



**Saudi ports modernisation**  
Mawani signs 30-year deal for \$1.86 billion worth of investments at King Abdulaziz Port in Dammam – Page 11



**Production capacity doubled**  
Inma Steel is localising technology to support the oil, gas, petrochemical and mining sectors in the kingdom – Page 13



**Faro measures surfaces to the mm**  
The new BuildIT Construction software analyses surface flatness, steel structures, piping systems – Page 15

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# NO COMPROMISE ON VISION 2030

Saudi Arabia is determined to diversify its economy as enshrined in Vision 2030. Its rise on global development indices is a promising sign the country is moving in the right direction



Logistics and infrastructure policy will play a key role in Saudi Arabia's economic diversification

**T**HE Covid-19 global pandemic will have some economic bearing on Saudi Arabia, which has carried out one of the strictest lockdowns in the region in attempts to contain the disease.

The oil-rich kingdom has swiftly drawn out plans to maintain financial stability. The Saudi Arabian Monetary Authority (SAMA) announced a SR50-billion (\$13.33 billion) program to support the private sector, especially the small and medium enterprises and mitigate any financial impact from the pandemic.

The measures are essential so the country meets its goals outlined in Vision 2030, an ambitious path it set out on in 2016. The leadership's bold foresight then envisioned a country less dependent on oil, economically diversified and transforming into a knowledge economy. Nothing proves that vision more correct than today's oil prices, which have plummeted to new historic lows. For a country, whose bread and butter is oil that can prove devastating.

Saudi Arabia's economy is strongly linked to the revenues generated from its oil sales, which have remained roughly 80 per cent of total government revenues between 2009 and 2018.

But the kingdom is looking for ways to strengthen its non-oil profile to sustain long-term growth. This is also a key objective of the Saudi Vision 2030, which puts the non-oil sector at the heart of the country's economic development. Reducing its reliance on the oil sector is vital for the country's economic diversification.

The vision's key economic goals include increasing the private sector's contribution to gross domestic product (GDP) from 40 to 65 per cent, raising the share of non-oil exports in non-oil GDP from 16 to 50 per cent, and reducing the unemployment rate from 11.6 per cent to 7 per cent by 2030.

It also aims to maximise local content by localising more than \$70 billion of content through programmes such as In-Kingdom Total Value Add (IKTVA) Programme, make economic agents more efficient and increase government revenues by removing domestic energy subsidies and introduce other non-oil revenue items, enabling further government investment. Developing the kingdom's non-oil sector would help it to meet these targets.

According to the Governor of the Saudi Arabian Monetary Authority, Ahmed al-Kholifey, monetary, fiscal and structural policies are all geared towards an expansion

of the private non-oil sector GDP over the medium term.

The IKTVA programme has attracted 468 investments from 25 countries with an estimated capital expenditure of \$6.5 billion, resulting in 44 industrial facilities completed to-date, with another 64 facilities under construction.

Saudi Aramco, a key stakeholder in the Vision 2030, has signed 66 memoranda of understanding (MoUs) and strategic and commercial collaborations valued at more than \$21 billion with international partner companies and entities from 11 countries in several industrial and business sectors under its IKTVA Programme.

These investments will contribute to building an integrated Saudi supply chain and bringing new capabilities to the kingdom.

The agreements have been with companies like Hyundai Heavy Industry, Siemens, Aasia Steel, Oilfields Supply Center (OSC), Al-Khorayef Petroleum, Mitsubishi Hitachi Power Systems, Schneider Electric, Honeywell, Advanced Electronic Company (IT), XDM 3D Printing, Shengong New Materials, XINFOO and Saudi Exports Development Authority.

*Continued on Page 6*





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Yokogawa is supporting KSA Digital Transformation and Innovation Aspiration of Vision 2030.

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HRH Prince Abdulaziz bin Salman bin Abdulaziz, Saudi Minister of Energy, HRH Prince Saud bin Nayef bin Abdulaziz, Governor of the Eastern Region, centre, and other key officials at the 5th IKTVA Forum & Exhibition held in Al Khobar in February

# ... No compromise on Vision 2030

*Continued from Page 4*

## CLIMBING GLOBAL RANKINGS

Fortunately for Saudi Arabia, Vision 2030 took off to a solid start. Official reports have painted a promising picture of how the goals in the vision are being met.

