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Oil Review Africa

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COVID-19

News and analysis for African oil and gas

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COVID-19's impact on the African oil and gas industry. (Image credit: Adobe Stock)

EDITOR'S NOTE

IT IS INCREDIBLE how the world and its markets can change in such a short space of time. The impact of COVID-19 is being felt by every industry across every continent and, for the oil and gas industry, the added pressure of a falling oil price is, for many, adding to the challenges. Time will tell if the latest OPEC production cut will have the desired impact. At *Oil Review Africa*, we have a duty to inform our readers, arm them with information they need to face challenges and create opportunities in a tough global marketplace. Our magazine will update our readers on industry developments, product solutions for investing in operations with a long-term view, and the countries that are making their mark, even when surviving rather than thriving is the priority.

Additionally, our website, www.oilreviewafrica.com, is updated daily to ensure that businesses can make informed decisions on a daily and even hourly basis. We remain committed to serving Africa's oil and gas industry, doing what we can to help everyone weather this latest storm.

Georgia Lewis
Managing Editor

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Managing Editor: Georgia Lewis
ora@alaincharles.com

Editorial and Design team: Mariam Ahmad, Prashanth AP, Fyna Ashwath, Miriam Brtkova, Praveen CP, Manojkumar K, Lucia Mathurin, Nonalynka Nongrum, Samantha Payne, Rahul Puthenveedu, Deblina Roy and Louise Waters

Publisher: Nick Fordham

Sales Manager: Richard Rozelaar
E-mail: richard.rozelaar@alaincharles.com

Magazine Sales Manager: Chidinma Anah
Tel: +44 (0) 20 7834 7676 Fax: +44 (0) 20 7973 0076
E-mail: chidinma.anah@alaincharles.com

International Representatives

India	Tanmay Mishra
Nigeria	Bola Olowo
UAE	Murshid Mustafa
USA	Michael Tomashefsky

Head Office:
Alain Charles Publishing Ltd
University House, 11-13 Lower Grosvenor Place,
London SW1W 0EX, United Kingdom
Tel: +44 (0) 20 7834 7676 Fax: +44 (0) 20 7973 0076

Middle East Regional Office:
Alain Charles Middle East FZ-LLC
Office L2-112, Loft Office 2, Entrance B
P.O. Box 502207, Dubai Media City, UAE
Tel: +971 4 448 9260 Fax: +971 4 448 9261

Production: Srinidhi Chikkars, Swati Gupta, Eugenia Nelly Mendes and Arjun.S
E-mail: production@alaincharles.com

Subscriptions: circulation@alaincharles.com

Chairman: Derek Fordham

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Executives Calendar 2020

JUNE

16-17 **Angola Oil & Gas**
Luanda
www/africaoilandpower.com

17-18 **Upstream West Africa Summit**
Dakar
www.upstreamwestafrica.com

25-27 **FIDEC Forum**
Kinshasa
www.forum-rdc.com

JULY

6-10 **Oil & Gas Leadership & Success Virtual Summit**
Online
www.upstreamawards.com/virtual-summit-2020

OCTOBER

20-22 **Africa Energy Forum**
Amsterdam
www.africa-energy-forum.com

21-22 **Africa E&P Summit**
London
www.africaepsummit.com

NOVEMBER

2-6 **Africa Oil Week**
Cape Town
www.africa-oilweek.com

9-12 **ADIPEC**
Abu Dhabi
www.adipec.com

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

Oil and gas events amended in response to COVID-19

OIL AND GAS events across the globe have been affected by the worldwide COVID-19 pandemic, with many events being cancelled or postponed in response to travel restrictions, economic challenges and health and safety advice from governments in regard to social distancing.

There has been a trend towards webinars during this time of lockdowns and restrictions which have led to unprecedented numbers of people working from home.

For example, Oil & Gas Leadership & Success Virtual Summit will be held entirely online from 6-10 July. This event will focus on developing leadership within organisations and companies and on how to succeed in times of crisis.

Africa E&P Summit, a well-attended London event, has been postponed until 21-22 October. With 50 speakers already confirmed, the programme features Maggy Shino, Namibia's petroleum commissioner, talkng about exploration opportunities; Egbert Faibille Junior, CEO of Ghana's petroleum commission, will discuss the West African country's 21st licensing round; and Mouhamadou Makhtar Cissé, Senegal's petroleum and energy minister, will be giving the ministerial keynote address,

It is hoped that it will be business as usual for many African events.

Image Credit: Adobe Stock

At this stage, it is business as usual for two of the biggest events on the African and international oil and gas calendars with Africa Oil Week still set to go ahead in Cape Town and ADIPEC still on track to run in Abu Dhabi. Both events are, at the time of going to press, slated to be held in November.

FIDEC 2020, which is scheduled for 25-27 June in Kinshasa, is a multi-sector event which focuses on the development of Congolese companies by conecting them with foreign companies for mutually beneficial investment opportunities. Anthony Nkinzo Kamole, director general of the National Agency for the Promotion of Investments of the Democratic Republic of Congo, will be among the speakers.

Major oil production cut by OPEC and OPEC+ countries receives mixed reaction globally

Image Credit: Africa Oil & Power

Mohammad Sanusi Barkindo, OPEC secretary general.

ON 12 APRIL, OPEC and OPEC+ member countries decided to cut oil production by 9.7 million barrels a day starting on 1 May 2020, lasting until 30 June 2020. From 1 July 2020, production cuts will be readjusted to 8mn bpd until the end of the year. For 2021 and 2022, OPEC and OPEC+ member countries agreed on a production cut of 6mn bpd, lasting from 1 January 2021 until the end of April 2022. The baseline for the calculation of the adjustments is the oil production of October 2018,with the exception of Saudi Arabia and Russia, on the same baseline level of 11 million bpd.

OPEC secregtary general, Mohammad Sanusi Barkindo said in a statement after the agreement was reached in an online meeting that the "multi-faceted challenges thrown up by the unparalleled COVID-19 pandemic need comprehensive and global solutions."

"I am optimistic that we can seal this deal, with unity and courage for the common cause of oil market stability, in the interests of all stakeholders," he added.

Chief Timipre Marlin Sylva, Nigeria's petroleum minister, outlined how the production cut would benefit the industry: "This will enable the rebalancing of the oil markets and the expected rebound of prices by US$15 per barrel in the short term. This also promises an appropriate balancing of Nigeria's 2020 budget that has been rebased at US$30 per barrel."

However, analysts at AZA Finance cautioned that the cuts would not revive the global oil industry or the Naira. A statement from its analysts said: "OPEC's decision to cut production by 9.7 million barrels a day to adjust to low demand as a result of coronavirus proved insufficient to revive the price of oil or the Naira, trading at 412.5 in the parallel market. Analysts are of the view that the CBN could lower its policy rates and increase the loan to deposit ratio to 65 per cent, adding further pressure on the exchange rate. In normal circumstances this would certainly not be an opportune time to cut interest rates, considering high inflation rates."

South Sudan's petroleum minister, Puot Kang Chol was positive about the cut mitigating the impact of COVID-19 on the country's oil industry: "We welcome all efforts to stabilise the oil market and South Sudan will continue to play its role. Our government will continue doing its utmost best in making the oil production and fighting the coronavirus a priority, and we will continue collaborating with all our partners."

"This is a critically needed relief in the face of declines in crude demand estimated at around 20mn bpd. Stepping away from a destructive price war, the return to market management by Saudi Arabia and Russia and backed by the United States and a very involved President Trump, marks a physical and psychological inflection point for the oil market," said Roger Diwan, vice president financial services, IHS Markit.

Rystad Energy's head of oil markets, Bjornar Tonhaugen said the agreement is potentially bullish: "We would be surprised to see overall OPEC+ compliance at 50 per cent through May, which is what we believe Saudi Arabia also knows. However, we do believe the deal is potentially bullish for oil prices down the line, as the deal has a surprisingly long duration with 6mn bpd cuts through the 1Q 2022 – long after the market has hopefully recovered from COVID-19 demand losses. For those who endure this downturn, 2022 looks increasingly bullish for the oil price in our view."

Mihir Kapadia, CEO of Sun Global Investments, said that inventories would continue to pile up from Saudi Arabia, Russia and the UAE for a few more weeks after the annoucment, adding that the production cuts may not be a sufficient remedy: "The scale of the cuts, while impressive as OPEC+'s largest ever agreement, likely won't be enough to offset the complete collapse in oil demand taking place in major economies. Thus the deal should help to prevent prices from excessive downside, but probably won't be enough to help boost prices much higher."

COVID-19 may lead to weaning of Angola off oil

THE COVID-19 PANDEMIC may be the catalyst for Angola to wean its economy off oil revenue dependency, according to UNCTAD. The United Nations' trade and development agency is working with the European Union on Train For Trade II, a project in Angola to help authorities identify promising non-oil sectors, train entrepreneurs and business owners, weigh investment promotion policies and improve trade infrastructure.

"Diversifying Angola's economic structure away from its heavy dependence on oil is key to boosting competitiveness and will help the country reduce its vulnerability to external shocks," said Paul Akiwumi, director of UNCTAD's division for Africa and least developed countries, adding that the COVID-19 pandemic draws this need "into sharp focus".

"Angola is rich in natural resources and has many other products to offer consumers across the world. But local businesses struggle to develop and export their products due to slow and costly import and export procedures," Mr Akiwumi said, noting that the country's producers face challenges in moving goods both within the country and across borders.

"Angola with its high potential in terms of natural resources, including agriculture, fisheries and energy, has some of the greatest possibilities to benefit from the reforms included in the agreement," commented the EU's ambassador to Angola, Tomás Uličný.

For more on Angola, see page 15.

Nigerian oil and gas industry called on by government to fight coronavirus

THE NIGERIAN NATIONAL Petroleum Corporation (NNPC) and major players in the Nigerian oil and gas industry have been called on by Godwin I. Emefiele, governor of the Central Bank of Nigeria to join a nationwide response to the coronavirus pandemic and bolster the country's economy.

In a speech given at the end of March, Governor Emefiele said that engaging Nigerian stakeholders in the private sector on how to provide support to the Federal Government in procuring equipment and materials to combat the pandemic in Nigeria was essential. He said that the private sector, led by Aliko Dangote Foundation and Access Bank, has formed the Nigerian Private Sector Coalition Against COVID-19. The objectives of the Coalition are to: mobilise private sector thought leadership; mobilise private sector resources; increase public awareness, education and buy-in; support private and public healthcare's ability to respond to the crisis; and support government efforts.


