER - Cal buil black Flaiil	Polymers	200,000,000	Ruwais	Procurement
TAKREER - Hamriyah Free Zone Tank Farm	Oil Storage Tanks	250,000,000	Hamriyah	Construction
TAKREER - Ruwais Flare Gas Recovery	Gas Processing	150,000,000	Ruwais	Construction
TAKREER - Ruwais Lube Base Oil Facility	Base Lube Oil	700,000,000	Ruwais	Construction
Takreer - Ruwais Refinery Expansion	Refinery	2,100,000,000	Ruwais	Construction
(Package 1 - Crude Distillation Units)				
TAKREER - Ruwais Refinery Expansion	Refinery	3,100,000,000	Ruwais	Construction
[Package 2 - Residue Fluid Catalytic Cracking Unit]	Off. 11 O Thilling	0.500.000.000		
TAKREER - Ruwais Refinery Expansion (Package 3 - Offsites and Utilities)	Offsites & Utilities	2,730,000,000	Ruwais	Construction
Takreer- Hamriya Jetty and Pipeline Network Project - Marine Works 2	Oil Storage Tanks	250,000,000	Hamriyah	Construction
Takreer- Ruwais Refinery Expansion	Oil Storage Tanks	1,300,000,000	Ruwais	Construction
(Package 4 - Tank Farm and Pipeline)		,,5,000		
Takreer- Ruwais Refinery Expansion (Package 7 - Marine Works)	Refinery	270,000,000	Ruwais	Construction
Union Chlorine - ICAD Chlorine Alkali Plant	Chlor Alkali	70,000,000	Abu Dhabi	Construction
VOPAK HORIZON - Fujairah Oil Terminal Expansion (Phase 7)	Gas Storage Tanks	200,000,000	Fujairah	Engineering &
74000 0 44 5140 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	07.0	F00 000 ***	C =:	Procurement
ZADCO - Satah Field Development - Main Construction Package	Oil Production	500,000,000	Satah Field	Construction
ZADCO - Satah Field Development - Overview	Oil Field Development	500,000,000	Satah Field	Construction
ZADCO - Satah Field Development - Water Facilities Package	Oil Production	100,000,000	Satah Field	Construction
ZADCO - Umm Al Dalkh ESP Installation - Package 1 ZADCO - Umm Al Dalkh ESP Installation - Package 2	Sub Sea Cable Sub Sea Cable	650,000,000 650,000,000	Umm al Dalkh Umm al Dalkh	Construction EPC ITB
(Phases 3, 4 and 5)	San Sea Canif	030,000,000	Ommin at DatKN	FLOUD
ZADCO - Umm Al Dalkh Full Field Development (Overview)	Oil Field Development	650,000,000	Umm al Dalkh	EPC ITB
ZADCO - Upper Zakum Full Field Development - 750 Project -	Roads	250,000,000	Abu Dhabi	Construction
Non Process Civil Works				
ZADCO - Upper Zakum Full Field Development - 750 Project -	Oil Field Development	1,300,000,000	Zakum	Construction
Surface Facilities - EPC 1	Oil Deadwati	/ 200 000 200	7-1	
ZADCO - Upper Zakum Full Field Development - 750 Project - Surface Facilities - EPC 2	Oil Production	4,200,000,000	Zakum	Engineering & Procurement
ZADCO - Zirku 7th Crude Oil Storage Tanks	Oil Storage Tanks	30,000,000	Abu Dhabi	Construction
ZADCO - Zirku Facilities Capacity Enhancement	Oil Field Development	400,000,000	Zirku	FEED
		,		

Stainless and Specialty Steels for

OIL & GAS

Angles Channels Flat Bars Hexagons Ingots & Billets Round Bars Square Bars

Seamless Pipes
Welded Pipes
Reinforcement Bars
Threaded Rods
Wire Rods
Tying Wires





VALBRUNA GULF

High quality is our standard

P.O. Box 17285, JAFZ, Dubai, U.A.E. Tel: +9714 886 0200 Fax: +9714 886 0201 Wab: www.valbrunagulf.com,

E-mail: sales@valbrunagulf.ae

Fully owned subsidiary of Acciaierie Valbruna S.p.A, Italy

Project Focus

Compiled by Data Media Systems



Project Summary

Project Name	ADCO - Sahil Field Development - Phase 2	
Name of Client	u Dhabi Co. for Onshore Oil Operations (ADCO)	
Budget (\$ US)	000,000	
Facility Type	Field Development	
Status	СІТВ	
Start Date	Q3-2013	
End Date	Q1-2019	
Location	Abu Dhabi, U.A.E.	

Project Background

Abu Dhabi Company for Onshore Oil Operations (ADCO) plans to increase onshore crude production by 143,000 barrels a day (bpd). As part of the effort to achieve this goal, ADCO is developing Sahil Phase 2, which will be situated 120 km south of Abu Dhabi, UAE and itself will contribute 100,000 bpd of new crude capacity.

Project Status

Aug 2014	Currently, some paperwork is in process by ADCO for the evaluation of the scope elements. Once this is finalized, the EPC bidding process will proceed.
May 2014	CH2M Hill has won a contract to manage the development of the Sahil field.

Contractors

Contract Type	Pre-Qualified	Bidders	Awarded
PMC	AMECMott MacDonaldTebodinSNC LavalinCH2M Hill	AMEC Mott MacDonald Tebodin SNC Lavalin CH2M Hill	• CH2M Hill
EPC	 Galfar Engineering & Contracting SAOG China Petroleum Co. Descon Adyard ALSA Engineering 		Not yet appointed
FEED	WorleyParsons	WorleyParsons	WorleyParsons

Project Schedules

1Q-2019	Completion

Project Scope

The scope of work includes:

- 100,000 bpd oil field development
- water-disposal pumps
- associated facilities

- gas injection compressors
- water-alternating gas wells
- main oil line (MOL) booster pumps
- flow lines & flow metres

النشرة النوطية – الشرق الاوسط

وبين مشاوليه، ويتطوي التنفيذ الناجح للعقود في مشروعات الغاز الطبيعي المسال العائم المينكرة، مثل مشروع بريلود لشركة شل، على تطوير مجموعة من عقود المشروعات عبر سلسلة القيمة الخاصة بالغاز الطبيعي المسال العائم من شأنها أن تُوجِد توافقا فعالاً في المسالح بين كل طرف من أطراف المشروع ذات الصلة، بينما يتم القضاء على المخاطر أو التخفيف من حدتها.

ولاشك أن العديد من أوجه الاعتماد المتبادل تعني أيضا العديد من فتوات الاتصال المفتوحة، وهذه القنوات بالغة الأصمل في ملياتها مخاطر جمة ، حيث بمقدورها أن تجلب تعييرا لا ضرورة له إلى المشروع ويصبح فقط الخطر المتأصل ظاهرا عندما يتطلع المالك/المشغل إلى استرداد نسبة من التكافة من شريك في المشروع المشترك حتى يكتشف أن الاتصالات الحيطة بالتغيير لا يمكن تتبعها ، ولهذا السبب يجب تمجيل التعليمات وسلسلة الاتصالات التي أعدات تعيير تعاقدي ، تسجيلاً دفيقا لا تشويه شائية ، إذ يتم الاعتماد على تسلسل الأحداث في حالة شائية ، إذ يتم الاعتماد على تسلسل الأحداث في حالة شائية ، إذ يتم الاعتماد على تسلسل الأحداث في حالة التجوء إلى التحكيم ،

ترتيب شفرات الحمض النووي

تسترم إدارة المخاطر التعاقدية التخلص من مخاطر المشروع التجاري من خلال ضمان توحيد وليسيط، وكذلك التحكم في الاتصالات الفوضوية التي توجد بالمشروع الرأسمالي الكبير، سواء كان الاتصال بشأن تطيمات، أو التزام، أو تغيير محتمل، أو استفسار متعلق بالمؤقع، تخيل – على سبيل المثال – أن الوقت هو ثابت يمثله محور أفتي، صرف رأس المال يتم بمبالغ أكبر بصفة متز إيدة كلما تقدمت الإنشاءات في المشروع بمرور الوقت، ويتم صرف رأس المال بموجب عقود، غير أنه يدون نظام تواصل بوقر طريقة متضبطة لإدارة الخاطر بدون نظام تواصل بوقر طريقة متضبطة لإدارة الخاطر المتأصلة في هذه المقود، تبقى العملية بأسرها مفتوحة لإمكان حدوث تغيير شيحة القنوات اتصال غير ضرورية، وغير منظمة ومشبشرة.