Recently, the National Transformation Program (NTP) released its annual report, reviewing its most significant achievements by the end of 2019. The programme plays a major role in overcoming the challenges to Vision 2030 goals.

The achievements highlighted in the NTP are categorised into three main principles: achieving governmental operational excellence, improving economic enablers, and enhancing the standards of living, and further spread into eight themes.

Eng Thamir bin Abdullah Al-Sadoun, CEO of NTP, says the Kingdom has achieved numerous successes through the programme, which aimed at removing obstacles to doing business in the country.

He says Saudi Arabia was the world's most improved in the annual ranking of the ease of doing business in 190 countries, according to the 'Doing Business 2020' report issued by the World Bank Group. It climbed to 62nd place, from 92nd last year. In this regard, the country had implemented more than 400 reforms through the National Competitiveness Centre (Tayseer) to serve investors, such as: procedures automation, development of regulations, regulations and policies, and enabling the private sector to achieve economic development.

The Kingdom advanced more than 100 rankings, from 141 in 2018 to 38 in 2019, in the 'Business Start-up' index through the launch of the Comprehensive Service Centers (Meras), which offer easy establishment of companies, electronically in just one hour. Additionally, the country rose to 49th position on the index of the most developed countries in the United Nations Trade and Development Index (UNCTAD).

The NTP through the instrumental role played

by the digital transformation plan has contributed to raising the kingdom to second place among G20 countries for its advancement in the digital arena.

## INDUSTRIAL REVOLUTION

As a part of the Vision 2030, Saudi Arabia established the National Industrial Development and Logistics Vision Realisation Program (NIDLP) that aims to transform the Kingdom into a leading industrial power and an international logistics platform, while focusing on the 4th Industrial Revolution in a way that will generate ample employment opportunities for Saudi cadres, boost trade balance and maximise local content.

The programme focuses on four key sectors: industry, mining, energy and logistics. The program also designs and provides a range of essential enablers that include developing appropriate systems, providing the required financing, developing infrastructure, industrial lands and private areas, and enhancing research and innovation.

A key player in the NIDLP is the Saudi Authority for Industrial Cities and Technology Zones (Modon), which oversees the country's industrial cities. There are 35 industrial cities with over 3,500 factories that are leading Saudi Arabia's transformation to a leading industrial power.

Eng Khalid bin Mohammed Al-Salem, the Director General of Modon, says the authority has become one of the pillars of the Vision 2030 and an enabler of industry.

Modon has launched its new strategy aiming to enable the industrial sector, contribute to the development of local industry, strengthen local and global partnerships to attract local and foreign investments that have the added-value, and to transfer and localize industrial knowledge in the industrial cities.

It also launched a number of new products being provided to its industrial partners, and the number of products increased from only 4 in

2015 to 14 products by the end of 2019, and the industrial sector will witness the positive impact of these products on micro, small, and medium enterprises and will contribute to strengthening supply chain in Saudi Arabia.

Additionally, Modon has been very successful in attracting leading global companies to bring in value-added investments. These include General Electric for manufacturing gas turbines, Isuzu Motors for producing trucks, Ebara Pumps Saudi Arabia, Schlumberger for drilling rigs, and Henkel for chemical industry.

Dammam 2nd Industrial City hosts two industrial factories by Siemens. The first factory, covering 70,000 sq m, manufactures gas turbines, while the second factory produces automatic control panels.

Keen on environmental protection, Modon encourages best practices for sustainable development, such as recycling, fighting desertification, and conservation of natural resources.

In this regard, Modon has launched the 'Zero Waste' programme to promote environmental sustainability and to reduce manufacturing wastes into zero waste.

To be in line with the Digital Transformation and the 4th Industrial Revolution, Modon in partnership with the Saudi Industrial Development Fund and King Abdulaziz City for Science and Technology (KACST), has launched the National Productivity Program to support factories in achieving the highest averages of production efficiency, and to enable the factories to adopt the technologies of the 4th Industrial Revolution.