Image Credit: Adobe Stock

Supporting Nigerian healthcare will be among the objectives.

"We are already engaging other important stakeholders in Nigeria and abroad, such as the NNPC and players in the oil industry," said Governor Emefiele in his speech.

Oil demand was "flattening before the pandemic": Warwick Business School

THE IMPACT ON the oil and gas industry of the coronavirus pandemic reflects a wider trend, according to Professor David Elmes, who leads the Global Energy Research Network at Warwick Business School.

"The battle to supply, whatever the price, is happening in a climate of both short-term and long-term decline in the demand for oil," said Professor Elmes. "We are starting to see how the coronavirus is reducing oil demand, but some industry forecasts were acknowledging a flattening off in long-term demand last year, before the pandemic began."

"State-owned oil and gas companies around the world will be having tense discussions with their governments about how long they can expect government sympathy for low prices. That will be made more difficult by governments needing to pump money into their economies to address the slowdown caused by coronavirus," he said.

In regard to riding out the crisis, Professor Elmes said that companies will look at cutting costs, shifting activities to lowest cost fields, trimming investment, and thinking hard about what dividend they can pay.


Image Credit: Adobe Stock

There are multiple factors which have led to reduced oil demand.

Licensing changes tipped due to pandemic

INVESTORS ARE UNLIKELY to commit exploration budget to licensing rounds in the near term due to the coronavirus pandemic, according to analysts at data company GlobalData.

The report, 'Impact of COVID-19 on Global Licensing Round Opportunities', states that licensing rounds are likely to be extended or deferred as governments manage the impact of the virus or wait for better investment conditions. Bangladesh, Brazil, India, Liberia, South Sudan, and Thailand have announced changes to licensing round activities, and others are expected to follow suit.

Toya Latham, upstream fiscal analyst at GlobalData said: "The number of deepwater licenses awarded as part of bid rounds is also likely to be subdued in the short term. With the largest discoveries of last year located mostly in deepwater settings, deepwater acreage offers potentially lucrative opportunities for E&P companies. However, deepwater projects often require more capital and have longer payback periods compared to onshore and shallow water projects, and therefore deepwater acreage is likely to be less attractive in the current investment climate."

"Companies with less exposure to the oil price through limited or hedged production, which have available capital in the current environment, are likely to be well positioned for rounds held following the oil price stabilisation and may be in an advantageous situation to capitalise on reduced service costs for exploration activities," she added.

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WORLD STANDARD **COMPRESSORS**

WFS signs new partnership to support subsea growth

WFS TECHNOLOGIES (WFS), subsea wireless automation provider, has announced a new strategic oil and gas partnership with AeonX Limited (Nigeria) which is set to support global growth for its patented Seatooth products. The agreement aims to promote and deliver the full range of Seatooth products for asset integrity and flow assurance monitoring to existing and new clients in Nigeria.

AeonX recognised that the WFS range of wireless asset and structural integrity monitoring devices were vital to their continued success in West Africa and complemented their own specialist services to clients.

As a result, they are now able to provide wireless asset integrity monitoring including real-time insight into the condition of subsea infrastructure as well as pipeline temperature and pressure monitoring and structural fatigue monitoring.

Winifred Bassey, of AeonX, said, "A key aspect to achieving production optimisation and asset integrity objectives lies in availability of field data for which adequate instrumentation is key. The company's proprietary Seatooth technologies significantly improve management of offshore energy assets and increase production as well as reduce both cost and risk."

MG Vowgas wins Nigerian local content award

MG VOWGAS HAS been presented with an award recognising its efforts in local content in Nigeria. The award was presented by Simbi Wabote, executive secretary of the Nigerian Content Development and Monitoring Board (NCDMB.)

Mr Wabote commented that he was not surprised by MG Vowgas' win as the company has worked hard to ensure many jobs that were previously done abroad are now done locally.

MG Vowgas group managing director, Godwin Izomor said, "This is another testament to not just our competence, it is also a worthy recognition of our continuous demonstration of the workability of the Nigerian Content Act in the oil and gas sector."

Image Credit: MG Vowgas

MG Vowgas' Godwin Izomor.

Cybersecurity an important investment for operators

CYBERSECURITY HAS EMERGED as the top focus of upstream oil and gas companies' digital investments, according to a report from Accenture. The "Accenture Upstream Oil and Gas Digital Trends Survey 2019" is based on a global survey of 255 industry professionals.

When respondents were asked which digital technologies their organisations are investing in, 61 per cent cited cybersecurity, five times higher than in 2017, when the survey was last taken. The report suggests the focus on cyber resilience is rising as oil companies seek to protect assets and reputations. Cybersecurity was cited by more respondents (16 per cent) than any other digital solutions when asked which were driving the greatest impact in terms of business performance, up from 9 per cent in 2017.

"Managing attacks isn't just a matter of protecting reputation, share price and operations, but it's part of a greater responsibility for national services and security. Upstream businesses must continue to invest thoughtfully and substantially in cybersecurity measures, as they often underestimate their exposure to such attacks, which are also increasing in technical complexity," said Rich Holsman, a managing director at Accenture.

NNPC group managing director vows to stop subsidies and boost refinery capacity

Petrol prices have been cut in Nigeria this year.

Image Credit: Adobe Stock

MELE KYARI, GROUP managing director of the Nigerian National Petroleum Corporation (NNPC), has resolved to stop subsidising the price of petrol and revive the dormant Nigerian refinery sector.

Owing to lack of refinery capacity, Nigeria imports almost all its oil needs with NNPC responsible for 99.61 per cent of the total oil imports, while Major Oil Marketers of Nigeria (MOMAN), the private sector-led body, imported the remaining 0.39 per cent. Mr Kyari says NNPC will continue to import fuel for onward distribution but will not subsidise them anymore.

"There are many things wrong with the under-recovery because it makes us supply more than is needed. This makes the under-recovery to be bloated because we unwittingly subsidise fuel for the whole of West Africa. That has to stop," Mr Kyari said.

In March 2020, the Nigerian Government through PPPRA reduced the pump price of petrol from N145 per litre to N125 per litre and further reduced to N123.50 per litre on 1 April, 2020 and had promised a monthly modulation of the prices.

The national public relations officer of Petroleum and Natural Gas Senior Staff Association of Nigeria, Fortune Obi, said the removal of the subsidy could only be sustainable if the country's refineries were working, as it would be difficult to control the price of a product that one did not produce. He said, "The removal of the subsidy on the petroleum products is a right step in a right direction; however, the challenge is that the refineries are not working – for the removal of subsidy to be sustainable, the government must fix the refineries."

Mr Kyari says the NNPC says it has structured a plan to fix its refineries: "We made a very conscious decision to shut down our refineries after proper scoping, which was not done in the past, we know exactly what to do to get them back onstream. We have also secured financing to make sure they work optimally. Aside from proper scoping, we're also going to have an operation and maintenance contract, a different model of getting the refineries to work. We are looking at a structure where world-class processes will always be in play. We've seen it work before with success".

He has vowed to rehabilitate four refinerines "within the life of this administration and support the private sector to build refineries" not run by NNPC, with the goal of transforming Nigeria into a "net exporter of petroleum products by 2023."

Corys Investments and Georg Fischer enter Egypt's growing gas and water distribution market in joint venture

CORYS INVESTMENTS HAS announced a joint venture with GF Piping Systems for natural gas infrastructure. The venture in which Corys and GF will take the industrial lead, will invest in a major production site for plastic pipes to participate in the Egyptian gas and water distribution market.

Egypt is undergoing a major governmental initiative to develop its gas and water infrastructure. In 2018, more than 1.3 million households were connected to the network. According to Egyptian government forecasts, the plan is for a similar number to be connected to the gas distribution network each year.


Image Credit: Adobe Stock

Domestic gas is a growing market in Egypt.

Together with GF, Corys will hold equally a combined stake of 75 per cent in the joint venture, while Egypt Gas will hold 25 per cent. Egypt Gas was established in 1983 by the Egyptian government and was the first company in the field of natural gas networking.

Named Egypt Gas GF Corys Piping Systems S.A.E., the joint venture will set up a new production facility for plastic pipes and fabricated fittings for the domestic market near Cairo. Commercial production is planned to start in 2021. The initial investment will amount to approximately US$21.6mn.

"Egypt offers great investment opportunities. The most significant of these is the establishment of many new cities with huge utility networks in which Egypt Gas Company is involved. Therefore, the idea of this joint venture makes a lot sense and is beneficial. It is an important achievement, and I am absolutely delighted and very proud of it," said Wael A. Gowayed, chairman and delegated member of Egypt Gas.

WEATHERING THE STORM: PROGRESS IN ANGOLA

Despite tough times globally, particularly in the wake of another oil price drop, projects in Angola are going ahead, representing long-term investments in the future of the hydrocarbons industry. Georgia Lewis reports.

ANGOLA HAS UNDERGONE radical political change in recent years with a new president and petroleum minister taking over. The new leadership, steered by President Laurenço, sparked plans to revive the country's once-lucrative oil and gas industry, and companies with a presence in Angola have stepped up. With oil prices again slumping amid a price war between Saudi Arabia and Russia, as well as economic challenges presented on a global scale with the coronavirus pandemic, it is hoped that there is enough investment as well as production to sustain the Angolan oil industry through yet another challenging period.

Baker Hughes has big plans for a multimodal oil and gas facility to operate as a hub to support a range of projects in Angola and neighbouring countries, as well as delivering a range of their own products and services along the value chain.

Total, a long-term player in Angola, is ambitious – the plan is to boost production by 2023 to add more than 100,000 bpd from Block 17, keeping production north of 400,000 bpd. Eni is another big operator reporting positive news from Angola with its offshore Agogo oilfield, located in Block 15/06 starting production in January this year, nine months after discovery.

Image Credit: African Energy Chamber

President Laurenço has big ambitions for Angolan oil after making sweeping changes in ministries.

Eni reports the start-up of its offshore Agogo oilfield, situated in the 15/06 Block in the Angolan waters. The start-up takes place just nine months after its discovery thanks to the operational synergies facilitated by the Floating Production Storage Offloading (FPSO) Ngoma, West Hub production centre, 15km from the oilfield.

Joint ventures are expected to continue to play a role such as Equinor, which is working with Sonangol, the NOC, particularly with their exploration work in the Lower Congo Basin. Total, meanwhile, has completed a project with Ocean Infinity, a subsea technology and data company. It was the first time that geophysical, geotechnical, and seismic data was gathered at the same time. This was achieved through simultaneous operations of Ocean Infinity's autonomous underwater vehicles (AUVs) with geotechnical and seismic equipment based from one surface vessel over 28 days. The work included 2D ultra high-resolution surveys and seabed soil sampling in Blocks 17 and 32.