ويضع ذلك داخليا بين المالك/الشغل وشركائه، وخارجيا مع المقاولين، والأن لك أن تتصور أن تطبيق إدارة الخاطر التعاقدية بشابه ملقا لولبيا تلف طقائه حول الخط الزمني للبشروع، و«اللف» هو نظام تسجيل، وعند تشقيله يقوم بتجميع كافة الاتصالات عبر الخطء الزمني للمشروع، وهنا تصبح الاتصالات غير النظمة متطومة في هنات محددة، ويتشابك الخط الزمني واللف، من حيث الأهمية الحاسمة، مع بعضهما البعض، ويشبهان كثيرا في ذلك ترتيب شفرات الحمض النووي، وذلك لتوفير سحل لا نزاع فيه لجميع بيانات العقود



إدارة المخاطر التحاقدية يشابه ملفاً لوليياً تنتف مافاته حول الحط الزمني فلمشروع مثل ترانيب شعرات الحمض النووي

الرسمية والانصالات والانتزامات التعاقدية وفرارات المراجعة وأزمنة الاستجابة للقرارات.

وحين يستطيع المالكون/الشفلون - حسيما هو مطلوب - استعادة شواهد وأدلة يمكن تدهيقها ولا يمكن تفنيدها مسجلة في اشرائيب ششرات حمض شووي، يكون يمقدورهم الإهلال من حالات المطالبات وتعظيم استرداد التكاليف لضمان أحمل جميع أصحاب المسلحة في المشروع والعقود لتصييهم من التكاليف المشروعة وغير المخططة.

الإنذار البكر وإدارة المخاطر الاستباقية

يستطيع المالكون/الشغلون أن يشرعوا في الاستفادة من العلومات الثجارية المتاحة، عندما يطبقون التحليلات على نظام تواصل ونظام تسجيل مجتمعين. حيث بتم تخزين الاتصالات التضبطة والتظمة يلانظام عمل واحد، فعلى سبيل الثال، إذا تم تسلم طلب تعديل في مشروع كبير من مقاول، وكانت لهذا الطلب فيمة عالية مرتبطة به، يمكن تعرير هذا الاتصال إلى الأشخاص الذين مم في حاجة إلى رؤيته، والأهم من ذلك إلى الأشخاص المقاليين باتخاذ قرار اعتماده من عدمه. وتتمثل إحدى الضوائد الأخرى في قدرة المالكين/ الشغلين على قياس الخاطر في مضروع معين. وإن تم أستالام كمية كبيرة من طلبات التعديل في فترة قصيرة يمكن تصعيدها إلى أصحاب الصلحة الللائمين ليتنبهوا إلى وجود مشكلة في الأفق، ومن ثم فإن الشروع انخاذ إجراءات لدرء تسرب القيمة الكبيرة وجدولة

التجاوزات في العلاقات التجارية مع المقاولين، وهو. يبساطة ما لا تستطيع الأنظمة الداخلية الحالية تحقيقه،

إن حلول إدارة المخاطر الثمافدية تتكامل ثماما مع أنظمة الشروع الأخرى، وتوفر نهجا منضيطا في جميع الاتصالات بين شركاء الشروع والقاولين من خلال ما يلى:

توجيه المقاولين والشركاء وأصحاب المصلحة إلى استخدام برنامج تجاري رسمي واحد للتواصل مع الماتكين/الشغلين، بينما يتم تنفيذ العقود، وكذلك اعتماد معايير شركة النفط على أنها وجوب حتمي ونتدفق جميع التعليمات والاتصالات من وإلى المقاول يطرق المالك/الشغل من خلال هذه القثاة الواحدة يطرقة محددة علما ومنظمة.

ربط عالم الهندسة بالعالم التجازي بالأصر ارعلى شرير جميع الاستعلامات القنية والتعليمات وغيرها ، من خلال القناة التجارية لأغراض المراجعة (هجس التوافق أو التباين مع بغود العقد) ثم إلى المقاول والفرق الفنية التابعة للمالك/الشغل.

الحصول على أفكار ورؤي مهمة وقيمة عن طريق تحليل حركة الاتصالات التجارية التي تلقي الضوء على الجوانب ذات الأولوية للمشروع، مما قد تتطلب الاهتمام، ويُعتبر هذا تركيزاً جديداً على شكل إندار مبكر على طلبات التفيير الحتصلة، وهو يصمح على طلبات إلى تقبول التغييرات الضرورية، ولكن المهم أنه يسمح لهم يتجنب التغييرات غير الضرورية التي يمكن أن تؤثر سلبا على المشروع عندما تتصحم إلى مستويات كبيرة وينتج عنها مطالبات

النتائج التوقعة

يعد الكثير من الشركات الفائقة الحجم، والشركات الكبرى والأخرى السنقلة، إلى إدخال تغييرات على الطريقة التي تدير بها التغيير خلال تنفيذ عقود مشروعاتها الرأسمالية، وثبة ما هو أكثر من ذلك، فهي يؤهر مثات الملايين بل مثيارات الدولارات الأمريكية بإنفاذ الزيد من الانضباط إلى عمليات صرف رؤوس أموالها وتحسين اتصالاتها، وكذلك الحوكمة والشقاهية لديها، وهذه المغاصر بالقة الأهمية من أجل تحقيق عائدات المصوى، وتختيف حدة الخاطر التعاقدية في المخاطر التعاقدية الشخصة، وفي الأخير، عقد إدارة المخاطر التعاقدية الرئيسية، يحصل المالكون/الشغلون الفائدة من عملية مترابطة لصنع القرارات عن طريق العائدة تمن عملية مترابطة لصنع القرارات عن طريق تحسين الانضباط الرأسمالي، ولذلك فهم يحققون نتائج تجارية تقوق كل التوقعات.



إدارة المخاطر التعاقدية

في القال التالي، تقول كلير كولهاون الرئيسة التنفيذية لشركة (80ver8) لإدارة الخاطر التعاقبية التركة (80ver8) لإدارة الخاطر التعاقبية، إن الكماش الهوامش وانخفاض العائدات على الأصول، تجعل الامتيازية الانضباط، الرأسمالي ضرورة للمالكان/الشفلين للمشروعات الرأسمالية الكبيرة.

تواجه كبريات شركات النفط والفاز التكاملة تهديدا مشتركا: الكماش الهوامش الشفيلية وهبوط الإنتاج والخفاض العائد على الأسهم الرأسمالية والأصول، وقد أثار الخفاض العائد على رأس المال والهوامش التشفيلية توعاً من الفرع بن المساهمين والمستثمرين، وحدر المحلسون بالشول إن المخاوف يسبب الانضباط الرأسمالي، كانت عاملاً مهما به هبوط أداء قطاع النفط والغاز العالمي، ولكن السمت استجابة الشركات بالبطء وأخفق بعضها في الإجابة عن السؤال الماذا كان اتجاه الهبوط بارزا وصريحا؟

يتعين على شركات الطاقة العالية تعديل توقعاتها للأرباح لعمل الاستثمارات المطلوبة لتلبية الطلب العالمي على الطاقة في المستقبل، هكذا حدرتها الوكالة الدولية لتطاقة، وأشارت الوكالة، التي مقرها باريس، في تقرير لها إلى إن التكفة الرأسمالية لإنتاج وحدة الطاقة، سواء النقط أو الغاز الطبيعي أو الكهرباء، تضاعفت منذ عام الاساسية، وقال فاتح بيرول، كبير الاقتصاديين لدى الوكالة في مقابلة هن باريس، ان تضاعف التكاليف الرأسمالية مسألة خطيرة.

وعلى الشركات تحدين انضياطها الرأسمالي وأن تكون أكثر واقعية قيلاً علا السنتيل بشأن معدلات العائد، طابلا بقيت الأسعار عند هذه السنويات، لقد محنى عهد النفط السهل، قالهيدروكر بونات سارت أكثر صعوبة وأعلى تكلفة في استخراجها، كما غدت الشروعات

الرأسمالية الكبري معقدة وعسيرة التوقع يصورة متزايدة، كما أن المشروعات يشارك فيها أيضا أسحاب مصلحة أكثر ومستثمرون أكثر، وتقع نموذجيا الإمناطق متطرفة من المالم بمشاركة من الحكومات الوطنية. والتنويضات والمحتوى الحيوي لعدلية صنع القرار. وهكذا أصبحت المشروعات اليوم لا تتسم بالتحديات الفنية فحسب، بل ومحفوفة بالخاطر ومشجونة بالتعييرات.

التواسل البيني التجاري

لا مناص من التغيير في مشروعات النفط والغال. وحتى أفضل فريق تصميم يُعد تصميماً هندسياً شبيعاً لن يكون بطاقته أبدا توقع ونصور ما هو مطلوب ينسبة القاولين يتقدمون دوما بطلبات تغيير، وتستعرق طلبات التعديل وطلبات التغيير، التي يتقدم بها القاولون في مجال الاتصالات، وقتا حتى تتسرب إلى الفرق المالية وخزانات المالكين المشغلين، وبعروز الوقت، يمكنها أن تصل إلى مستويات كبيرة ومهمة ينتج عنها مطالبات عالية التكلفة لاحقال في الشروعات، في وقت يكون فيه من عالية وسعمة التغييرات.