Phase 1 of the program that included working with 20 factories was launched in April 2019 in cooperation with General Electric. Phase 2 will be launched in 2020 and will include 40 factories, enabling them to shift toward the IR4.0 technologies.

## LOGISTICS & INFRASTRUCTURE

Logistics and infrastructure policy will play a key role in Saudi Arabia's economic diversifi-

cation and reform efforts. Vision 2030 aims at making the country a global player in logistics by enhancing the freight transport sector and associated value chain. The modernisation of ports is key to meeting that objective.

Saudi Arabia's ports are witnessing a qualitative shift in their systems and procedures by launching more advanced services in its ports along the western and eastern coasts.

The Saudi Ports Authority (Mawani) recently signed a \$1.86-billion deal to modernise King Abdulaziz Port in Dammam and increase its capacity to an estimated annual handling capacity of 7.5 million twenty-foot equivalent units (TEUs).

Separately, at Jeddah Islamic Port, a \$1.7 deal will see Red Sea Gate Terminal (RSGT) improve infrastructure, equipment and technology by 2050, with annual container throughput capacity growing to 8 million TEUs.

Eng Saad bin Alkhalb, President of Mawani, says the total expected investments in both the Jeddah Islamic Port and King Abdulaziz Port amount to approximately SR17 billion.

Saudi Ports in February handled 20 million tonnes of cargo, with the total number of exported and imported containers reaching 552,000, an increase of 2.46 per cent, compared to the same period of the previous year.

Modon too has increased the number of zones dedicated for logistics by 60 per cent in 2019, compared to 2018. These zones will enable integrating and interconnecting with import, export, and transportation agencies in the public and private sectors.

Some prominent logistic companies that Modon signed agreements with include Naqel in Arar and Madinah, and Starlinks in Jazan, Tabuk, and other zones.

Moreover, Modon's logistic zone in Jeddah 1st Industrial City has been expanded to be a smart logistics zone having integrated services with LogiPoint Company. This zone covers 120,000 sq m land area.



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- **AL-QAHTANI NAILS & GALVANIZED WIRE FACTORY**  
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(Valve production and services)
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(Production of longitudinally welded steel pipes for the production and transportation of oil and gas)
- **VALLOUREC SAUDI ARABIAN CO.**  
(Production of seamless steel pipes for the oil and gas industry according to high technology)
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(Bottling and distribution of drinking water in a variety of containers)

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(Providing business services and representation of companies, import and export for the account of third parties and commercial agencies)
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(Development of land to residential or industrial schemes and investment therein)
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# Schlumberger Spark manufacturing centre is world-class



Schlumberger's facility at Spark ... world-class manufacturing

ON February 24, Schlumberger announced the opening of a world-class manufacturing centre at the King Salman Energy Park (Spark), which supports Saudi Aramco's In-Kingdom Total Value Add (IK-TVA) programme to promote economic growth.

The centre will manufacture well completions technologies including liner hangers and packers and isolation valve technologies, including GROVE and ORBIT ball valves, to help improve the efficiency of oil and gas op-

erations in the kingdom and neighbouring countries.

The first phase of the manufacturing centre, which comprises 105,000 sq m, will create more than 200 new jobs over the next few years and develop a highly skilled manufacturing and supply chain workforce for oil and gas products and services within the region. This is a demonstration of Schlumberger's alignment with the Kingdom's 2030 Vision.

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Jeha ... commitment to IKTVA

the Schlumberger manufacturing centre at the King Salman Energy Park. As the first upstream services company to establish a manufacturing centre at Spark, we are enabling an agile fit-for-basin capability that links research, product development and now manufacturing to the needs of the Saudi market. It is a true demonstration of our commitment to the IKTVA programme by expanding our localisation portfolio bringing our latest technologies to be manufactured in the kingdom," says Ziad Jeha, President, Schlumberger Saudi Arabia and Bahrain.