It is no surprise with Africa experiencing transformation in multiple markets with the Belt and Road project that Angola too is receiving investment from China. Huawei has invested US$60mn into Angola's telecommunications industry with the Huawei Technological Research Center, which is based in Luanda. The technology developed here is expected to be utilised in multiple industries, including oil and gas.

China Sonangol, meanwhile, has a joint venture with Sinopec with Sonangol Sinopec International, which holds a 50 per cent participating interest in Block 18. This block is operated by BP and covers an area of more than 5,000km^2 with water depths between 500-1,600m. It contains the Greater Plutinio development which was the first BP-operated asset in Angol,a and it is made up of five fields discovered between 1999 and 2001.

A COUNTRY ON THE EDGE OF CHANGE

Mozambique stands on the cusp of economic revival, thanks to its flourishing gas sector. Now the pressure is on the debt-ridden government to use whatever future gains it will generate from its gas resources towards infrastructure investment. Samantha Payne reports.

REVENUES FROM GAS production could lift millions out of poverty in Mozambique and provide infrastructure investment to bridge the disparities between urban and rural areas, especially in the central and northern provinces. A World Bank report recommends public investment in infrastructure in rural areas is paramount to improve the economy, adding that gas could push growth from 2.3 per cent in 2019 – which slumped after tropical cyclones Idai and Kenneth – to 5 per cent by 2021.

Shireen Mahdi, World Bank senior economist, who co-authored the report, said it was vital for the country to continue to balance its books: "It will be important that in the near term, the country continues to improve its fiscal position, through improvements in expenditure efficiency, revenue management, and debt reduction ... These measures are important as the country continues on the path of macro-stability."

Mozambique is expected to become a global LNG exporter following the discovery of gas in the Rovuma Basin by Anadarko Petroleum (now Occidental Petroleum) and Italy giant ENI.

There are three LNG projects underway. Total SA is the main operator of the Mozambique LNG project in Area 1 after it acquired Anadarko's 26.5 per cent stake for US$3.9bn in September 2019. The 12.9mn t/yr project is expected to enter production in 2024. Other major licensees include the state-owned oil company's subsidiary, Empresa Nacional de Hidrocarbonetos (ENH) Rovuma Área Um, S.A, which has 15 per cent, followed by Mitsui with 20 per cent, ONGC Videsh, Beas Rovuma Energy Mozambique and Bharat Petroresources (BPRL) Ventures Mozambique B.V have 10 per cent each, while PTTEP Mozambique Area 1 Limited has 8.5 per cent.


Image Credit: World Bank Photo Collection/Flickr

Hopes are high for a rural revival in Mozambique with gas development.

A consortium of McDermott, Chiyoda Corporation, and Saipem is responsible for the EPC of the onshore liquefaction plant, along with its support facilities. Worley was awarded in February to provide engineering and consulting services for the delivery of the onshore and subsea facilities.

Almost 90 per cent of the Mozambique LNG production has reportedly been sold to major buyers in Asia and in Europe.

The second project is Coral South FLNG: ENI will lead and operate the project while ExxonMobil will construct and operate the liquefaction facilities onshore. ExxonMobil farmed into Area 4 block in 2017 with 25 per cent interest. Other stakes have been taken by CNPC (20 per cent), Kogas (10 per cent) and ENH (10 per cent). The US$8bn project will be able to liquefy more than 3.3 million tonnes of gas per year when it comes into operation in 2022.

The third project is the ExxonMobil-led Rovuma LNG scheme, due to start operating in 2025. The Rovuma LNG project will produce, liquefy and market gas from three reservoirs of the Mamba complex in the Area 4 block in the Rovuma Basin.

In October last year, Mozambique Rovuma Venture (MRV) composed of Eni, ExxonMobil and CNP, awarded a EPC contract to JFT, a consortium made up of JGC, Fluor and TechnipFMC for the Rovuma LNG onshore liquefied natural gas production complex in Cabo Delgado, Mozambique. MMRV has a 70 per cent stake while Galp, Kogas and ENH each have a 10 per cent stake. Insurgents in the north, however, are trying to jeopardise LNG operations, prompting IOCs to ask the government for additional security.

Sasol South Africa operates natural gas production in Inhambane Province, with reserves of 2.6 trillion cubic feet. The gas is produced and processed at a central facility in Temane and transported via an 865km pipeline to South Africa, linking southern Mozambique for domestic use.

The Mozambique government has also secured financing for a 400MW gas-fired power plant and transmission line to Maputo, the capital. EDM and Sasol New Energy Holdings developed the ambitious project along with Globeleq and its consortium partner, eleQtra in the Temane Energy Consortium.

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AUTONOMOUS DRONES: QUARANTINE-PROOF

The impact of the coronoavirus can be mitigated by autonomous technology, such as drones. Ariel Avitan, co-founder and chief commercial officer at Percepto explains how this technology could prove cost-effective and productive during challenging times.

THE CORONAVIRUS HAS exposed the soft underbelly of critical infrastructure and industrial sites worldwide – workforce availability. As more and more companies implement business continuity plans to deal with the outbreak, fewer and fewer employees are able to fully function. When facilities don't know who can and will show up for work, both planning and operations are seriously impeded. In Western Australia, for example, the coronavirus is potentially affecting some 60,000 fly-in, fly-out (FIFO) workers at remote mine sites and onshore and offshore oil and gas plants.

And this challenge is compounded by a flagging demand for commodities – oil, natural gas, ore, and other resources – as global industries and economies slow down or even grind to a halt. Given the ongoing price war between Saudi Arabia and Russia and the resulting price drops, the oil industry is particularly hard-hit, with companies bracing for lower revenues, diminished investment, and even large-scale layoffs.

Thus, even as companies are unable to produce at full capacity, they are also unable to sell at full capacity – leading many to take a much closer look at current and future operational expenses and efficiency.

This is leading many companies to rethink the role that autonomous technology – and specifically autonomous drones – can and should be playing in their operations.

Large industrial sites are high-value assets that require constant maintenance and monitoring – independent of both production volumes and market conditions. Even when production is slowed or stopped, and when maintenance personnel are unable to function or even show up at work – critical components still need to be closely monitored, security perimeters need to be maintained, and scheduled maintenance needs to be conducted. The alternative to such monitoring and maintenance can be not only costly but also deadly.

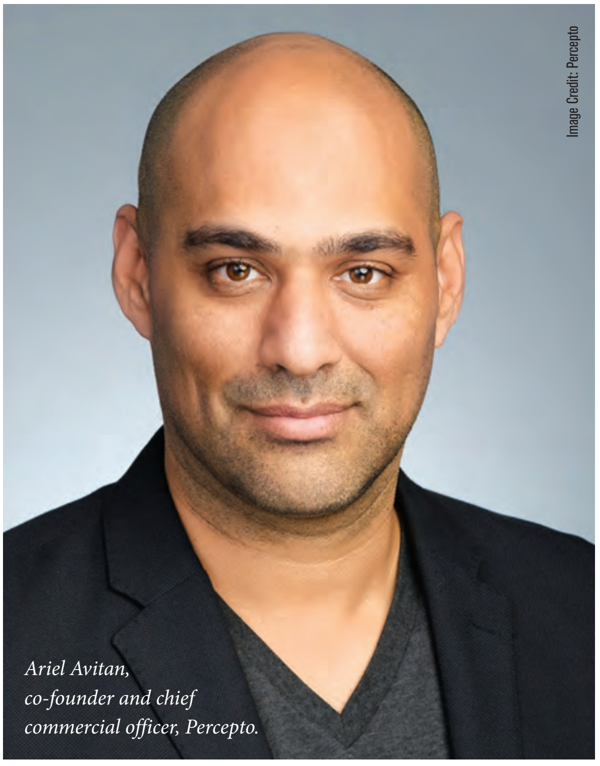

Image Credit: Percepto

Ariel Avitan, co-founder and chief commercial officer, Percepto.

Autonomous drones are an essential part of the contingency plans that support business continuity. Drones are always available, even if operators are under quarantine, and can help alleviate the challenges associated with volatile market trends and workforce availability.

Multi-mission autonomous drones can conduct security, safety and inspection missions – and be quickly and flexibly re-tasked to meet changing operational demands. This makes them a force multiplier – since a single person operating autonomous drones can replace multiple security, safety and inspection employees.

Moreover, autonomous drones can be controlled remotely, from anywhere in the world. This means that – as long as companies have suitable regulatory permits – employees can work from home, yet operate autonomous drones as if they were on site.

Finally, even when a near-pandemic is not sweeping the globe – multi-mission, on-site autonomous drones have been proven to increase efficiency and reduce operational costs. By delivering consistent visual asset monitoring, autonomous drones provide true data-driven maintenance, which according to one study can result in up to 45 per cent less downtime and up to 60 per cent greater output or production. Without costly human pilots, autonomous drones provide a massive boost to existing efforts to improve preventative maintenance and reduce unexpected downtime – which can dramatically affect the bottom line in the best of times and help organisations better deal with the loss of revenues in the worst.

Although coronavirus will not, thankfully, be the new normal – it should be a business continuity wake up call. To adapt to the fluctuations of a truly global marketplace, companies need to prepare for all contingencies – including those where human employees cannot fulfill their roles on-site. Investment in autonomous technology today can help critical infrastructure and industrial companies smooth operational and financial bumps in the road both today and in the future.


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GETTING BETTER DATA FASTER

Cloud technology is helping oil companies to manage and use geophysical data more rapidly and reliably than ever before.
Martin Clark reports.

GEOPHYSICAL DATA MANAGEMENT is evolving seemingly at breakneck speed. Fast-moving technology gains are helping to keep track of the massive amounts of data churned out daily by the oil and gas industry.

It is a tool that can help upstream operators and contractors better understand oil fields, flow rates, system processes, and most other aspects of the energy chain. Last year, seismic specialist Polarcus introduced to the market its suite of data transfer and Cloud processing solutions.

These cloud-based products, known as Polarcus Cirrus, provide clients near real-time access to seismic data, enabling crucial project decisions to be made faster and ultimately shortening the exploration cycle. In its latest annual report, released this March, the company said three projects utilised the power of Cirrus in 2019, enabling clients near real-time access to over 120 terabytes (TB) of seismic data.