وقد أشار تقرير من ماكيتري، مندر أواخر العام المأضي، إلى أن الخاطر الرئيسية، خلال تنفيذ الشروع، ترتبط بالقصور التعاقدي والطالبات، والمعافظة على تأييد أصحاب المسلحة العمومين، ورصد سوء الإدارة

من جانب القاولين، ولذلك كان التواصل البيلي مع القاولين هو العنصر الحرج، وذكرت شركة شلومييرجر عن تقرير لها أن 70 في المائة من الشروعات الرأسمالية الفرر لها موازنة بأكثر من ٥ مليارات دولار أمريكي، سوف تتضخم موازناتها بأكثر من ٥٠ في المائة، ولا مستطيع أن نقال من أهمية هذا الرقم، إذ بيلغ متوسط حجم المشروعات في قطاع النقط والفاز حاليا حوالي الزيد من المشروعات الصحمة فائقة الحجم، ويبلغ متوسط عدة مشروعات ما بين ٢٠ إلى ٥٠ مليار دولار أمريكي فساعدا، حيث وسلت فيمة تطوير حقل نفط أمريكي فساعدا، حيث وسلت فيمة تطوير حقل نفط أعاني من من تأخيرات كبيرة وتجاوزات التكاليف، إذ

كيفية إدارة الخاطر التعاقدية

إن تجاوزات التكاليف غير الخطط لها، وضعف القدرة على استرداد التكاليف، ليس لها تأثير مباشر على الأداء المالي للمالك/الشغل فحسب، بل وتعرض أيضا فيمة أنصية المساهمين للخطر، ويلا مطلع هذا العام الخفضت قيمة أسهم اتحاد مساسير، الأسباني بسبب أخبار عن مطالبة تزيد قيمتها عن مثيار دولار أمريكي، وتتعلق بمشروع توسعة قناة بنما الذي كأن للاتحاد الأسباني الدور الرئيسي في إنشاءاته.

وأدى القراع، بين اتحاد مساسير، ومقاوليه حول السؤولية عن التكاليف الإضافية، إلى تأخير هائل في أعمال توسعة القناة، ومع تزايد اتصاف الشروعات الرأسمالية الكبيرة في قطاع النقط والغاز بوجود عدة شركاء في مشروع مشترك يتقاسمون الخاطر والعائدات، تجد أن المقود التي تقوم عليها تتضمن العديد من أوجه الاعتماد المتبادل، ولابد من تحديد قواعد تشارك واضعة من البداية، فيما بين شركاء المشروع المشترك ويبقهم



CHALLENGES AND OPPORTUNITIES FOR THE NEXT 30 YEARS



SUPPORTED BY







ملتقى العالم الجديد لخبراء النفط و العاز THE WORLD'S NEW MEETING POINT FOR OIL & GAS PROFESSIONALS

10-13 نوفمبر 2014 • أبو ظبى، الإمارات العربية المتحدة 10-13 NOVEMBER 2014 • ABU DHABI, UAE

ــرض عـــــالـ A WORLD CLASS EXHIBITION

100,000

16 NATIONAL

1.800

17 INTERNATIONAL OIL COMPANIES

20 INTERNATIONAL PAVILIONS

60,000 ATTENDEES

DRENING TIMES:

REGISTER NOW WWW.ADIPEC.COM/REGISTRATION

SPECIAL FEATURES AT ADIPEC 2014



REPORT IN COM

1 MINISTERIAL SESSION

2 EXECUTIVE

BEXECUTIVE PANEL SESSIONS

PLUS 3 SPECIAL IT SESSIONS 4 ACADEMIA SESSIONS

4 INDUSTRY BREAKFASTS & LUNCHEONS

81 TECHNICAL CONFERENCE SESSIONS

OPENING TIMES:

E7.39-18.00

81 30 18 00

07.30-18.00

17.30-17.00





 WWW.ADIPEC.COM ABU DHABI NATIONAL EXHIBITION CENTRE





وود التشيرة التقطية - الشيق الأوسط ووي

Triv وهي تشمل تركيب خطوط أنابيب بطول ٥٨٥ كيلومترا وإنشاء محطتين الضغط الغاز . ولكن لم يجر المضي في كل مشروعات الغاز في أرامكو بسلاسة، لاسيما الجهود المبدولة لاستكشاف منطقة صحراء الربع الخاتي القاحلة. وقد رحل عدد من المشروعات المشتركة الكيرى من هذه المتطقة بعدما أخفقت في اكتشاف الغاز بالحفر ، وشركة ، شل ، هي آخر شريك يعلن ترحاله من المنطقة تاركة أرامكو تعضي وجدها ، رغم اكتشافها بعض الغاز ، وهذه نهاية مخيبة للأمال لما كان يعتبر أصلاً مبادرة جديدة مثيرة للمشاركة في قطاع التنفيب والإنتاج الربح بالملكة العربية السعودية .

الغاز غير التقليدي

إن أحد المجالات المليثة بالتحديات، والذي تخطط أرامكو لاقتحامه سعيا منها لتعزيز إنتاج الغاز المحلي، هو الاستفادة من إمكانات الطاقة غير التقليدية للمملكة، والطفرة التي حدثت في إنتاج الغاز بالولايات المتحدة من خلال استغلال مخزون الصخر الزبتي، لم تمر دون أن بالاحظها آخرون في شتى أرجاء العالم، حيث يحرص العديد الآن على مضاهاة هذا التجاح، وقال علي النعيمي، وزير البترول السعودي، إنه يُقدَّر احتياطيات المملكة من الغاز غير التقليدي بأكثر من الغاز غير التقليدي بأكثر من الغاز غير التقليدي بأكثر من الغاز المتعاما المؤكدة من الغاز المتماما التقليدي، وهذا لك عدد من كبرى الشركات الدولية التي تبدي الآن اهتماما بالتقدم بعروض للعمل على تطوير بعض هذه الإمكانات الواضحة،

وتتطلع أرامكو، حاليا، إلى بناء مشاآت معالجة ورؤوس (فوهات) آبار وخطوط أنابيب للغاز غير التقليدي في طُريف بشمال الملكة حيث يجري حاليا تطوير مشروع التعدين الكبير وغد الشمال، وهي تأمل في إنتاج ٢٠٠٠ مليون قدم مكعب يعميا من الغلا غير التقليدي بحلول عام ٢٠١٨ لتوفير إمدادات للمشروع ومحطة الكهرياء المرتبطة به، وتشمل قائمة الشركا، المحتملين مجموعة ، جي إس، الكورية الجنوبية للهندسة والبناء، ومماري تيكنيمونت، الإيطالية، و، جي حي سي البابانية، و، إس إن جي "لافائين الكلدية، وذلك طبقا لمصادر بالقطاع استشهدت البابانية، والي بي موريق المقلومة المدينة في إنتاج بها رويترز مؤخرا، وقد استلهمت الملكة، مثل آخرين، الطفرة الحديثة في إنتاج بها راسخر الزيتي بأمريكا الشمالية، والتي حولتها من مستوردة للغاز بالكامل إلى مصدرة له. لهذا بدأت الملكة العربية السعودية البحث عن احتياطياتها من الغاز غير التقليدي في مواقع أخرى متعددة شملت المنطقة الشمالية الغربية والمنطقة الشمالية الغربية والمنطقة الشمالية الغربية والمنطقة الشرفية والربع الخالي، إلا أن العمل لايزال في مرحلة مبكرة،

التكله له حيا

يؤكد الاختيار، الذي تواجهه أرامكو أيضا في قطاع الفاز غير التقليدي.
الاعتماد المتزايد للشركة على التكنولوجيا، ومرة أخرى أحد المواضيع المتشاجهة
في القطاع، وقد أشاد خالد الفالع بالسجل المثبت للقطاع بإعادة اكتشاف ذاته
ليحول التحديات إلى هرص، كما توقع المزيد من ذلك، وصرح فائلاً: «محن
مقتفعون بأن الابتكار والتكنولوجيا المتطورة هما عاملا التمكين الاستراتيجيان
الأساسيان لنجاحنا الحالي ولقدرتنا التنافسية المستقبلية،

ويعني ذلك أن المجموعة سوف تقوم بمضاعفة قوتها العاملة للبحث والنطوير ثلاث مرات، وبزيادة تمويلها لهذا المجال فائق الأهمية بخمسة أضعاف، ومرة أخرى، الأساس المنطقي هنا هو الجوائب الاقتصادية بشكل كبير، وتسير أرامكو على الخطة لزيادة معدلات استخراجها للقفط إلى ٧٠ في المائة، مما يسمح لها