Schlumberger is the world's leading provider of technology for reservoir characterisation, drilling, production, and processing to the oil and gas industry.

With product sales and services in more than 120 countries and employing approximately 105,000 people representing over 170 nationalities, Schlumberger supplies the industry's most comprehensive range of products and services, from exploration through production, and integrated pore-to-pipeline solutions that optimise hydrocarbon recovery to deliver reservoir performance sustainably.

Schlumberger has executive offices in Paris, Houston, London, and The Hague, and reported revenues of \$32.92 billion in 2019.



The facility will create over 200 jobs





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At Sulzer, we develop, design and produce mass transfer equipment that offer solutions for all your separation challenges. Our portfolio includes state-of-the-art products for distillation, absorption, stripping, evaporation, phase separation, liquid-liquid extraction, crystallization and membrane separation. The recent acquisition of GTC Technology adds a range of refining and petrochemical licensed process technologies to Sulzer's existing process plant design, construction and commissioning capabilities. This includes supply of proprietary equipment, catalysts and specialty TECHTIV® solvents for the licensed technologies.

As a market leader in aromatic extraction technologies using extractive distillation, Sulzer GTC has a unique patented technology application – 'GT-BTX PLuS®', for the refining industry. GT-BTX PLuS® can enable FCC/RFCC gasoline desulfurization with minimal or no octane loss to help refineries produce gasoline that can meet ultra-low sulfur fuel (Euro V) regulations along with the flexibility to produce aromatics. This technology unlocks value for a refinery to increase margins without major capital investment while planning for turnaround upgrades to meet environmental regulations. Among Sulzer GTC's other process offerings are naphtha and C4 isomerization, hydrotreatment (ranging from Naphtha to Residue), refining/petrochemical integration and dividing wall columns.

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# Health of employees, clients prime concern of AYTB

AYTB, one of Saudi Arabia's major industrial contracting services companies, remains vigilant of Covid-19 and has reacted swiftly to the situation by streamlining finances to not only protect the business but also secure the financial wellbeing of its employees, says Mohamed Zain Al-Harbi, AYTB CFO

**A**YTB in its 40-year history has experienced and mastered many challenges and faced various world economic crises, whether it be the low oil prices in the 80s, the market crashes in early 2006 and 2015, the mortgage crisis in 2008 or others.

The current Covid-19 situation doesn't compare to any previous turmoil or challenge as it has not only affected the economy but has attacked a very precious thing: human health. AYTB strongly believes that the health of AYTB employees, their clients and all stakeholders remain a prime concern.

In this regard, the company has put in place the highest safety standards and created a dedicated committee led by the CEO and senior management that follows daily an action plan and process maps covering all possible risk areas.

From another perspective, well-informed and influential finance leaders, however, anticipate situations well in advance and act promptly to weather down cycles, helping their companies emerge stronger than before.

Remarkably, Saudi-based AYTB is one of those vigilant companies that has reacted swiftly to the situation by streamlining finances to not only protect the business but secure the financial wellbeing of its employees as well.

AYTB's CFO, Mohamed Zain Al-Harbi, is leading the finance charge. For him and his team to be ready for all eventualities including worst-case scenarios, they must develop and play various scenarios to evaluate the impact on liquidity, top and bottom lines and the business in its entirety.

A well-thought-out plan in Covid-19 would take into consideration various tiers and elements, such as creditors, customers, cash flows, and company employees, aided by seamless coordination and communication.

At AYTB, the company's finance team has made liquidity management its primary task. There is an increased focus on the collection of receivables and the conversion of any unbilled performance into receivables. A risk considered here is a possible collection shortage from some smaller clients, who might face financial difficulties due to the global business environment.

In this regard, AYTB has found strong support from its very un-



Al-Harbi ... well-thought-out plan

derstanding clients. This rapport with the clients is the result of AYTB's 40-year history of providing trusted and quality services.

Another vital aspect looked into is the management of the current credit limits with the relationship banks while negotiating additional finance sources in the case of any emergency. AYTB has been deliberating and discussing all possible scenarios here and has been in contact with banks from day one.