This new data management and streaming platform is designed to bring acquired seismic to clients faster via direct satellite transfer, which allows rapid onshore access to high-fidelity data. The end goal is to facilitate project decisions in near real-time, thereby shortening the exploration cycle, and ultimately cutting costs. Polarcus said its total revenues from the combined Africa, Europe and Middle East region amounted to about 30 per cent of total earnings last year. But it is not alone in streamlining the management of big data or drawing on Cloud-based solutions for quicker decision-making in the field.

Cloud computing is transforming data management.

Image Credit: Adobe Stock

CGG also unveiled a new collaboration with IT giant Microsoft to deliver its geoscience products, data and services via Microsoft Azure. Similarly, the end goal is to accelerate exploration and development workflow. The platform gives oil and gas companies access to CGG's extensive library of geoscience data, and high-end interpretation, analysis and reservoir characterisation software technologies.

As part of the shift, CGG's GeoSoftware is offering existing applications in the Cloud, such as its HampsonRussell and Jason packages, as well as continuing to make them available on supported platforms. This includes computer-intensive GeoSoftware applications used for inversion and AVO analysis not only being multi-CPU enabled, but being able to access Cloud computer power. And more is set to come.

CGG said that future GeoSoftware developments include commercialisation with other Cloud providers such as Amazon (AWS) and Google (GCP) and software re-design to take full advantage of the Cloud and provide a software-as-a-service model.

SOMALIA TURNS TO SEISMIC FOR INDUSTRY LIFT-OFF

Seismic specialist TGS is supporting Somalia as it pushes ahead with its debut licensing round, in a bid to become the next emerging market for Africa.
Martin Clark reports.

ONE OF THE world's last remaining exploration frontiers, Somalia is drawing on a bank of seismic data from TGS to underpin its oil search ambitions. The strife-torn country has missed out as many of its near neighbours – the likes of Kenya, Tanzania and Sudan – have enjoyed success with the drill bit through recent years. But Somalia is positioned close to the oil-rich Middle East, facing out to the Gulf of Aden and the Arabian Sea, offering huge offshore potential – estimated at potentially up to 30 billion barrels of oil across the 15 shallow and deepwater blocks on offer in a long-delayed licensing round.

Somalia's president Mohamed Abdullahi Farmajo ratified the country's Petroleum Law in February, paving the way for exploration efforts to move forward, as well as the creation of a new national oil company. While that may be impacted time-wise because of recent global events, it opens the door for drillers keen to test new, frontier waters.

"Somalia has the potential to become one of the most significant plays offshore East Africa," TGS commented after the presidential decree.

The company offers 20,000 km of long-offset 2D seismic data offshore, which has already been used to de-risk source rock presence, distribution and maturity. This data complements an additional 20,000 km 2D survey, also offered by TGS. It is the only data available covering the blocks proposed by the country's first offshore bid round, which has a closing date at the end of the third quarter, although this may well be reviewed in light of current events. TGS holds an exclusive agreement with the Somali authorities to market its data to interested parties.

"Offshore Somalia remains one of the last truly frontier margins in the world," said TGS executive, Rune Eng, describing the area as having "outstanding exploration opportunities".

So far, only two exploration wells offshore along the 1,000 km-long margin have been drilled.

A part of its work, common in the development of all frontier basins, was to integrate newly-acquired long offset seismic with these wells and all other existing information resources, such as regional satellite gravity and magnetic data.

The survey design, which covers water depths from 30 metres to 4,000 metres, has allowed for seismic coverage over the shelf, slope and basin floor with dip, strike and recording time intervals suitable for defining a range of leads and prospects. Modern processing algorithms were also applied to the raw data to achieve optimal subsurface imaging.

It is an exciting time for one of Africa's lesser known oil territories, with interest already evident among some very large players. In March, Somalia's Ministry of Petroleum and Mineral Resources said it had agreed an "initial roadmap" with a Shell-Exxon joint venture "to further explore any offshore hydrocarbon potential", though it is unclear how this affects the 2020 licensing round, if at all.

Last October, Shell and Mobil (now part of Exxon), which had a joint venture on five offshore blocks in Somalia prior to the toppling of dictator Mohamed Siad Barre in the early 1990s, agreed to pay the government US$1.7 million for historic leasing of the blocks.

Will offshore oil be the saving grace for Somalia, an often-troubled country?

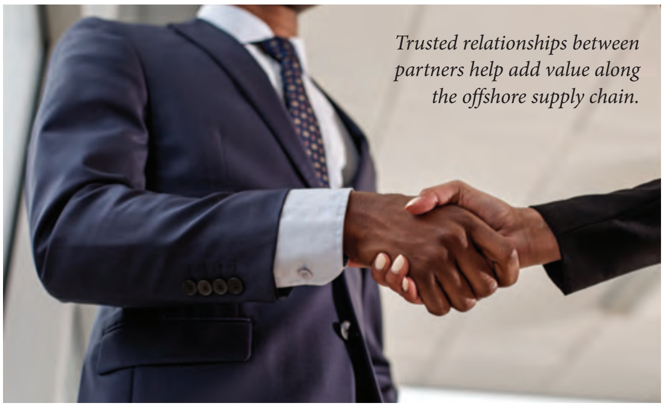
Image Credit: Adobe Stock

DRIVING COMPETITIVENESS IN THE SUBSEA SUPPLY CHAIN

Chris Thompson, chairman of engineering firm Express Engineering, considers leveraging the supply chain and maintaining strong relationships to drive competitiveness in the subsea oil and gas equipment market.

THE GLOBAL OIL and gas industry operates in a shifting and challenging business environment. Variations in supply and demand linked to global geo-political issues, have historically contributed towards uncertainty in an industry that has craved a stability that has seemed out of reach. Now, strategic partnership models are set to recalibrate this and bring greater confidence and reduced volatility. So, it's against this landscape, that the subsea sector is focused on achieving the efficiencies and competitiveness that will bring projects to fruition to support future production volumes and the wider supply chain. The dynamic between the customer and supplier is changing, heralding advantages to customers and more value to outsource partners within the subsea supply chain.

We saw critical experience and capacity lost from the sector during the last downturn and it's unlikely that we will see the same levels of engineering talent and capacity return in the foreseeable future. As such, operators such as Shell and ExxonMobil demanded a recalibration of costs, reduced lead times and product solutions from their subsea infrastructure partners, which could deliver acceptable ROI on the back of lower oil prices new business models and product systems had to accommodate the risks of



Trusted relationships between partners help add value along the offshore supply chain.

Image Credit: Adobe Stock

macroeconomic global influences on the oil price. Service companies (TechnipFMC, BH, Aker, OneSubsea) became smarter and leaner, bringing in new products and business models in anticipation of a recovery and to secure business.

Service companies are taking a fresh look at engaging the supply chain to deliver their backlogs and win business. They have scaled back investment in manufacturing resources and engineering expertise, instead focusing their efforts and resources elsewhere for a more capable supply chain. This opens up opportunities for agile supply chain specialists and contract manufacturers who can deliver access to top engineering talent and cost-effective solutions.

The competition to secure business with the highest performing products delivered in the shortest timescales can only be achieved through strong supplier relationships and outsourcing to suppliers who can operate higher up the supply chain. Working with suppliers to draw on core strengths and skills, will deliver real bottom line benefits during bidding and execution of projects.

Fostering 'real' partnership brings other advantages. Investing in the long-term strategic supplier relationships rather than simply seeking short term, tactical, transactional and contractual engagement motivates and incentivises businesses, encouraging them to invest in delivering the products and services required and adopt flexible working practices and a culture of innovation.

Industry reports indicate the subsea tree market is expected to grow at a CAGR of approximately 7.70 per cent until 2025, driven by the decline in operating costs and developing unconventionals. The favourable outlook for a returning subsea sector has created renewed opportunity for tree, tie-in, manifolds and connections and tooling OEMs such as TechnipFMC, Aker Solutions and Baker Hughes. Winning contracts and gaining market share has become an intense competition. New subsea systems have been designed to reduce weight, improve efficiency, extend life and cut costs, while shorter 'time-to-oil' lead times continue to secure project wins and the flow of oil from deepwater fields globally.

Future business models must have inbuilt resilience in anticipation of the next slowdown in subsea infrastructure investment. Operators and contractors will focus on their core strengths and where they can offer the most value while they outsource to supply chain partners parts of what previously may have been core business, so when the next downturn comes, fixed costs will be lower and more sustainable.

The customer must trust the supplier with their intellectual property and knowledge. This demands integrity from the supplier who must trust that their investment in resources and skills is translated into forward orders. Equally, it can be hard to form a partnership based on trust alone. A track record of success and reliability offers reassurance in all customer/supplier relationships.

PUMP MARKET HOPES NOW IN DOUBT

Strong growth in the industrial pumps segment now seems uncertain after a rough few months. Martin Clark reports on the possible implications for Africa and the Middle East looking ahead.

Will the pump market recover from the COVID-19 crisis?

Image Credit: Adobe Stock

THE PUMPS MARKET was expected to thrive in the coming years, supporting a resurgent oil and gas industry, although that has all now been thrown into doubt in the wake of the coronavirus pandemic. One forecast by Technavio announced at the end of January 2020 that the global industrial pump market was poised to grow by US$1.54 billion or 7 per cent through to 2024. It cited key market drivers such as the increasing benefits of pump rental services and innovations in service delivery as helping underpin the anticipated growth.

Another report, Global Oil Refining Pumps Market, said on 4 March 2020 that the sector "will rise at a significant rate" during its forecast period, through to 2025, though it is not clear how recent events may have been taken into account.

But the reports also highlighted how volatility in the market often discourages companies in the oil and gas sector and other industries, such as automotive, to make large-scale capital investments.

> "Equipment rental allows end-users to access the latest technologies at cost-effective rates"

Given the volatility that has hit the energy sector since the turn of the year, that now seems almost certain to adversely impact its overall projected growth rate for the foreseeable future. One trend that could hold up, even in light of current events, is the shift to rentals.