قطاع اللفط والغاز المعودي يحطى بيرنامج استثمار قيمته عدة مليارات من الدولارات

بإضافة أكثر من ١٠٠ عليار برميل من الموارد النفطية إلى محفظة الموارد الضخمة بالفعل، وسوف تكون التطويرات الجديدة في الحفر والمجالات الأخرى أيضا حيوية للمملكة حتى تحقق قدراتها من الغاز غير التقليدي غير المستغلة بعد. وهناك اهتمام أيضا بقطاع الطاقة التجددة على المستوى الوطلي، إذ نتطلع الملكة إلى الاستفادة من الطاقة الشمسية، على وجه الخصوص، لتعويض جزء من اعتمادها على الوفود الأحفوري، وهذا ليس بعل قصير المدى، ولكنه على الدى الطويل سيبقي أرامكوفي مصاف الطيقة العليا من منتجي النفط والغاز البلاد دون استقراف احتياطياتها من الهيدروكربونات الثمينة، وهذه أخيار جيدة البلاد دون استقراف احتياطياتها من الهيدروكربونات الثمينة، وهذه أخيار جيدة للتصدير، وفي الحقيقة ، يمكن للمملكة العربية السعودية في المستقبل – على الأقل للتصدير، وفي الحقيقة ، يمكن للمملكة العربية السعودية في المستقبل – على الأقل نظريا – أن تكون أحد من منتجي الطاقة الشمسية على نطاق واسع والأقل تكلفة بيد أن عذا لا يزال بعيد المنال.

لا تراجع

رغم كل هذه التحديات العديدة، لا تنوي أرامكو السعودية التهرب أو التراجع عن تحمل مسؤولياتها باعتبارها المنتج الأول للتفط على مستوى العائم، وتواصل الشركة تنويع وزيادة بصمتها العالمية، وتوسيع أعمالها الحلية، تماما مثلما كائت ولا تزال منذ سنوات عديدة، والنية والغصد أن تقوم بذلك جنبا إلى جنب مع شركات النفط الدولية الأخرى. وقال خالد الفالع مؤخرا؛ محتى مع انجاه الشركات الأخرى إلى تخفيض إنفاقها، فإننا سوف نستثمر لبناء أعمال تجارية متكاملة رأسيا وأفقيها تنصير بالرقي ية مجالات التكرير والتسويق والبتروكيماويات ومواد التزنيق والكهرباء حيث يأخذ الكثير من هذه النوسعات شكل مشروعات مشتركة مع شركات عائية رائدة أخرى في الداخل والخارج، لقد كان هذا العام مزدحها بالفعل لفريق أرامكو، ولن يكون عام ٢٠١٥ مختلفا عنه، ولقد كانت الشركة في صميم مجال النفط منذ زمن بعيد، وكما في معظم مناحي الحياة الأخرى، الخبرة تعني الكثير.

Under the Patronage of **His Royal Highness Prince Saud Bin Naif Bin Abdulaziz**Governor of the Eastern Province, Kingdom of Saudi Arabia

SAOGE 2014

THE 6th SAUDI ARABIA INTERNATIONAL OIL & GAS EXHIBITION

24-26 NOVEMBER 2014
DAMMAM, KINGDOM OF SAUDI ARABIA

VISIT THE LEADING EVENT FOR SAUDI ARABIA'S OIL & GAS INDUSTRY!



أرامكو السعودية تمضي في مشروعاتها التطويرية

من الترمع أن تقود أرامكو الشعودية استثماراً ستوياً بقيمة 1 مليار دولار أمريكي على مدار العقد القادم. وذلك للمحافظة على متزلتها كساحبة المركز الأول في الإنتاج. وفي هذا المقال يقنع مارتن كالراك تطلعات وخطت عمالاق عالم النفط.

تعتزم الملكة العربية السعودية الحافظة على موقعها على قمة التصنيف العالمي تتنجى النفط، بخطط إنفاق ضخمة، على مدار العقد القادم، من شأنها أن تمضى قَدما بالنطويرات في قطاع التلقيب والإنتاج، وأبضا في قطاع الصناعات التحويلية، وخلال صيف هذا العام، أغلن رئيس أرامكو السعودية، شركة النفط الملوكة للدولة، أن المجموعة سوف تشرع إلا إنفاق رأسمالي فيمته ٠ ٤ مليار دولار أمريكي سنويا على مدار السنوات العشر القبلة، وذلك للمحافظة على ثبات الطاقة الإنتاجية للنفط ومضاعفة إنتاج الغاز . علما بأن شركة أرامكو تعتبر بالفعل أكبر منتج للتفط على مستوى العالم وتدعم الطلب العالمي، لكنها حريصة على توسيع قدراتها في مجال الغاز لتلبية الارتفاع المتسارع للطلب المحلى من الصناعة وقطاع الكهرباء. وقد أعلن خالد القالح، الرئيس التنفيذي للشركة، أمام مؤتمر عُقد خلال الصيف. أنه يتوقع أن يرى الأموال تتوجه إلى جميع الجوائب، رغم أنه خص العمل بالواقع البحرية على أنه يمثل قوة دفع جديدة مهمة ضمن مجموعة مشروعات التنقيب والإنتاج، وقال إن الكلير من هذا الإنفاق الرأسمالي سوف يذهب إلى الشروعات البحرية، سواء المشروعات وأسعة النطاق، مثل مشروع منيفة في الخليج العربي، وكذلك التنقيب البحري الأكثر حداثة في البحر الأحمر وحقول مُدين، وقال الفالح: «بالرغم من أن استثمار اثنا سوف تغطى سلسلة القيمة، فإن الجزء الأكبر سوف يتجه إلى مشروعات التنقيب والإنتاج، وبالمواقع البحرية بصورة متزايدة.. وأضاف: «إن الهدف هو المحافظة على أقصى قدر من ثبات الطاقة الإنتاجية للنفط عند ١٢ ملبون برميل يوميا بيتما تتم أيضا مضاعفة إنتاجنا من الفازء وحذر القالح أيضا من ارتفاع التكاليف في قطاع التفط، ومن أنها ستبتلع حصة أكبر من الميز اثبة، مسلطاً الضوء، عن قرب، على الجوانب الاقتصادية للمشروعات، وقال: ءمن آجل الاستفادة من هذه الموارد النفطية المكافة على نحو متزايد، يتمين أن تكون أسعار النفط جيدة بما يكفي لجذب الاستثمارات المتلوية، وسوف تدعم براميل النفط الهامشي الأكثر تكلفة الأسعار على المدى الطويل،. وقد تضاعفت بالفعل تكاليف المشروعات في أرامكو تسبيا خلال العقد المأضى رغع بذل كاهة الجهود الثلى للتخفيف من حدة تصاعد التكاليف. وهذا نتيجة للاختناقات وأوجه التقصيل ملسلة التوريد، بالإضافة، بالطبع، إلى الارتفاع الدائم لتكاليف استغلال التقنيات الحدبثة في الحقول اللازمة لاستخراج التغط والغاز من المكامن التي ما هنئت تتسم بالمزيد من التعقيد والتحدي.

الأعمال كالمتاد

لاتزال الأعمال كالمتاد، في الجزء الأعظم منها، بالنسبة للمهندسين والفنيين في أرامكو، الذين كثيرا ما ألفوا إدارة الميزانيات الكبيرة، وعملوا بلا كل لنتمو الطاقة الإنتاجية للمملكة لتصل إلى الأفاق السامية الحالية، وبما أن صناعة التفط والفاز تعتبر القطاع الاقتصادي الأول في المملكة العربية السعودية، حققت الرياض من النفط إيرادات بلغث ٢٧ مليار دولار أمريكي في العام الماضي،

وتحظى هذه الصناعة روتينيا ببرامج استثمار تبلغ فيمتها مليارت الدولارات. كما أنها أثينت أنها مصدر عمل غني المحمدة اولين الأجانب وشركات الخدمات. ومن بين مشروعات التنفيب والإنتاج الكبيرة الجارية مشروع توسعة حقل خريص بالمنطقة الشرقية، حيث يجري حاليا تقديم العطاءات،

وقد استحود قطاع النفط والغاز على 10 ية المائة من إجمالي عقود الإنشاءات المحلية التي تم متحها خلال الربع الثاني من عام ٢٠١٤ وهقا لللاحصناءات الصنادرة عن البغك الأهلي التجاري، ويتركز جزء كبير سن ذلك على منطقة جازان وتطوير أرامكو لمصفاة جازان ومشروع المحلة بتكك للتطقة. وهي واحدة

من عدد من مبادرات التكرير الرئيسية الجارية التي تستهدف تعزيز قدرات الملكة في مجال الصناعات التحويلية، ويعني كل هذا الكثير من العمل المتواصل للمقاولين؛ مثل شركة إيسار الهندية التي حصلت مؤخرا على صفقة قيمتها ٥٤ مليون دولار أمريكي لتطوير محطة تثبيت خام في محطة بقيق في شبية من أجل أرامكو. ومع ذلك، فإن أحد التحديات التي تواجه الشركات الدولية هو التركيز الكبير في المملكة العربية السعودية على الاستمانة بشركات التوريد وشركات تصنيع المعدات المحلية، وقد أصبح ذلك من أولويات أرامكو من أجل دعم مبادرات الحكومة لدمج المواطنين السعوديين، قدر الإمكان، في القطاع الرائد بالمملكة، وقد أدي هذا إلى إطلاق مجموعة من المشروعات المشتركة بين بالمملكة، وقد أدي هذا إلى إطلاق مجموعة من المشروعات المشتركة بين الشركات السعودية والمستثمرين الأجانب.