It is worth mentioning that various Saudi ministries and authorities have been quick in rolling out significant initiatives to support the private sector. These include support from the Saudi Arabian Monetary Authority (SAMA), Ministry of Finance, General Authority of Zakat and Tax (GAZT), Ministry of Interior, Ministry of Human Resources and Social Development, etc.

These initiatives have meant considerable support for companies. And the result was an immediate impact, which was reflected in the demonstrated support by banks to AYTB and other companies in the market.

Meanwhile, a weekly rolling cash flow forecast was implemented from an early stage. This is important for the finance team to keep the development of liquidity under control. It also allows the team to continually analyse any changes in the client's payment behaviour or additional operating expenditure (OPEX) or urgent supplier payment.

In any challenge linked to a significant crisis, the role of communication is crucial for business success, and the AYTB team understands that very well.

The team has been able to establish communication channels with all business stakeholders to regularly inform them about the business status, and any significant development in operations or financial aspects.

The concerns of employees, suppliers and other partners are taken seriously, and all the possible measures are taken to address them.

As a forward-looking company, AYTB believes every crisis and challenge in life has positive sides as well. "As a company, we look to the current situation in its entirety and are trying to find positive aspects in it. This could include finding operating efficiencies, improving the balance sheet, and learning lessons about certain business lines or segments that the company hasn't entered or might reevaluate in the future. We know for sure that the world after Covid-19 will definitely not be the same as before," says Al-Harbi.

In conclusion, the prevalent times might be very stressful and would require tremendous efforts from the CFO and other senior management leaders. However, they also give them great opportunities to learn more about their own business, a chance to look into their personal development, to reflect and analyse all aspects of their lives (by looking at the bigger picture) and find valuable and missing time for their own families.

To everyone, we at AYTB, a family to trust in the toughest of times, say to you please "stay home, stay safe and save lives".



AYTB's head office



# Mawani signs \$1.86bn deals to modernise Dammam port

**S**AUDI Ports Authority (Mawani) and Saudi Global Ports (SGP) in a virtual ceremony signed a 30-year new build, operate and transfer (BOT) agreement with investments exceeding SR7 billion (\$1.86 billion) for container terminals at King Abdulaziz Port in Dammam.

The ceremony was patronised by Prince Saud bin Nayef bin Abdulaziz, Governor of the Eastern Region and participated by Eng Saleh Al-Jasser, Minister of Transport and Chairman of the Saudi Ports Authority; Khaw Boon Wan, Coordinating Minister for Infrastructure and Minister for Transport of Singapore; Eng Saad bin Alkhalb, President of Mawani; and Eng Abdullah Al-Zamil, Chairman of Saudi Global Ports.

According to the agreement, SGP will embark on a development and modernisation program to transform King Abdulaziz Port into a mega container hub and increase its capacity to an estimated annual handling capacity of 7.5 million twenty-foot equivalent units (TEUs). The project will provide more than 4,000 job opportunities in the port and logistics sector.

It is a part of the continuous developments carried out by Mawani in the Saudi ports.

SGP will invest and develop key infrastructure such as berths and container handling equipment, and will more than double the existing container handling capacity of King Abdulaziz Port in Dammam. The investments will focus on environment-friendly and technologically sophisticated systems, including the adoption of automation to develop a modern Saudi workforce.

Al-Jasser says: “The continuous developments in Saudi ports come in line with the national efforts to achieve goals and pillars of our country’s ambitious vision to promote sustainable economic development and raise competitiveness”

He says the agreement enhances logistics, raises the reliability of supply chains, supports local and international trade and contrib-

utes in raising the rank of the Kingdom at the logistics performance index to become among the 25 best countries around the world. The agreement, he adds, also attracts new investments to the national economy, support local content and national industries and increase the national exports and imports that contribute to creating promising investment opportunities.

Alkhalb says the total expected investments in Jeddah Islamic Port and King Abdulaziz Port in Dammam amount to approximately SR17 billion.

Wan says this partnership strengthens the relations and cooperation between Saudi Arabia and Singapore, and indicates a qualitative shift witnessed at Saudi ports in their systems and procedures by launching more advanced services in its ports along the western and eastern coasts.