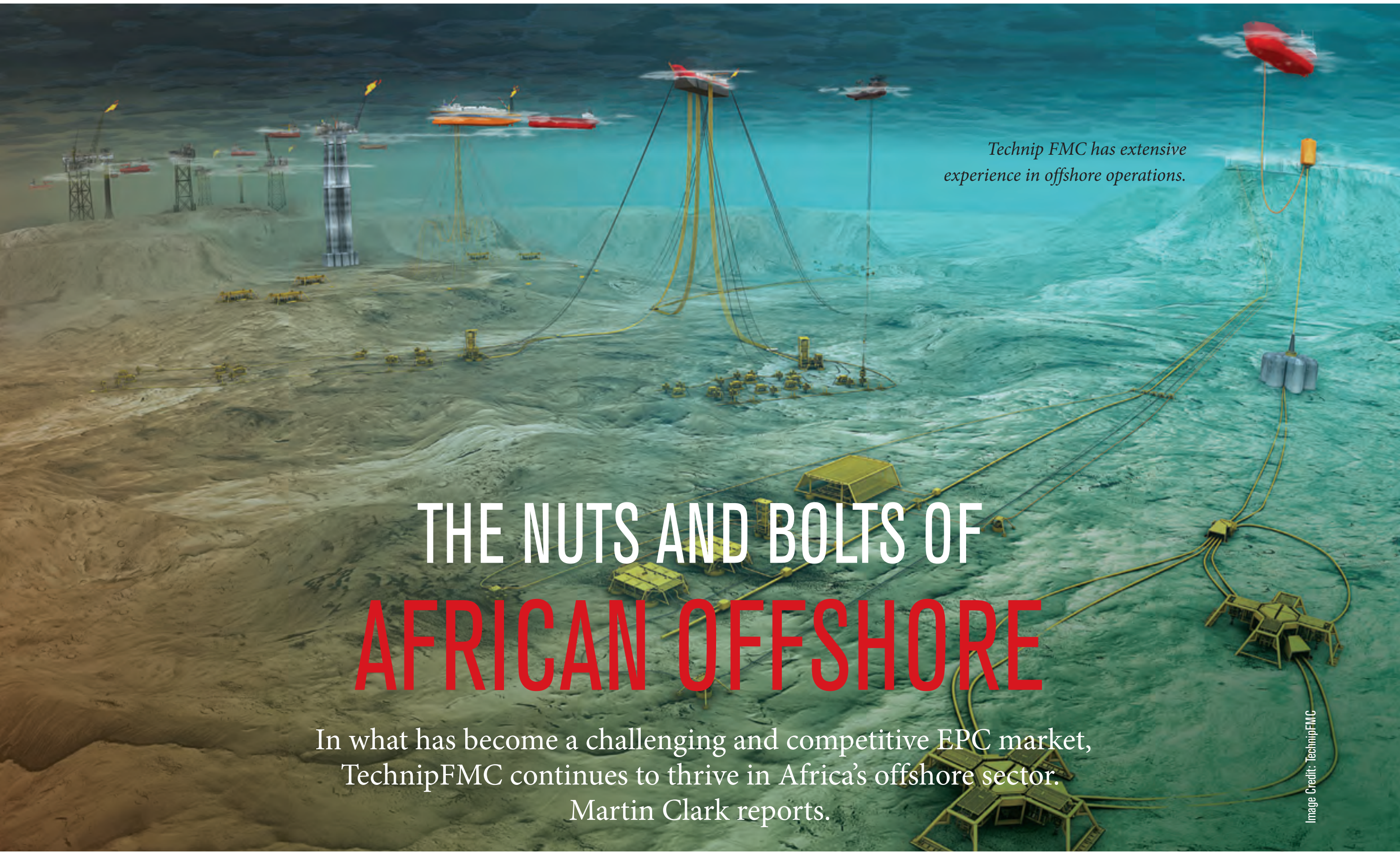
"The growing emphasis on reducing operational costs is compelling end-users to rent equipment rather than making the purchase," the Technavio report states.

"Equipment rental allows end-users to access the latest smart pumping technologies at cost-effective rates. Moreover, advantages such as flexible work delivery setup, professional services and consulting, timely service responses, and a wide range of product availability for fluid handling systems provided by pump rental service providers are factors fuelling the growth of the market."

Major players in the pumps market include the likes of Flowserve, Sulzer, Weir Group and TechnipFMC among many others. Despite the abrupt, adverse market conditions, these companies continue to upgrade and refine their product offer to the oil and gas industry.

In March, Amarinth, which specialises in centrifugal pumps for the energy sector, appointed a new Africa sales manager, Itai Choi, to support the strong growth the company sees in the region. He will split his time between bases in Nigeria and London, focusing on core territories such as Algeria, Uganda, Mozambique, Senegal, as well as Nigeria.

Oliver Brigginshaw, Amarinth's managing director, said the intention is to provide local, on-the-ground support where projects are being undertaken in Africa: "We always strive to deliver localised support where we can, as in the case of our established Middle East and Asia Pacific territories."



Technip FMC has extensive experience in offshore operations.

Image Credit: TechnipFMC

THE NUTS AND BOLTS OF AFRICAN OFFSHORE

In what has become a challenging and competitive EPC market, TechnipFMC continues to thrive in Africa's offshore sector. Martin Clark reports.

AFRICA'S UPSTREAM IS alive and well despite all the challenges facing the industry in 2020. On 20 March, TechnipFMC declared that it had been awarded a "significant" engineering, procurement, construction and installation (EPCI) contract by BP for work offshore Angola. It entails the development of the Platina field, in Block 18, at water depths ranging from 1,200 to 1,500 metres, with the work estimated to be worth between US$75 million and US$250 million. The contract covers the manufacture, delivery and installation of subsea equipment including subsea trees, a production manifold with associated subsea control and connection systems, as well as rigid pipelines, umbilicals and flexible jumpers.

Arnaud Pieton, TechnipFMC's president for subsea, called it an "important deepwater development" for supporting Angola's oil and gas industry in the long-term. It follows earlier front-end engineering and design work on the Platina field by the company.

Pieton said his team will draw on local expertise in the market to deliver the project.

"[We] will utilise our local assets such as our service base in Luanda and our umbilical factory in Lobito," he said.

It highlights how successful EPC companies have positioned themselves closer to markets in recent times, in part, a response to host government calls to see more local content.

BP's Platina field is scheduled for start up at the end of 2021 or early 2022, and marks the second phase of development in Block 18, the Greater Plutonio project, which started up in 2007.

TechnipFMC has enjoyed a run of other EPC awards in Africa in the past year as well, including in some of Africa's newer, emerging energy hubs.

One of Africa's biggest upstream projects right now is the Greater Tortue Ahmeyim natural gas project located offshore Mauritania and Senegal.

It is a test for all of the many engineering teams working to make it a reality, including TechnipFMC.

It landed the contract for the engineering, procurement, construction, installation and commissioning (EPCIC) of the floating production storage and offloading (FPSO) unit, a project worth between US$500 million and US$1 billion. Here, the initial subsea infrastructure will connect the first early exploration wells drilled through production pipelines to the FPSO.

From the FPSO unit, liquids will be removed and the export gas will be transported via a pipeline to an LNG hub terminal where the gas is to be liquefied.

Back in October 2019, TechnipFMC also announced that its JFT consortium, which groups it with JGC Corporation and Fluor Corporation, had picked up an EPC contract from Eni and Exxon for the Rovuma liquefied natural gas (LNG) onshore production complex.

The LNG project will produce, liquefy and market gas from three reservoirs of the Mamba complex in the Area 4 block in the Offshore Rovuma Basin. It includes the construction of two gas liquefaction trains, with a total capacity of 15.2 Mtpa, as well as associated onshore facilities. The onshore project is to be located in Cabo Delgado, Mozambique, and will generate huge numbers of jobs for local workers.

DEMAND FOR VALVES EXPECTED TO STAY STRONG

With oil and gas operations taking place in increasingly challenging conditions, the valve sector has to keep up with rising performance expectations from operators.


Demanding conditions are leading operators to require more durable valves.

Image Credit: Adobe Stock

THE DEMAND FOR oil and gas is showing no signs of slowing down and this, in turn, has led to operators exploring for and extracting hydrocarbons from more technically demanding locations. Venturing into often hitherto unexplored plays, whether on or offshore, means operators are choosing equipment and hardware carefully to meet high expectations. Valves need to be hard-wearing – not just for tough conditions, such as deeper water, but to keep maintenance costs under control. There is money to be made, even in these challenging times with another oil price war and the coronavirus pandemic impacting on bottom lines. The worldwide market for industrial valves in oil and gas is expected to grow by five per cent up to 2023.

Along the value chain, valves have different roles to play. In the upstream, valves control the flow of hydrocarbons from high pressure injection systems. At the midstream stage, where oil and gas is stored and transported from deep sea operations, valves protect equipment while controlling flow. Keeping systems at low temperatures is important for converting gas to liquids, meaning valves need to be effective in cooler conditions. With the downstream segment, raw materials are fed into the petrochemical industry, requiring high pressure valve designs.

In the deepwater sector, Weatherford is an example of a company which is leading the way. At the end of 2019, the company did a deal with Petrobras to deliver 24 of its Optimax deep-set safety valves over the next four years. This particular valve protects against catastrophic loss of well control by providing failsafe closures at pressures up to 10,000psi and are rated for depths up to 12,000ft. The valves are controlled by a primary hydraulic control line whereby application of control-line pressure keeps the valve open. When the pressure is bled off, the valve closes to protect property, workers and the environment, which is especially important in sensitive deepwater operations. A secondary upward-facing piston, plus heavy-duty power springs, enable fail-safe closure while keeping the hold-open pressure to a minimum.

In Nigeria, meanwhile, valves have played an important role in helping Compact Manifold & Energy Services Limited (CMES), an indigenous oilfield service company to meet local content requirements. The Executive Secretary of the Nigerian Content Development and Monitoring Board, (NCDMB) Engr. Simbi Wabote, commissioned the CMES in Benin City, Edo State.

In his keynote address, Engr. Wabote expressed delight for the formal operational commissioning of the manufacturing facility dedicated to in-country production of flanges and fittings and commended the managing director, Olufemi Osunde for his doggedness in establishing the facility and positioning as a dynamic oil and gas service provider committed to addressing operational challenges facing operators in diverse sectors of the economy, most especially the oil and gas industry.

Engr. Wabote commended the management of the company on its human capacity development initiative by training 50 Nigerian graduates in the area of machines operation to produce flanges, valves and fittings with a projection targeted to increase the number of employees to 200 in the next five years.

INVESTING IN SMART WELLS

A boom in offshore activity is boosting the smart well market, and it makes sense to make this investment to enhance operations, especially as the industry faces a new series of challenges.

EMERGING ECONOMIES AROUND the world, especially in Africa, are driving demand and growth in the smart well market.