خالدالفالح

اليارس التنفيذي لشركة أرامكو السعودية

البحث عن الفاز

أصبحت زيادة إنتاج الغاز الطبيعي، على وجه الخصوص، إحدى أولويات أرامكو الأولى. كما أصبح البحث عن ترسيبات جديدة للقاز يحتل أيضا بؤرة الاهتمام، حيث تبدل الملكة قصارى جهدها من أجل مواكبة ذلك الارتفاع المدريع في الطلب المحلي بها، وتحتل المملكة العربية السعودية المركز الخامس كأكبر استياطيات مؤكدة في العالم للغاز، على الرغم من أن إنتاجها المالي مقتصرٌ على الغاز المصاحب المرتبط بإنتاج الفقط، وتتوقع المملكة أن يصل الطلب المحلي على الغاز، لتوليد الطاقة يصفة رئيسية، إلى الضعف تقريبا يحلول عام ٢٠٢٠ من مستوياته في عام ١٠٠١ التي بلغت ٢٠٥ تريليون قدم مكعب في السنة. ولا تزال أدامكو تتفق بسخاء لدفع عجلة العمل فيما يتصل بالتطويرات الكبري في قطاع الغاز، مثل العربية والحصباة وكران، وهو أول حقل بحري للغاز على المساحب في الملكة العربية السعودية،

وإحدى الخطط الرئيسية التي يجري تتنفيذها الآن هي توسيع شبكة الغاز الرئيسية، وقد حصلت دودسال الهندية، أوائل هذا العام، على عقد لتطوير المرحلة الأولى من توسيع الشبكة في المدينة المفورة، المقرر أن تنتهى في أواخر عام







SOLAR













مــواجهــة أزمــة المــواهــب فمي المنطقــة

يقول رياض الثان، في هذا القال: إن مشكلة فقص المواهب في قطاع التفط والغاز في الشرق الأوسط بحاجة إلى تداركها عاجلاً بدلا من اجلال.

تواجه معظم شركات النفط والغازع هذه المنطقة وخارجها نقصأ خطيرا فضجمع المواهب الذي يمكنه أن يعيق أداءها على المدى البعيد إذا لم توجد حلول للتصدي له. إن الأسباب الجذرية لأزمة تقص المواهب واضحة جلية: تقدم القوى العاملة فخ العمر مقترنا بوظائف عالية التخصص وقلة أعداد الهندسين والمديرين المؤهلين، ورغم ذلك لا تبزال الحلول المطلوبة الواجهة هذا التحدى أقل وضوحا، وقد احتل استبدال هذه القوى العاملة، التقدمة في العمر بعمالة تتميز بمستويات عالية من التحفيز والموهبة والولاء، مركز الأولوية في العديد من الشركات في هذا الشطاع، وإذا كانت هذه الشركات تسعى إلى تحقيق الازدهار فا المستقبل، سيكون لزاما عليها أن تجد الأن حلا لهذا المعدل الكبير في الدوران، وتكون على يقين من إنجازه على نجو سلس قدر استطاعتها،

إن مسألة تركيز مديري الموارد البشرية والتوظيف جهودهم، في السنوات الأخيرة، على استقطاب العمالة على المستوى العالمي، مسألة جادة للغاية، ومع ذلك نجد أن مجمع العمالة ينجذب الهندسون الشباب المحليون إلى وظائف مندسية أخرى خارج قطاع النفط والغاز، ربها توفر لهم أجورا أعلى وأوضاعا أفضل، وهذا يعيد، منتقلة عالميا، وينطوي هذا الحل على تحدياته الخاصة، الاسيما القدرة على تحريك الأفراد يسلاسة من جزء إلى آخر في العالم، وإدارة هذه العلية بطريقة فعالة التكلفة،

تطوير استراتيجيات

ولئن كان الاستقطاب نحو الخارج سمة للعديد



ويناض الثنان

من شركات النفط والغاز، فإنها أدركت أيضا أممية تطوير استراتجيات للمحافظة على الموارد البشرية التي لديها بالفعل، وإدارة ما لديها من مواهب داخلية هي تحد متوجه للداخل ويتسم بطابع شخصيي أكثر، بحيث تتضمين استراتيجيات للتعيين والمشاركة والتطور المهني وتخطيط التعاف وتطوير الفادة، وبعبارة بسيطة أن تفعل كل ما في وسعها للمحافظة على الموارد البشرية التي تمتلكها بالفعل،

يجب أن تتضافر كل هذه المسائل على المستوى الاستراتيجي، وكذلك على مستوى التطبيق، وتثير الأبحاث الحديثة، التي أجرتها النشرة النفطية. الشرق الأوسط مع متخصصين في محالي الموارد البشرية وإدارة المواهب في هذا القطاع، بعض القضايا المثيرة للاهتمام حول كيفية الارتقاء بشدرات الموظفين وإشراكهم وتطوير قادة

افتراضيين لإدارة فرق عمل افتراضية، وإيجاد مجموعة من القادة من أجل تخطيط فعال لعملية التعاقب، وعلى حين يمكن للاستقطاب أن يضطلع بدور في مواجهة تحدي أزمة المواهب، يبدو أن كيرى، وكلما تزايدت حدة المناضية على المواهب البشرية النادرة، كان على شركات النفط والغاز أن تطور مجموعة المواهب الداخلية الخاصة بها، وأن تصبح نماذج مبتكرة ومرنة تُخصص لملاءمة والمادرة إلى اجتذاب المزيد من أعمال التغيير، وترقيتها، أو تطوير استراتيجيات توظيف ناجحة وترقيتها، أو تطوير استراتيجيات توظيف ناجحة وأدائهم واستبقائهم.

وتوفير مكان عمل بشعر فيه الوظفون بالانتماء والتحمس للأدوار المنوطة بهم ولشركتهم، يمكن أن يكون سبيالاً فعالاً جدا لاستبقاء الوظفين. كذلك يعتبر فهم كيفية تأثر مستويات المشاركة بثقافة الشركة، وتنفيذ الاستراتيجيات والقيادة والتنظيم والعمليات، إحدى الخطوات الهمة. فهو يسمح للموظفين بتحمل المسؤولية عن تطوير ذاتهم، كما أنه يؤكد الرابطة التي تصل ما بين الأداء الشخصى ونتائج الأعمال.

وكلما ازداد ترسخ آزمة المواهب في قطاع النفط والغاز، احتاجت الشركات إلى التصدي لهذا التحدي بشكل مباشر، أو مواجهة أزمة موارد بشرية في أروقة الكاتب ومجازات الحقول، ورغم أن استقطاب المواهب هو جزء واحد من الحل، فإن الإدارة الفعالة لها هي مكون أساسي من مكونات استجابة بعيدة المدى.

رياض المنان مدير ملتقى الموارد البشرية للنفط والغاز، المرفع انعقاده في الغترة من ٢٣ إلى ٢٥ بوقمبر/تشرين الثاني ٢٠ قي دبي. ويوفر هذا الملتقى، الذي يأتي في الوقت المناسب، منيرا لممثلي شرخات النفظ والغاز، ليس لمنافشة مذه التحديات قحسب بل والأكثر أهمية مناقشته للحلول، http://hrforumoilandgas.com

فرص عمل كبيرة في صناعة الكيماويات بالإمارات

قامت شركات البتروكيماويات في دولة الإمارات العربية المتحدة بتوطيف ٢٨١٠٠ مستخدم في عام ٢٠١٢، وذلك وفقا لبيانات جديدة صادرة عن الاتحاد الخليجي للبتروكيماويات والكيماويات. وتُسعستبر الإمسارات الآن ثباني أكبر مسركو للبتروكيماويات من حيث العمالة في دول مجلس التماون الخليجي، وهو ما يمثل ٢٦ في المائة من إجمالي القوى العاملة بصناعة الكيماويات في دول الخليج العربي، وتقوم دولة الإمارات العربية المتحدة بتصنيع منتجات كيماوية تُقدر قيمتها بحوالي ١١ مليار دولار أمريكي، بما في ذلك منتجات البلاستيك والأسعدة.