It is worth noting that King Abdulaziz Port is the largest Saudi port on the Arabian Gulf coast spread over 19 sq km. It has 43 berths and a capacity of 105 million tonnes. It is linked with Riyadh Dry Port by railway, which helps goods from all over the world enter the Eastern and Central Regions of the Kingdom.

The port has modern handling equipment that enables it to handle various types of cargo. It includes two advanced container terminals, one refrigerated cargo terminal, two general cargo ter-



The agreement was signed under the patronage of Prince Saud, top centre

minals, two cement plants: one for exporting black cement and clinker and one for white cement, bulk grain terminal, Iron ore handling terminal, naval vessel manufacture area and gas and oil platform. The port contains a ship repair facility that includes two floating ship docks to accommodate ships up to 215 m long.

Separately, Red Sea Gate Terminal (RSGT) has officially taken over operations in the northern section of Jeddah Islamic Port, significantly expanding its operational capabilities and capacity.

In a 30-year concession agreement signed with Mawani, RSGT will invest \$1.7 billion in infrastructure, equipment and technol-

*Continued on Page 12*



Together, Towards a  
Bright Future for Saudi Youth

## SAUDI PETROLEUM SERVICES POLYTECHNIC

Partnering with petroleum, energy and industrial companies to graduate, develop and prepare quality Saudi technical workforce

SPSP was established to meet the needs of the petroleum services industry and to support the process of Saudization in Saudi Arabia. It was founded in 2008 by the Ministry of Energy, Industry and Mineral Resources, the Technical and Vocational Training Corporation, Saudi Arabian Chevron, Saudi Aramco and Aramco Gulf Operations Company. SPSP is a fully independent, not-for-profit entity, which is governed by a Board of Trustees representing the major stakeholders in SPSP.

### PROGRAMS & COURSES

By maintaining collaboration with our industry partners, **SPSP** develops its programs and courses to meet the specific needs of the petroleum services industry. The programs have been designed to ensure that all graduates exit with certified and accredited core vocational skills and an understanding of the petroleum services industry.

**SPSP** technical specialties include: Mechanical, Electrical, Operations, Welding, Pipefitting, Instrumentation, HVAC, Drilling, Rigging, Scaffolding or Crane Operation & Heavy Equipment. **SPSP** also offers courses in the fields of drilling, heavy equipment and health & safety customized to the needs and requirements of Oil & Gas companies across the spectrum in both Upstream and Downstream.

A new program has recently been launched targeting young engineers with less than 5 years of experience from all engineering disciplines. The program (ACT Eng.) is a first phase certified downstream training and development program, established in collaboration with the French Institute of Petroleum (IFP).



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# ... Mawani signs deals

Continued from Page 11

ogy by 2050, with annual container throughput capacity growing to 8 million TEUs.

“As we begin operations at the northern part of Jeddah Islamic Port, we are very proud to commemorate this tremendous milestone of the RSGT growth strategy, demonstrating our ongoing and long-standing commitment to expansion, modernization, and world-class terminal services,” says RSGT CEO Jens Floe.

By 2023, the expanded RSGT, covering an area of 1.5 million sq m, will have increased annual container throughput capacity to 5.2 million TEUs.

Already able to accommodate Ultra-Large Container Ships (ULCS) of 20,000 TEU class and above, at the end of the first three-year phase of investment, RSGT will be equipped with 24 Super Post-Panamax quay cranes, 67 Rubber-Tyred Gantry Cranes (RTGs), and will offer 4,900 Reefer plugs.

“This carefully planned programme of growth and investment will firmly establish RSGT as the largest logistics gateway, and the busiest container terminal, in Saudi Arabia, and on the Red Sea,” says Floe.

Red Sea Gate Terminal has already signed an Islamic financing agreement with Banque Saudi Fransi and Al Rajhi Bank for the project.