With exciting new discoveries off the coast of Senegal and Mauritania in particular, the time is right for investment in smart wells to enhance upstream operations, especially as factors such as oil price wars and the impact of the coronavirus are creating additional industry challenges in 2020.

The time is right for smart well investment as increased deepwater activities intersect with increased use of IoT technology in these sort of operations. However, the drive to move towards smart technology in wells needs to be balanced with the need to protect data and prevent cybersecurity breaches.

This is especially pertinent to the oil and gas industry, which is leveraging the Industrial Internet of Things (IIoT) along entire value chains. An example of this is Microsoft partnering with Halliburton to bring smart technology to the oil and gas operations where Halliburton is a major service company.

Image Credit: Adobe Stock

The IIot is transforming oil and gas operations and making remote working easier, especially on deepwater projects.

When done properly, investing in smart well technology improves efficiency and saves costs - when machinery is fitted with sensors and connected to one network, accessibility, particularly from remote environments is made easy.

As well as the efficiency and cost benefits, the oil and gas industry can set an example in terms of using greener sources of energy to power its operations. Renewables, such as wind and solar, are making great technological strides and these can be leveraged to power IIoT-based operations.

With the discipline of well engineering accounting for approximately 40 per cent of development costs in a typical ultra-deepwater project, it can be easy to see the appeal of using smart technology.

New technologies such as smart well completion systems allow multiple production zones to be produced by the same well. This, in turn, cuts back on the need to invest in the exploration and production of an area made up of several reservoirs or various production zones.

> **“The time is right for smart well investment as increased deepwater activities intersect with increased use of IIoT technology.”**

FLOW RATE MEASUREMENT GOES DIGITAL

Modern operators need to maximise recovery while continuing to lower operational costs – and reliable digital technology has become more important than ever to meet these goals. Flow rate measurements are vital for reservoir management and maximising recovery.

Image Credit: Adobe Stock

Increased refinery activity can be a catalyst for growth in the metering market.

MULTIPHASE AND WET gas flow metering technologies, plus leveraging the Industrial Internet of Things (IIoT) are critical to meet modern demands. And it is indeed a growing market with the global flow meter market size projected to be worth US$12.3bn by 2027, a CAGR of 5.8 per cent over the next seven years.

While these technologies have been commercially available for a couple of decades, the changing operational environments and evolving digital paradigms have become more important than ever for operators. In 2019, the magnetic segment accounted for the largest share of the global flow meters market.

The penetration of IIoT has helped the evolution of smart flow rate measurement solutions, leading to an increased demand for intelligent flow meters.

Traditional separators provide dual functionality of gravitational phase separation and then measurement of separated single-phase flow. Multiphase flow measurement devices cut phase separation, expanding the options available to the operator to optimise OPEX while maximising recovery via high-frequency measurements. Multiphase and wet gas meters, as well as virtual meters, have been used for reservoir and process management, regulatory reporting, allocation, and custody transfer. These devices are compact, convenient to deploy, provide real-time measurement, and are relatively low maintenance. Smart meters provide real-time measurement that meshes well with surface and downhole streams of pressure, temperature, vibrations.

> **“Factors such as increased industrialisation and buoyant refinery activity could help boost the meter market in Africa.”**

Coriolis meters, meanwhile, enhance the reliability, accuracy, and efficiency of liquid flow rate measurement. Furthermore, the integration of IoT in flow rate measurement solutions has helped transform Coriolis meters into intelligent flow meters. The adoption of these meters is expected to grow significantly in the coming years. Extensive adoption of Coriolis flow meters by the oil and gas, chemical, and refinery sectors is projected to drive the growth of the overall product segment until 2027.

While India and the Asia-Pacific regions are expected to show the highest growth in the smart meter markets in the years ahead, factors which also apply to parts of Africa, such as increased industrialisation and buoyant refinery activity, could help boost this important market across the continent as well.

LIUGONG DRESSTA WINS BACK-TO-BACK RED DOT AWARDS

LiuGong Dressta's design team has won back-to-back Red Dot Product Design Awards with the new Dressta TD-16N crawler dozer, which sets a new benchmark for visibility.

RIGHT FROM DAY one, the LiuGong Dressta design team's brief was simple – create the best all-round dozer for the customer. The winning team headed by Ed Wagner, (executive director of new technology) and Gary Major, (executive director of industrial design) knew that the operator was essential to designing something truly unique.

Ed recalls, "We literally started with the operator, the blade and the tracks and then built everything around them without compromise."

The result is a dozer with unrivalled all-round visibility encompassing 309 degrees. According to Major, "As with our previous award-winning motor grader the 4180D, we set out to create the best visibility in class with the TD-16N – I think we've achieved that. I think it's also true to say that benchmark visibility is becoming one of the defining characteristics of our design ethos. We know how important visibility is, not only for safety, but for productivity and operator satisfaction too."

The new dozer features a mid-cab design over a mid-mounted automatic, dual path hydrostatic drive train. It comes digital ready and with a standard six-way angle blade. Controls are easily accessible, intuitive, and easy to use thanks to the electro-hydraulic joysticks. With an operating weight of 19,090 kg (42,090 lb) and Net horsepower of 170 hp (127kW), it has the power and performance Dressta is well known for. While visibility was high on the design team's agenda it was not the only consideration, operator safety was also a priority.

"Every operator out there has a story about falling off the tracks … This is the first machine where you don't have to get onto the tracks," Major said.

Firstly, the team designed non-slip steps at the rear of the machine, totally negating the need to step onto the tracks. Complete with safety handrails these steps allow easy access to and from the cab with three points of contact maintained.

The TD16N is the only dozer in its size class with this type of "no tracks" access. Secondly, they ensured that all access points for daily checks, maintenance and fuelling were reachable from ground level.

"It's a great honour to win back-to-back Red Dot Awards," commented Dressta Chairman, Howard Dale, "it's an unbelievable achievement that underlines the amazing work Ed, Gary and the whole design team do every day. I think it says a lot about how far we have come as a business and where we are heading. Chinese manufacturers are not usually known for design but our growing reputation for design, excellence is making the industry sit up and take notice. Our investment in R&D has reached new records and we are making giant leaps in intelligent and connected machine technology. Two Red Dot Awards are fantastic but they are only the start of our story, we are on an upward trajectory. I'm convinced that the industry will see that Dressta offers something really different in the market: cutting edge design as standard."

"We literally started with the operator, blade and tracks, then built everything around them without compromise."

Image Credit: LiuGong Dressta

This award-winning dozer sets new standards for visibility, earth-moving performance and safety.

A RECKONING FOR GLOBAL OIL MARKETS

Roger Diwan, vice president, financial services, IHS Markit, shares his analysis on the possible impact on the global oil markets amid the extreme challenges already being faced by the oil industry for 2020, such as low prices, falling demand and COVID-19.

MID-MARCH MARKED THE decisive inflection point for markets in terms of recognising the scale of the looming surplus as major countries across Europe and North America shut down. Our latest estimates for global liquids demand point to a year-on-year contraction in the second quarter of 2020 of more than 14 mn bpd. With supply on its current trajectory, this sets up implied global liquids builds of more than 12mn bpd in the second quarter. Markets have started to translate this dire outlook into prices. More worrisome still, low prices still appear unlikely to garner the type of immediate supply response physical markets will require in the short term, pointing to further downside in the short term.

The crux of the challenge for oil markets is twofold, the immense size of surplus and the compressed timeline of prospective builds, severely limiting the runway of the price war. In particular, we see fundamental pressure concentrated over March and April, an eight-week blitz period over which stocks currently stand to build north of 1.0 billion barrels cumulatively. Such an unprecedented build would overwhelm available storage capacity globally by the middle of the second quarter. Given the trajectory of the outbreak, the next few weeks are unlikely to provide material relief to bearish momentum as markets digest and price the reality that supply will need to resolve this balance. It can do so through shut-ins or through management. Time will tell if the latest OPEC production cuts will have the desired mitigating effect or whether these cuts will only offer a partial solution to a bigger problem, which was affecting the industry before the coronoavirus pandemic. For more commentary on this from IHS Markit, turn to page 6.

A falling oil price is fuelling industry challenges for the foreseeable future.

Markets are now left to grapple with where and how these shut-ins will unfold, with urgency adding complexity. There are two paths that lead producers to shut-in production: negative variable cost economics, and lack of physical takeaway capacity forcing producers into filling limited wellhead storage and eventual shut-ins. As Brent prices near the US$15-20/bbl range, a significant share of global production would likely fall below opex costs. But this does not mean those projects will shutter operations overnight. Such activities can be complex, they vary by geography and company, and time is required to plan and execute a shut-in.

As demand disappears, spot barrels forced to shelter in place. Up to now, the sharp market imbalances have mostly existed as a spreadsheet exercise as we and others chart the coming course through the crisis. In the next two to three weeks we will see those physical imbalances manifest in physical markets. We are already seeing clear indications of that unfolding across the global supply chain. This includes intentional floating storage plays by IOCs and traders, skipped, cancelled or extended spot tenders in Latin America, and unsold cargoes in West Africa. This will soon be followed by inventory builds across onshore tanks in the U.S., with refinery margins collapsing and refinery runs soon to follow. The oil market's physical challenge: flatten the curve(s). In addition to crude forward curves bending ever deeper into contango, pressure points are emerging across the supply chain. Forward curves for jet, diesel, and gasoline in key hubs have moved into contangos. The velocity of the collapse in end-user demand is upending refined product markets. Steep contangos ultimately reflect systemic imbalances that need to be temporarily digested or corrected, either through stimulated demand or supply reductions. As a result, steep contangos are typically relatively short-lived. For refined products, the path is relatively clear, as refiners will curtail throughputs sufficiently to rebalance their product markets. This is the transmission mechanism that crude markets are facing in the short term, as declining demand exacerbates crude imbalances. Storage can help sustain contangos for a period, but given the scale of the challenge, a sharp supply response will likely be needed to flatten these curves, such as the latest OPEC production cuts.