وقال الدكتور عبد الوهاب السعدون، الأمين العام للاتحاد الخليجي للبتروكيماويات والكيماويات الإمارات العربية المتحدة قد بنت بانتظام، وعلى مدى الستوات القليلة الماضية، قاعدة صلية من رأس المال البشري الذي يتمتع بالمهارات العالية، ويتما تكون بعض الأسواق الأخرى في المتطقة قادرة على الحصول على مجمع أكبر من الموارد المائية أو البشرية، استطاعت دولة الإمارات العربية المتحدة أن تنتج بعضا من أعلى المنتجات قيمة في المتطقة تحديرات الاحادة وتشير وتشير المارات الاحادة وتشير وتشير الكيماويات إلى أن الاثيرا المضاعف، تصناعة والكيماويات وصل حاليا إلى 1: ٣، وهذا يعني أن كل الكيماويات وصل حاليا إلى 1: ٣، وهذا يعني أن كل



الإمارات تعليم الآن ثاني أكبر محور البتروكيماويات لامجلس النعاون الخليجي

عشر وظائف نتشأ في القطاع تؤدي في النهاية إلى ٢٠ هرصة عمل غير مباشرة إضافية في سلسلة توريد البتروكيماويات، وفي الإمارات العربية المتحدة، أدى التوظيف الباشر، جنبا إلى جنب مع توفير ما يُقدر بحوالي ١١٤٢٠٠ هرصة عمل غير مباشرة في ٢٠١٢، وكانت صناعة الكيماويات الإهليمية. ككل مسؤولة في نفس الوقت عن التوظيف المباشر لعدد ١٤٨١٠٠ مستخدم وإيجاد حوالي ٤٤٦٨٠٠ فرصة عمل إضافية بطريق غير حوالي وفقاً التقديرات الاتحاد الخليجي مباشرة، ووفقاً التقديرات الاتحاد الخليجي

البتروكيماويات بدول الخليج العربي أنتجت منتجات تصل قيمتها إلى ١٠٢ مليار دولار أمريكي، واختتم السعدون كلامه بشوله: «إن صناعة البتروكيماويات تتطور إلى صناعة تعس تقريبا كل قطاع في اقتصاد دول مجلس التعاون الخليجي؛ من التكنولوجيا وتصنيع المعدات والبناء والتشييد والزراعة إلى التجزئة والتجارة، وعلى المستوى المالمي، يعكن لدول مجلس التعاون الخليجي المساعدة في تلبية الطلب المتزايد على المنتجات الكيماوية، وأثناء ذلك يمكنها توفير فرص عمل الكيماوية، وأشاء ذلك يمكنها توفير فرص عمل من مواطني دول مجلس التعاون الخليجي، من مواطني دول مجلس التعاون الخليجي،

plant (A of it is the light band chippen lighter) F.1.TE	مفكرة رجال الأعمال:
دیسمبرنگاتون تائول ۱. م. دوتمر وسمرض آپافشور جنوب شرق اسبا سنخاموره ۷. ۲. معرض البصرات للنفط والغار اسبال	نوقمبر تشرين الثاني: ٢. ١ - التصماع الشلاب للشركة السعودية للصناعات السامية الجيين ٤ بوممبر مراتم أوييتو السناعة واكتابة الصاعبة الوطباء ١ - ١٣ - مؤتم رومعرض أوطباء الجولاءة للحاول أديباء ٢٠١٤ - أوطباء
). 1 கண் 1யத் Riguad Wald Acto. 1 (4)	



000 النشرة النفطية – الشرق الأوسط 000

اكتشاف جديد للنفط والغاز في الجزائر



سوناطراك وعازيروم حفقا اكتشاها جديدا للتعط بة الجزائر

حققت سوناطراك، شركة الطاقة الجزائرية الملوكة للدولة، جنبا إلى جنب مع شريكتها الروسية غازبروم اكتشاها جديدا للنفط والغاز بالكتلة ٢٣٦ب بمنطقة العسال في حوض بركين بالجزائر، وتم حفر بتر الاستكشاف رورد سايح شمال - ١ حتى عمق نهائى قدره ٢٤٠ متراً، وقالت سوناطراك في بيان لها إنه تم تسجيل معدل ندفق نفط وغاز عند ٥,٨ متر مكب/ ساعة و٧٩٣٠ متراً مكباً / ساعة على التوالي، علما بأن هذا الاكتشاف الجديد هو الثالث في عدد من الاكتشافات المشتركة لسوناطراك وغازبروم في منطقة العسال وأضاف البيان أن الاكتشافين الأخرين في نفس المنطقة هما بثرا الاستكشاف رورد سايح - ٢ وزمليت الركاب شمال - ١٠

وتمتلك سوناطراك حصة مقدارها ٥١ في المائة من بشر الاستكشاف رورد سايح شمال-١ بينما النسبة المتبقية ٤٩ في المائة مملوكة لفازبروم، وكانت شركة غازبروم قد افتنتحت، في عام ٢٠٠٨، مكتبا تمثيليا لها في الجزائر بهدف تطوير أنشطتها في أفريقيا بالشراكة مع سوناطراك، وقامت الشركة في نوفمبر/تشرين الثاني بالكتشاف الأول لفازبروم من الاحتياطيات الهيدروكربونية في شمال أفريقيا،

بتروفاك تفوز بعقد العراق

قارت بتروفاك بعقد خدمات قيمته ٥٠٠ مليون دولار أمريكي لحقل الرميلة في العراق من شركة «بي بي» (برتيش بيتروليوم)، وقالت الشركة المدرجة في المملكة المتحدة، إنها ستوفر الإدارة والموارد البشرية لتنسيق عدد من مشاريع الإنشاءات في ما يُقدر بأنه ثالث أكبر حقل نفطي في العالم، والذي يقع على بعد ٢٢ كيلومتراً من الحدود الشمالية الكويتية، ووفقا لشروط العقد، الذي يمتد لثلاث سلوات مع حق التمديد لسنتين إضافيتين، ستشرف الشركة أيضا على أعمال مقاولين من طرف ثالث.

وتأتي هذه الخطوة في إطار المحاولات المبدولة من شركة «بي بي» وشركاتها في شركة عمليات الرميلة، وهي تضم شركة النفط الوطنية الصينية وشركة نفط الجنوب، وذلك للإسراع بزيادة الإنتاج في حقل الرميلة والذي تشير التقديرات إلى احتواثه على ١٧ مليار برميل من التفط، وقال مائي رجايائي، النائب الأول لرئيس شركة بتروفاك لمنطقة الشرق الأوسط: «استند متحنا لهذا العقد على سجل بتروفاك الحافل في العراق منذ عام ٢٠١١، وخاصة في حقل الرميلة».

وأفادت أيضا بتروفاك أنه قد ثم اختيارها لتوفير الدعم الهندسي والإنشائي بقيمة ١٢٠ مليون دولار أمريكي لنصبات شيفرون الثلاث في بحر الشمال بالملكة المتحدة: «ذا كايتن، و«أليا» و«إرسكاين».



بتروهات تعمل \$ العراق منت عام ٢٠١١



Bidders List



The DNA for Success

KFY FFATURES

- Project Scope and Background
- Track Project Schedules
- Key Personnel Details
- Track Entire Project Lifecycle
- Access Linked Projects
- Access Project Locations
- Advanced Search Features
- · Favourites, Notes, Reminders
- Track Updates
- Customized Email Alerts
- Statistics, Analysis & Forecasting
- Data Download
- Project Values and Financing
- Global Network of Researchers
- Customized Research Modules
- Business Profile of Colleagues

NFW FFATURES

- Customizable Dashboard
- Messaging/Sharing Projects Amongst Your Members Group
- Stream Current Industry News Through Your Dashboard
- Forecast Models by Feasibility & **EPC Award Dates**
- Compare Contractor Workloads Against Each Other
- 65 Levels of Key Personnel
- Deeper Project Financing Data

CONTACT US

Industry News

Tel: +973 1740 5590 • Fax: +973 1740 5591 • info@dmsglobal.net www.dmsprojects.net

جهود مضاعفة من أجل أديبك

تجري حاليا، على قدم وساق، التحضيرات لمعرض ومؤتمر أبو ظبي الدولي للبترول المزمع عقده في الفترة من ١٠ حتى ١٣ نوفغبر/تشرين الثاني بمركز أبو ظبي الوطني للمعارض، ويُقام هذا المعرض والمؤتمر تحت رعاية صاحب السمو الشيخ خليفة بن زايد آل نهيان، رئيس دولة الإمارات العربية المتحدة، وتدعمه شركة بترول أبو ظبي الوطنية (أدنوك) وغرفة أبو ظبي، حيث يحتقل بالذكرى السنوية الثلاثين لهذا الحدث الكبير، والذي يُعقد تحت شعاره المؤاتي ، التحديات والقرص في الثلاثين عاماً القادمة».