RSGT will invest \$1.7 billion in the Jeddah Islamic Port. Inset, Floe



## Kingdom allocates 54 mining sites

**S**AUDI Arabia has announced key decisions related to the largest allocation process for the country's mining reserve sites, including 54 of them spread over a 4000 sq km area, as part of its efforts to develop this sector under the Vision 2030 programme, reported SPA.

Saudi Minister of Industry and Mineral Resources Bandar bin Ibrahim Al Khorayef said these sites have been distributed in the regions of Riyadh, Makkah, Madinah, Asir, Hail and Najran, where 12 each were allocated to gold ore and copper ore, 9 sites for rare earth elements, 7 for silver ore, 5 for zinc ore, 3 for lead ore, two each for iron ore and quartz ore besides one each for site for tin ore and molybdenum ore.

By identifying these mining sites in various regions of the kingdom, the ministry could achieve a number of goals, including providing the attractive investment environment, providing the data needed by the private sector in this field, and offering opportunities for local and international companies to invest in the utilization of mineral resources, reported SPA.

The Saudi Geological Survey plans to start detailed exploration of the aforementioned mining reservoirs and conduct many detailed studies on it and then make modeling for them and calculate the mineralized sources for each reservoir and site to be presented later as investment opportunities, it added.

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# Inma Steel to double production capacity

**H**AVING recently moved to its new 65,000 sq m facility located in Jubail, Inma Steel is now in the perfect position to capitalise on its extensive experience and expertise by catering to the fast-growing local demand and expanding market.

A subsidiary of Alturki Holding, Inma Steel was first established in 1993 and has over the years built a solid reputation as the leader in custom-built process equipment and maintenance services including equipment installation, mechanical repairs, plant turnaround and shutdown services.

However, now with the new facility set to double its manufacturing capacity and Vision 2030 providing a clear roadmap, the company is looking to further deepen its local footprint.

Speaking about Inma Steel's strategy, the company's Managing Director, Muntaser Kalahji, emphasizes: "We have always believed in localising technology to support the oil, gas, petrochemical and mining sectors in the kingdom.

"Saudi Arabia is a burgeoning economy with all the resources needed to reach its full potential. Also, Vision 2030 has given local companies like Inma Steel the government support they needed to build strategic partnerships and bring the latest technology here. Saudi Aramco IKTVA programme have given an example of how local companies are capable of providing world class products and services."

Furthermore, the company is also focused on increasing local content throughout its supply chain whether it be by way of collaboration; choosing local vendors and partners; or by way of investing in local human resources.

Saudisation is, therefore, not only a cornerstone of Vision 2030 but it is also a belief that Inma Steel lives by, as a way to positively contribute to its community.

"We strongly urge and encourage increased local participation in the labour market of both young Saudi males and females primarily because of our own faith in local talent and its potential to transform the kingdom's future," Kalahji says.

Moreover, in retrospect when analysing the qualities that has helped Inma Steel maintain its position over the past 17 years, Kalahji comments: "In order to move forward successfully, it is important to remember what brought us here and, in this case, our reliability is an asset, for sure. Of all of Inma Steel's values, I believe our emphasis on building trust with our customers has played a major role in ensuring our relationships are positive and thus, long lasting."

This importance assigned to reliability is also reflected in the company's strategy in handling the current Covid-19 crisis. With an Emergency Response Plan in place, Inma has been able to fulfil its commitment to support its customers including Saudi Aramco and Sabic in all their operational needs in terms of manufacturing equipment, providing products as well as maintenance services so as to ensure continuity during the crisis.

Furthermore, this notion of reliability and trust also extends to its own employees as stern precautionary measures were put into place immediately as the coronavirus threat loomed over the kingdom.

"We have procedures and policies in place to ensure we are able to meet our clients' and shareholders' expectations without compromising the safety of our own employees. Thus, the health of our workers is inspected daily, all offices and work-spaces are sanitised

regularly, social distancing is maintained even whilst working, and priority is given to the health and safety of everyone at the Inma Steel premises," Kalahji says.

He further comments: "For us, our promise is sacred. Our promise to provide the very best quality products and services on time for our customers, our promise to preserve the brand and make the best decisions for our shareholders, and our promise to protect the interest of our employees in all aspects. This is how Inma Steel has created a name for itself and this is how we plan on foraging ahead."