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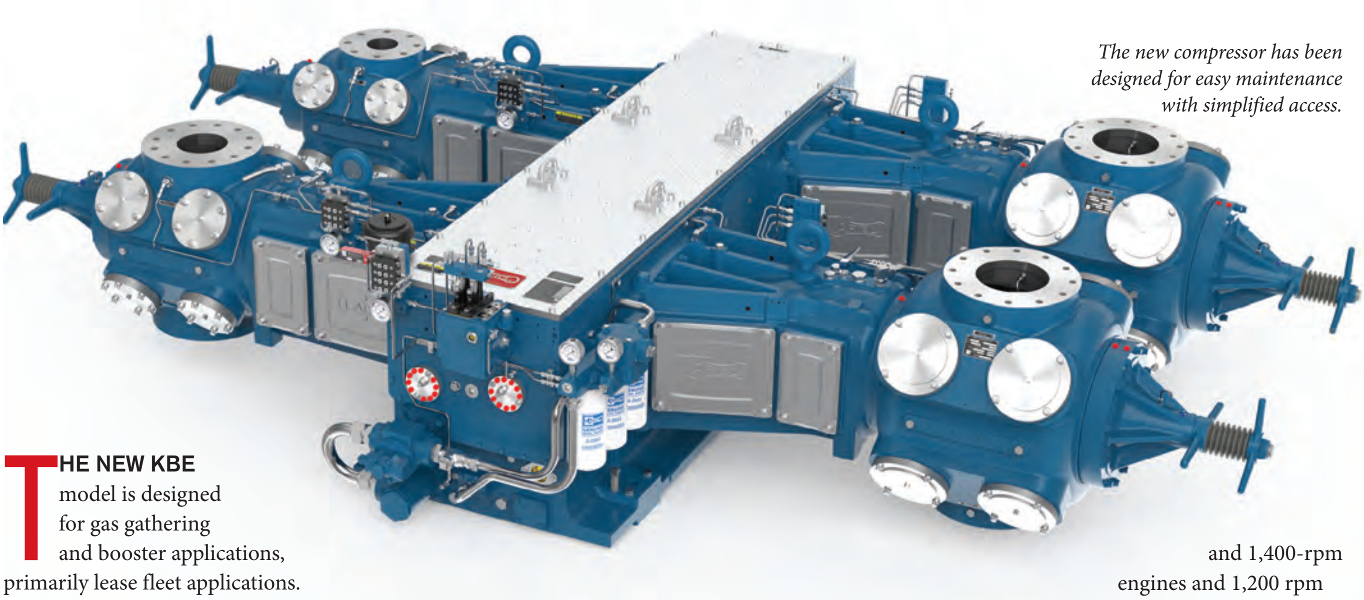
ARIEL LAUNCHES NEW COMPRESSOR MODEL

Ariel Corporation, the world's largest natural gas reciprocating compressor manufacturer, has added a new KB frame to its midline compressor line-up, the KBE.



The new compressor has been designed for easy maintenance with simplified access.

Image Credit: Ariel

THE NEW KBE model is designed for gas gathering and booster applications, primarily lease fleet applications.

In 2018, Ariel debuted the KBK:T frames, which also fall into the midline range. Unlike the KBK:T frames, which fell between two compressor models in the lineup, the KBE serves as an alternative for operators using Ariel's JGH:E:T compressors with ET cylinders.

The new KBE compressor is available in two- and four-throw variations. The KBE is designed to meet the compression needs for many of the applications that uses Ariel's JGH:E:KT frame and has the same features of other KB models.

It has the new KB style angled guide, which increases the structural stiffness substantially compared with the JG style frames. In addition, the KBE incorporates redesigned and stronger piston and rod assemblies and connecting rods.

Like the KBK:T, its crossheads, connecting rods and bearings are backward compatible with legacy JGE:K:T products.

The KBE frame, which can accommodate an internal torsional vibration damper, has the same footprint as the KBK:T compressors – and it features a simplified auxiliary end that incorporates the frame oil thermostat into the oil filter header.

In terms of maintenance, Ariel designed the KBE for simplified access.

The O-ring seals on the top cover and guide covers reduces the number of fasteners and eliminates the common challenges with paper gaskets.

Another highlight of the KBE frame comes from its cylinders. The KBE uses Ariel's new E cylinders, a derivative of its common ET cylinders found in most of its compressor models.

The E cylinders offer an extended service life with the use of the CP and CPS valves found in other KB style frames.

The KBE product is primarily focused in the 1,000 to 1,500 horsepower range. It combines our latest design feature with enhanced field experience and cost effectiveness of Ariel's ET cylinders. The longer stroke of the KBE matches well with 1,200- and 1,400-rpm engines and 1,200 rpm electric motors.

As of January this year, Ariel has made its JGH (introduced in 1986) JGE (1987) and JGK (1988) frames inactive; they are no longer produced or sold for new unit business, filling that void with the KBE.

However, Ariel will support all legacy equipment JGE:K:T products currently operating in the field with service and unprecedented support, for decades to come.

The KBE will not be the last compressor with the KB style frame. Ariel expects to produce more KB style compressors in the coming years.

Visit www.arielcorp.com for more information.

COVID-19: WHY AFRICA NEEDS AN UBUNTU PLAN

Dr Victor Oladokun, outgoing director of communication & external relations at the African Development Bank Group, writes about why Africa needs a globally coordinated Ubuntu Plan, a fiscal stimulus that recognises our shared humanity, to deal with an unprecedented crisis.

UNLIKE ANY OTHER pandemic, COVID-19 will alter the way we live, work, and socialise. The financial costs and the economic devastation are already of epic proportions. This is why Africa in particular urgently needs an Ubuntu Plan. A globally coordinated fiscal stimulus plan that recognises our shared and connected humanity.

America passed a US$2tn stimulus package. It is the largest bailout in the history of the US. European economies likewise have announced stimulus measures in excess of 1tn euros. Chinese factories are ramping up again, backed by a US$344bn stimulus package. In contrast, Africa's economies are already buckling. Global demand for oil and gas and commodity products – the mainstays of Africa's leading economies – has stalled. Revenues which were already overextended have dried up and small, medium, and large enterprises are at risk of total collapse. The United Nations Conference on Trade and Development (UNCTAD) estimated that the pandemic could reduce the growth of the region's GDP from 3.2 per cent to 1.8 per cent in 2020.

Even though the US, Europe and many parts of Asia are better suited economically and infrastructurally to a lockdown, they are struggling to cope with the burden of this sudden pandemic. A situation that will likely will be worsened by the duration and unpredictability of the pandemic. If these societies are struggling, the impact on Africa is best imagined.

Prior to the crisis, 41 per cent of sub-Saharan Africa's population lived on less than \$1.90 a day which is very little to survive on. Seven out of 10 persons in Africa are in vulnerable and precarious forms of informal employment eking their living on a daily basis. Lockdown, homeworking and teleconferencing are therefore not options. Family support systems from blue and white-collar workers and the diaspora, are themselves under threat. Job losses will strain these critical informal support systems to breaking points. In Africa, formal social safety nets rarely exist. Therefore, stockpiling food items for extended periods of isolation is out of consideration. Linked with this, Africa requires vast food supplies to meet the needs of the continent's poorest who can barely afford a decent meal.

Image Credit: African Development Bank

Dr Victor Oladokun is passionate about the need for an Ubuntu plan.

Which is why an Ubuntu Plan is now critical in order to cushion the harsh social and economic impacts of the COVID-19 pandemic in Africa. Such a plan would include a fiscal stimulus package, the development of critical infrastructure and support for the continent's most vulnerable populations.

Africa and its partners have already been striving hard to tackle the challenge of eradicating poverty with measures such as the UN's Sustainable Development Goals, and the African Development Bank's High5 strategy.

The COVID-19 pandemic however shines the spotlight on Africa's poor healthcare delivery systems and facilities and its vast challenges. The World Health Organisation (WHO) has already issued a 10-point strategy that calls for the creation of corridors on the continent to facilitate emergency deployments and material shipments. The plan calls on governments and the private sector to help increase supplies, medical equipment and care, and to strengthen surveillance and public awareness, in order to prevent continent-wide community transmission. In the short window available, global cooperation is imperative. The African Union's Vision Agenda 2063 and action plan states that "We are part of the global drive through the United Nations and other multilateral organisations to find multi-lateral approaches to humanity's most pressing concerns including human security and peace, the eradication of poverty, hunger and disease."

There is no better time for a globally coordinated Ubuntu Plan. To stop the global spread of COVID-19 and its global devastation, it must be stopped in Africa. The world must pay attention and lend a helping hand by strengthening global cooperation, now more than ever before.

SAGA GROUP CONTINUES TO FOCUS ON GLOBAL EXPANSION

The Saga Group is looking to increase its market share on an international scale and the regions of Africa and the Middle East are in the spotlight, with the focus on commitment to quality and high standards.

The Saga Group is keen to expand and provide its solutions to Africa and the Middle East markets.

Image Credit: The Saga Group

SINCE 1984, THE Saga Group has practiced a customer-first approach to delivering customised cementing accessory solutions to an expanding global market. Constantly seeking improvement, Saga's expanded product and services portfolio includes production chokes, drill-stem testing and casing packers.

Saga's Director Middle East & Africa, Kim Sadler, explains the benefits Saga brings to their customers: "We are well known throughout Asia for our liner hangers and other downhole tools, but much of our product portfolio like production chokes and casing packers are also suited to conditions found in the Middle East and Africa."

In recognition of Saga's total commitment to quality, PT Sagatrade Murni has been awarded API 11D1 certification for their manufacturing processes of liner hanger and production packers. This qualification offers customers further assurance of Saga's unwavering commitment to excellence, quality and reliability.

Kim Sadler explains why API 11D1 has become essential to maintain Saga's quality standards.

"We have been working diligently to achieve API 11D1. Our philosophy has always been to deliver the highest quality oilfield tools and the best service at all times. The need for increased range and higher specifications never ceases and gaining API 11D1 is another step we've taken to ensure our products are meeting the highest quality and consistency," he said.

> **"Our philosophy has always been to deliver the highest quality oilfield tools and the best service at all times"**

Saga added Lancaster Flow Automation LLC to its portfolio of companies in 2014. Lancaster designs and manufactures premium high-performance chokes used in the most challenging onshore and offshore oil and gas field environments.

In 2018, Saga Lancaster opened a service center in Abu Dhabi to provide rapid service and attend to the needs of their Middle East customers.

Consistent with its total commitment to quality, Lancaster has API 6A certification for the manufacture of all its chokes.

For more information regarding Saga PCE liner hanger equipment and services, Kim Sadler can be contacted at kims@sagapce.com. Regarding Lancaster Flow Automation chokes, Gerardo Haro-Valdez can be contacted at gerardo@lancasterflow.com. Saga PCE is headquartered in Singapore and is the exclusive worldwide distributor for PT Sagatrade Murni products and services.