ويُّعد معرض ومؤتمر أبو طبي الدولي للبترول الآن، طبقا المتطمين، ثالث

أكبر حدث بشأن التفطروالغاز في العالم، وأكبر تجمع للمتخصصين في مجال التقط والغاز خارج أمريكا الشمالية، مما يعكس أهمية النطقة لهذه الصناعة العالية، وازدهار أبو طبي كأحد المراكز العالية للطافة. وحدثُ هذا المام واعدٌ بأن بكون أكبر مما كان عليه على الإطلاق، وبأن يحظى بحضور أكثر من ٢٠٠٠ شركة عارضة. بما في ذلك أكثر من ١٦ شركة نفط وطنية و١٥ شركة نفط دولية وأكثر من ٦٠ ألف زائر من رجال الأعمال على المنتوى الدولي، وأن يكون من بين الحضور الكثير من الوزراء وكبار الشخصيات. وتشمل شركات النفط الوطنية الإقليمية المطة يقاهذا الحدث شركة بترول أبو ظبي الوطئية، وشركة أرامكو السعودية، وشركة نفط البحرين، وقطر للبترول، وشركة نفط الكويت. والأول مرة توجد أجنحة لعارضين دوليين من الهند وإندونسها وماليزيا وتايوان ونيجيريا، حيث سينضمون إلى العارضين من بلجيكا وكفدا والصين والدائمارك وفرنسا وأثانيا وإيطاليا وكوريا وهولندا والترويج وسنغاهورة وأسبانيا وتركيا واسكتلندا وبريطانيا والولايات المتحدة الأمريكية. لهذا، من المتوقع أن تتخطى الصفقات الشجارية، المبرمة خلال هذا الحدث، مبلغ الـ ٥ مليارات دولار أمريكي السجلة في عام ٢٠١٢.

وبالإضافة إلى قاعتين جديدتين تم بناؤهما لاستيماب الزيادة في أعداد العارضين العالمين، سيتم تخصيص مقطقة للصحة والسلامة والبيئة، والتني كانت قد أنشئت عام ٢٠١٢ استجابة تطلب من العارضين ومن الزائرين، وسوف تتسع، تقريبا الضعف عدد العارضين المتخصصين عما كانت عليه في العام الماضي، والجديد في ٢٠١٤ هو تخصيص مقطقة خارجية في المنطقة المسقوفة بمركز أبو ظبي الوطني للمعارض، للمعدات والآلات الثقيلة والمركبات.

وسوف يشتمل معرض ومؤتمر أبو ظبي الدولي للبترول لعام ٢٠١٤ أيضاً على منطقة مشباب أدبيك، حيث يمكن الطلاب التعرف على طبيعة العمل الحقيقية في مجال التفط والفاز من خلال تجرية تعلّم تفاعلية. وقد تم إطلاق مبادرة مشباب أدبيك، عام ٢٠١٣ لتشجيع الشباب على العمل في هذا المجال، ولتمكينهم من التفاعل مع الأطراف القاعلة الرئيسية به. واشتمل



معرض أدييك سيجنب هذا العام ٢٠٠٠ شركة عارضة

البرنامج على زيارات ورحلات ميدانية لمواقع شركة بترول أبو ظبي الومانية وعطيات الشركة المتعلقة بالطاقة.

وتتولى تنظيم مؤتمر أديبك، الزمع عقده على مدار أربعة أيام، جمعية مهندسي البنرول التي ستقوم باستضافة أكثر من ٦٠٠ متحدث إقليمي ودولي رئيسي، وتعقد ٨٨ جلسة فنية تغطي كل جانب من جوانب قطاع الطاقة. كما أن هناك حضوراً بارزاً للموارد غير التقليدية، مما يعكس الاهتمام المتزايد في المنطقة بهذا المجال.

ويلقى الكلمة الرئيسية بمراسم الافتتاح الدكتور ميشيو كأكوء الفزيائي العالمي الشهير والحُجة في شؤون البيئة. ويتضمن برنامج المؤتمر جلسة نقاشية وزارية رهيمة الستوى تضم الهندس سهيل محمد فرج الزروعي، وزير الطافة بدولة الإمارات العربية المتحدة، فضلاً عن ثلاثة وزراء طافة دوليين آخرين. وسوف تركز هذه الجلسة النقاشية على تنمية واستدامة المحتوى المحلى، كما ستركز الجلسات التنفيذية العامة على الابتكار والقيادة، والتكنولوجيا والاستدامة، بينما تغطى نماني جلسات عامة التعاون فيما بين شركات النفط الوطنية والدولية في الحقول للتقادمة، وتحقيق التميز في المشروعات الرأسمالية، وجذب وتنمية المواهب، والموارد غير التقليدية، وأمن الطاقة، والعرض والطلب في السوق، والصحة والسلامة والبيئة، والبحوث وتطوير التكنولوجيا، وتحسين استخراج الهيدروكربونات. يجدر بالذكر أن نادي بترول الشرق الأوسط (وهو ناد تجاري خاص وحصري لصناع القرار بقطاع التفط والفاز) سيقوم هذا العام. والأول مرة . باستضافة سلسلة من جلسات المعلومات الحصيرية رفيعة المستوى، ويشمل ذلك جلسة خاصة عن النساء في القطاع، وجلسات معلومات حول الصناعات التحويلية بدولة الإمارات العربية المتحدة، والمضخات والأثابيب، وكذلك المكسيك وإندونسيا.

للمزيد من الملومات، يُرجى زيارة الموقع الإلكتروني: www.adipec.com



Oil Review

ربسة التحريرة لسويسز وواسرز

فريق الحرير والعميم: بن واطب بوب قامر، هريتي بايرو، آشان الروات رائجانات جي إس، يراشات إيه إن. را نيبت، ذكل فالسائيس لويز كويك سندوما بلاجي، رويت بالناك.

الناشير: نت فيوردهام

مديرة النفسسر: بناي بناتين مديرة ميحات الجلاد كابند كابتشي

araham konongjuhisuharloszom رايد (۵۱ (۱۹۹۰ ، بريد (۱۵ (۱۹۶۱) دريد (۱۵ (۱۹۶۱) ۱۹۹۱) (۱۹ (۱۹۹۱) ۱۹۹۱) (۱۹

Country.	Representative.	Deleture	Fee	Driet
Divi	The second second	- Company		july remissed and character
helis	Tourney Midra	-	Charles of the second s	Assessment Commission
Name		2000/00/01/200	Married Street	letometronterone
Smith Africa	Annabid Mark	(27)218519007	manufacture by the second	manufacturing on
OK	Stays Therein	[44] 20 7804 767k	[44] 3079738076	-
1100	WAR AND THE OWNER.	Trainment of the same	DECEMBER 1888	to be a second or second

Alain Charles Publishing Sid University House, St. 128 Lower Growense Plance Lordon SWI, WORK, UK 486 (-1987); VIV) with

++4 (-) VEVE -- VI. ... 516

Alain Charles Middle Base F2-LLC Office 215, Lott 2A 0-F7-V va.p. 23-Lec phi/26 at Anna Basel Anna Colobbi - up offit 2 Sep. 477, calls offit 2 Sep. 477, calls

مكتب الشرق الأوسط الإطبعيء

الإنتاج: دونائيلة مرائيلي ناقليل كومار، لك مولت. موفيا غوليت. لكنها جن إربانًا سيساي يريد (الكرول: pootaction/voluncharles.com

الإشراكات: يريد إنكرول: circulation@illutrichelex.com

زليس مجلس الإدارة: دريسك فورد فسام

Ferguson Group Ltd..

Flexpine Systems

للزجوة توالدين مصورة massidinumenritiese التصييم والإخراج اللتي احمد مسلم النمار majar733@geesil.com. فطاعة مطبعة الإدارات ، دي



Serving the world of business © Oil Review Middle East (SSM 1464-9714

.Page

..205

لمحتويات

القسم العربي

أخبنار

	جهود مضاعفة من أجل أدبيك
1	اكتشاف جديد للنفط والغازية الجزائر
1	يتروفاك تفوز يعقد العراق
λ:	فرص عمل كبيرة في صناعة الكيماويات بالإمارات

تخليلات

4	مواجهة أزمة المواهب
11	أرامكو المعودية تمضيء مشروعاتها الثطويرية
10	إدارة المخاطر التعاقدية

ملخص محتوبات القسم الإنجليزات

تسريد حصم معرض أدنوك معرض أديبك.