AFRICAN RIG COUNT

COUNTRY	January 2019	February 2019	January 2020	February 2020
ANGOLA	5	5	6	6
CAMEROON	1	2	2	2
CHAD	7	7	7	7
CONGO	3	3	2	2
CÔTE D'IVOIRE	1	1	0	0
EQUATORIAL GUINEA	0	0	0	0
GABON	0	3	2	2
GHANA	0	3	2	2
KENYA	8	8	5	5
LIBYA	9	9	16	16
MAURITANIA	2	2	2	2
MOROCCO	1	1	1	1
MOZAMBIQUE	0	0	1	1
NIGERIA	15	14	14	23
SENEGAL	2	2	2	2
TUNISIA	2	2	2	2

Source: Baker Hughes

DNV GL goes digital to help operators manage the safety and cost risks of corrosion under insulation

A NEW METHODOLOGY designed to address the major safety threat and multi-billion-dollar cost posed by corrosion under insulation (CUI) has been published by DNV GL, a leading technical advisor to the oil and gas industry.

CUI is a type of corrosion which arises when water becomes trapped between insulation and the piping and vessels it is designed to protect. This problem has contributed to more than 20 per cent of all major oil and gas accidents in the EU alone over the past 35 years. DNV GL's industry-first methodology helps integrity engineers and plant managers to identify the areas of a plant with the greatest current and future risk of CUI and take action to prevent failures.

A leaking pipe which is a major CUI risk.

Image Credit: DNV GL

Recommended Practice (RP) DNVGL-RP-G109 was developed with several regulatory bodies, international oil and gas operators and major players in the supply chain to deliver a practical, cost-effective methodology for managing the threat of CUI and is setting a new standard for managing risk.

CUI can take the form of localised external corrosion in carbon and low-alloy steels, external stress corrosion cracking (ESCC) or pitting in austenitic and duplex stainless steel.

Despite the risks that CUI exposes, the oil and gas industry has never adopted a standard approach for identifying and managing the threat. Operators currently employ a variety of methods to identify the presence of CUI on their assets. These range from using diverse inspection methods that can lead to undetected defects to the expensive process of systematically removing and renewing all insulation and coating with limited upfront assessment of the risk of CUI presence. DNV GL's RP provides a systematic approach to assessing, mitigating and updating CUI risk.

www.dnvgl/cui

Vietnamese petrochemical project showcases back-up power solution for construction

AEG POWER SOLUTIONS will ensure backup power of all the security and control management systems of Long Son Petrochemicals polyethylene operations with industrial AC UPS and DC systems.

Long Son Petrochemicals is Vietnam's first fully integrated petrochemical complex project. Construction started in 2018 and the complex is expected to start commercial operations in the first half of 2023. Facilities will be located on Long Son Island, Ba Ria-Vung Tau Province, 70km southeast of Ho Chi Minh City. Its production capacity is planned for 1.6 million tons of olefins per year including High density polyethylene (HDPE), Linear low-density polyethylene (LLDPE), and Polypropylene (PP). The objective is to serve mainly Vietnam's soaring demand which is currently reaching 2.3 million tons per year, and expected to expand.

Image Credit: AEG

An artist's impression of the Long Son project.

Samsung Engineering was awarded the building of HDPE and Polypropylene process units as well as work for the utilities and offsites which contains substation and cooling tower.

Samsung selected AEG Power Solutions to secure power supply for the communication and safety supervision system, fire alarm and safety lighting systems, safety management control and heating, ventilation and air conditioning systems. consisting of AC and DC UPS systems, with the related back-up batteries. The solution will consist of a combination of Protect 8 UPS and Protect RCS Battery Chargers.

World-first pipeline technology unveiled at Amsterdam conference

WORLD-FIRST PIPELINE TECHNOLOGY which aims to revolutionise performance and safety in industries around the world was unveiled by Forth Engineering at the Offshore Pipeline Technology conference, which was held in Amsterdam in February this year, after first being showcased in Aberdeen last November.

Image Credit: Forth

Mark Telford, Forth Engineering managing director.

The development of the first ever FSWBot, Friction Stir Welding Robotic Crawler for internal repair and refurbishment of pipelines, is designed to transform the way industries deal with pipeline issues. Forth Engineering is working with consortium members TWI, J4IC, Innvotek and LSBU on the project, which will have a major positive impact on safety within the industry. Sponsored by Innovate UK, the project seeks to integrate several state-of-the-art technologies including friction stir welding, milling, patch deployment and ultrasonic NDT, onto a robotic system which can be deployed to conduct repairs on pipelines without the need for the pipeline to be closed down for the duration of the repair.

Forth Engineering managing director Mark Telford, said: "We really like working with companies and organisations who come to us with a challenge and ask us to come up with a solution ... It allows us to try different things until we come up with the method that works best, and through that partnership, and that way of working, a world-first solution is created."

DeepStream mitigates risk in North Sea operations

PREMIER OIL HAS signed a contract with DeepStream Technologies for their SaaS technology to digitise the tendering process within procurement operations. Premier Oil procures a significant amount of equipment and services annually, including many complex packages which involve extensive involvement of procurement, technical and legal teams across the organisation.

This is an intensive process including the exchange of large volumes of sensitive and detailed information with contractors and intermediaries within their supply chain.

DeepStream ensures that the tendering process is more transparent and efficient as well as fully auditable: reducing compliance risks and cost. The platform makes knowledge sharing among teams and reporting more effective, while facilitating collaboration with joint venture partners and other external business associates within the secure communication application. The programme has great potential in Africa where joint ventures are helping many projects move forward in multiple hydrocarbons markets.

Jack Macfarlane, DeepStream's chief executive officer, commented on the North Sea project: "We are not only facilitating a dramatically improved software experience for Premier Oil, but also enabling a secure and auditable tendering platform which removes the compliance risks associated with opaque email-and-attachment driven processes".

www.deepstreamtech.com

ATEX approval for TFX-5000 ultrasonic clamp-on Flow meter

THE DYNASONICS® TFX-5000 transit time ultrasonic flow meter has attained hazardous area certification to ATEX/IECEx Zone 2. The certification covers the Bell Flow Systems models that measure DN65 and larger, making the solution ideal for flow measurement in automotive, waste-water, oil and gas and other general industrial applications requiring hazardous zone approvals.

TFX-5000 ultrasonic clamp-on flow and energy meters are a versatile solution for measuring volumetric flow and heating/cooling rates in clean liquids as well as those with small amounts of suspended solids or aeration, such as surface water or raw sewage. Typical applications include water mains, reclaimed water, lift stations and booster pump stations in water and wastewater or the energy transfer of chilled water (cooling) and glycol/hot water (heating) in HVAC systems as well as produced water in oil and gas applications.

Image Credit: Bell Flow Systems

This meter offers great versatility to operators.

The TFX-5000 meter is available in a variety of configurations and can be selected with features suitable to meet particular application requirements. By clamping onto the outside of pipes, the TFX-5000 meter does not contact the internal liquid. It has advantages, such as reduced installation time and cost, no limits on pressure or fluid compatibility. The meter is available in two versions: a flow meter for water delivery, raw sewage, cooling water, sea water, deionized water, water-glycol mixtures, alcohols, chemicals and acidic or caustic fluids; and a heating/cooling energy flow meter used with dual clamp-on resistance temperature detector for hydronic processes and HVAC systems.

www.bellflowsystems.co.uk

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Three companies join forces to integrate well life cycle development technology

THREE OIL AND gas technology firms have joined forces to offer the global oil and gas industry an integrated and boundary pushing approach to well lifecycle integrity and production optimisation. Churchill Drilling Tools and expandable tubular well specialist Mohawk Energy have joined with Coretrax under its new brand, with a unified innovation offering designed to improve production performance and well intervention efficiencies.

Kenny Murray continues as CEO of Coretrax, which now employs 250 people globally across the UK, Middle East, US and South East Asia. John Fraser, formerly global business development director at Coretrax has been appointed chief operating officer. Former Mohawk Energy CEO Scott

Three companies will share engineering expertise.

Image Credit: Coretrax

Benzie is now chief technology officer at Coretrax.

Michael De-Rhune has joined the new leadership team as chief financial officer. He was previously group CFO at Excellence Logging and has held senior financial roles with Bibby Offshore, CEONA and Subsea 7.

Kenny Murray, CEO of Coretrax said: "Oilfield challenges continue to grow in complexity and our mission is to push boundaries to support the industry with novel and advanced ways to tackle well integrity and production optimisation ... Given current industry challenges with the low oil price and COVID-19, it's ever more important that we support the sector with a continuous focus on reducing rig costs."

www.coretrax.com

Oil and gas digital platform for project management secures big investment

A DIGITAL PLATFORM which could revolutionise the way in which the upstream oil and gas industry resources projects has secured £1.8m of private investment. The brainchild of new start-up technology firm, Xergy, Proteus is a cloud-based work management system that allows companies to find the right people for projects as and when they are needed and enables remote-working for a freelance culture to flourish.

Image Credit: Proteus

Colin Manson of Proteus is confident about workforce transformation.

Proteus facilitates working remotely within a working environment. This removes fixed overheads and improves utilisation rates and project management, while reducing carbon emissions from commuting and travelling. The ERP system within Proteus connects all workflows used by most oil and gas companies. The systems are accessed through an interface designed to simplify workflow, and it connects companies with the best suited freelance contractors for the job.

"By adopting Proteus, as a new way of operating, the working culture in oil and gas can be truly transformed," said Mr Manson.

www.proteus-work.com

Altera uses cloud tech to reduce value chain costs

DEEPSTREAM TECHNOLOGIES IS a collaborative platform for B2B data exchanges including industrial tendering, logistics and project execution. The cloud-based technology reduces costs and drives secure and auditable supply chain informational exchanges. Altera Infrastructure will use DeepStream to assure digital transparency and efficient communication within their supply chain and materially reduce compliance and audit risks inherent in manual emails.

DeepStream has signed a contract with Altera for its SaaS technology to digitise critical B2B exchanges in its supply chain. The cloud-based system ensures that the exchange of data with businesses within the supply chain is more transparent and efficient as well as fully auditable: reducing compliance, risks and costs. The multi sided network technology caters for exchanges between all participants in the supply chain. This securely and digitally facilitates the supply chain to interact within a compliant exchange platform.

Oystein Torlen, Altera Infrastructure head of supply chain, commented: "As we embark on a new chapter as Altera Infrastructure we are determined to drive a transparent, sustainable and efficient digital supply chain. Our adoption of DeepStream marks a significant contribution to those objectives, ensuring that we have best-in-class technology to deliver value, communication auditability and data compliance within our critical supply chain operations."

www.deepstreamtech.com


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