استطلاعات البتدوكيماويات والتكرير الموارد البشرية، السلامة والصدة وانبيثة، إدارة تسرب النفط

نظولوها المكثفات الطاقة في موقع الإنشاء.

أتمالات وتكتولوجرا المهلومات الثقنية السيزمية، حقول النفط الذكية.

ADVERTISERS INDEX

Company

Adivi Elicoli PVL Llu	109
ABCO Middle East FZE	60
Abu Dhabi Tourism Authority	
AES Arabia LtdAggreko Middle East Ltd*	169
Aggreko Middle East Ltd*	83
Al Bassam Group of Companies*	
Al Ojaimi GroupAl Rumaithy Establishment	145
Al Rumaithy Establishment	187
ALAA Industrial Equipment Factory	
Alcatraz Interlocks BV	
AlMansoori Specialized Engineering	
Ansell Healthcare-Middle East*	
Arminox Gulf FZCO	183
Avalon Sciences Ltd	82
BAPCO*	67
Bauer Kompressoren GCC FZE	61
Belman A/S	16
Bentec GmbH	
BGH Edelstahlwerke GmbH	63
Bredero Shaw Middle East Ltd	13
Bulk S.r.L.	102
Burintekh Ltd	
Cansco Well Control	143
Castolin Eutectic Middle East FZE	127
CMP Products	141
CompAir Middle East	
CRC-Evans Pipeline International Inc.*	123
Derrick Services UK Ltd (DSL)*	114
Dialight	109
DMG World Media Dubai Ltd	219
DMI International	142
DNV GL	53
Doosan Power Systems	87
DP-Master Manufacturing (S) Pte Ltd	
Elettrotek Kabel S.p.A	
Euroblast Middle East L.L.C.	96
Europoles Middle East LLC	
Evtorran	

Farhan Commercial Co. Ltd..

GAC	149
Genavco*	
Geyad for Industry and Contracting Co Ltd	
Giant Reinforced Plastic Industries (GRP)	
Global Pipe Company	81
GRACO BVBA	153
Hi-Force Ltd.*	25
Hillsborough General Trading L.L.C.	148
Hisaka Middle East Co. Ltd	85
Honeywell HPS*	
Honghua Golden Coast Equipment FZE	126
HOT Engineering GmbH	170
HSBC UAE	
Hunting Energy Services Ltd	159
icces	
IEV Group Sdn Bhd	89
IFP Training & Consulting Middle East SPC	89
IIR Exhibitions	223
Indiana Gratings Private Limited	
Inmarco Industries FZC	116
International Exhibition Services SRL	209
International Exhibition Services SRL	221
Isisan Isi San. VE Tic. A.S	
J. De Jonge Flowsystems B.V	
JESCO (Jubail Energy Services Co)	59
John Zink International Luxembourg S.ar.l	55
Joint Yoochang Thermal Systems Co., Ltd	23
Jotun Paints UAE Ltd (LLC)*	5
Kaeser Kompressoren FZE	
Kallman Worldwide, Inc	
KANON Loading Equipment B.V	17
KCH Separation BV	93
Keller AG fur Druckmesstechnik	57
Kohler Power Systems	
Lamprell Energy Limited	
Lapmaster International	
Leistritz Pumpen GmbH	
LISEGA Arabia Ltd. Co.	

.95

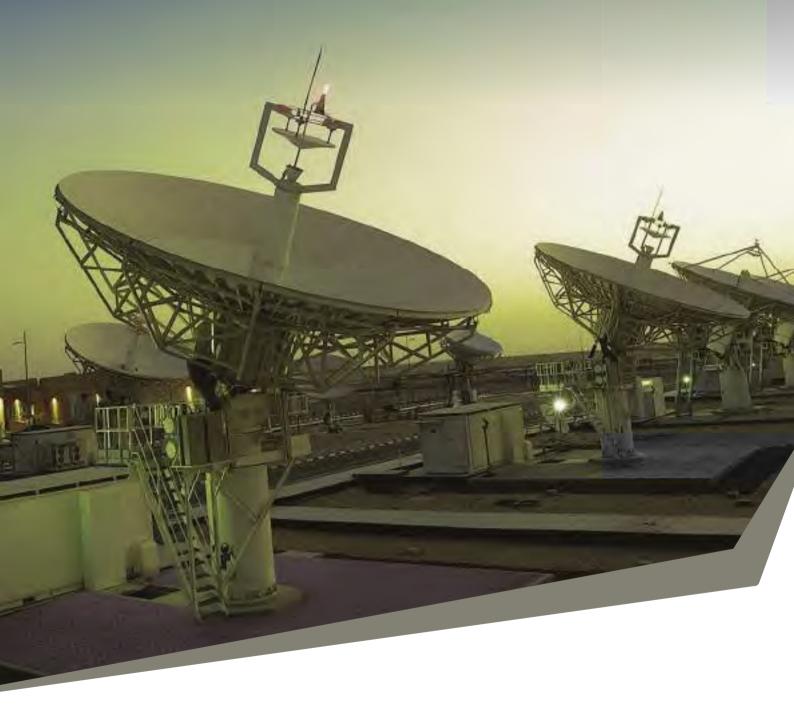
ЛАВІ AG	147
Madi Contracting Est. (Mcc)	
Magnetrol International N.V	
Magnetrol International N.V	133
AAOK LLC	
Marelli Motori SPA	
AcCoy Drilling & Completions	
Netscco Heavy Steel Industries Co. Ltd	99
ASA Middle East FZE	
lexans*	21
Deltechnik	18
OHL Gutermuth Industrial Valves GmbH	131
)ilserv	
OKI Europe Limited	173
Oman Cement Company*	
nis Line Blind	
pito International FZ LLC	
Oryx Engineering Solutions LLC	
arker Middle East FZE	
yramids Group	226
Stahl Middle East FZE	
laccortubi Middle East Fze	
taytec Ltd	10
Reactive Downhole Tools Limited	
Rittal Middle East FZE	
S Roman Seliger Armaturenfabrik GmbH	
tuth's Chris Steak House (Fine Dining Ltd)	
abin Metal Corporation	
afa Telecom L.L.C.	
aga PCE Pte Ltd	
aga PCE Pte Ltd	
audi Leather Industries Company Limited	
audi Steel Pipe Company chlumberger Oilfield Mktg Comms*	137
chlumberger Oilfield Mktg Comms*	39
chlumberger Technical Services Inc*	
chramm Inc.	
comi Oiltools (Cayman) Ltd	49

SFL Industries Stopaq B.V..

LumaSense Technologies GmbH

Shree Steel Overseas FZCO	122
SHRI HARI Trading LLC	197
Shridhan Automation Pvt. Ltd	
Sledgehammer Oil Tools Private Ltd	101
Spina Group Srl	178
Starlink Oilfield Supplies & Services DMCC	29
STAUFF - Walter Stauffenberg GmbH & Co KG.	
Stevens International LLC	207
Sulzer Pumps Middle East	100
Suraj Limited	45
Syscom 18	
T.D. Williamson, Inc	
Technical Access Services LLC	105
Technip - Region Middle East	119
Technogenia	94
Tenaris	47
TEPE Prefabrik Const. Industry Inc	104
Tercel Oilfield Products UK Ltd	27
Thomas & Betts	115
Timberland*	138
Top Oilfield Industries Ltd FZC	33
Trade House VELAN	
Tratos Cavi S.p.A	
UL ME FZCO*	
Uni-Geräte E. Mangelmann Elektrotechnische	
GmbH	91
Unique Maritime Group FZC	140
United Metallurgical Company / JSC OMK	157
Univar Oil & Gas	
Valbruna Gulf FZE	215
Van Beest B.V.	109
VF Imagewear	
Victor Industrial & Trading (L.L.C.)	
Voestalpine Tubulars GmbH & Co. KG	
Volant Products Inc	
Wanner International	
Ward Leonard Electric Company, Inc	
Westmark BV	
Yahsat	
Yokogawa Middle East & Africa B.S.C. (c)	121

SATELLITE COMMUNICATION SOLUTIONS TAILORED FOR YOUR BUSINESS NEEDS





When it comes to meeting your communication needs, YahService Managed Solutions provide the most innovative and advanced Cloud-Based Unified Communication (UC) Services over satellite, and voice and video conferencing capabilities over desktops and smart devices. These benefit various vertical segments like Oil & Gas, Construction, Enterprise, etc. with the most cost-effective solutions within Yahsat's coverage area and beyond.