Kalahji ... supporting the local energy sector

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Inma Steel's new 65,000 sq m facility in Jubail



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# Sulzer fuelling performance with modern BTX extraction method

Sulzer GTC's GT-BTX separation technology enhances processing of aromatic streams leading to improved recovery levels and increased purity, says the company

**R**EFINERIES and petrochemical complexes can maximise their margins and competitiveness by leveraging aromatics byproducts, such as benzene, toluene and xylene (BTX).

When setting up recovery and production lines for these aromatics, businesses can benefit from Sulzer GTC's GT-BTX technology. By selecting this solution for new or existing facilities, companies in the oil and gas sector can intensify their operations, improve their recovery levels from aromatic streams and increase the purity achieved.

The market for consumables used in industrial chemical processes is steadily growing and larger volumes of aromatics are required to support this expansion. As the building blocks to all aromatic derivatives, the global demand for BTX is also increasing. To serve this market with reliable supplies, forward-looking refineries and petrochemical complexes are investing in new or revamped BTX units.

When doing so, businesses need to implement separation equipment that can recover BTX with high purity levels, so that the substances will be accepted by polymer, solvent or additive manufacturers.

High BTX recoveries can be very energy intensive, especially if conducted via liquid-liquid extraction or azeotropic distillation. This can, in turn, compromise any effort to increase profitability or assure a quick return on investment (ROI). However, there are separation techniques that can support businesses make BTX recovery economically sustainable.

In high-purity BTX recovery applications, extractive distillation has proven more effective. This is a vapour-liquid extraction that relies on the addition of a third component – a solvent – to the hydrocarbon feedstock to change the corrected partial vapour pressure, known as relative volatility, of one or more constituents. In this way, the extra chemical promotes the separation between different substances.

Extractive distillation is to be favoured over other alternatives for a number of reasons. The overall mass transfer is generally considerably higher than in azeotropic distillation units with comparable size and footprint.

When compared to liquid-liquid extraction, extractive distillation minimises the risk of fouling within columns and their internals. It also requires considerably lower solvent volumes and



Refineries and petrochemical complexes can benefit from Sulzer GTC's GT-BTX technology

less equipment. In effect, only two distillation columns are required, rather than one extraction column with a downstream distillation unit.

Overall, by adopting extractive distillation systems, businesses can reduce capital costs by 30-40 per cent and benefit from 20-30 per cent lower energy consumption.

An example employing this extraction method is Sulzer GTC's GT-BTX licensed technology. The setup utilises two columns and advanced solvents to recover BTX from refinery, petrochemical or coke oven aromatics streams, such as catalytic reformat, pyrolysis gasoline or coke oven light oil (COLO).

During the GT-BTX process, the hydrocarbon feedstock is first preheated with hot circulating solvent. The mixture then goes through an extractive distillation column, where it is separated into raffinate (non-aromatic hydrocarbon) and aromatics-rich solvents. Finally, the aromatic compounds are stripped in a solvent recovery column and routed to the purification section, in order to fractionate them and produce chemical-grade BTX.

As a result, Sulzer GTC's GT-BTX technology can help refineries benefit from cutting-edge aromatics separation performance while reducing both capital expenditure (capex) and operating expenses (opex). By using this technology, it

is possible to produce larger volumes of higher purity aromatics in a more efficient way. This means that businesses can increase productivity as well as recover non-aromatics that can be used in subsequent processes, optimizing resource utilisation.

## UNRIVALLED SOLVENTS OF SEPARATION CHALLENGES

While extractive distillation offers clear advantages, there is a great variability in the processes available, resulting from column design and solvent selection. Therefore, refineries and petrochemical complexes should select mass transfer specialists that can deliver optimal results in both fields.

Sulzer GTC Technology can provide support to its customers in the oil and gas industry by delivering high-quality columns and internals as well as selecting the most suitable solvents. The synergies between this group and Sulzer Chemtech's teams lead to enhanced mass transfer capabilities in licensing process-based plant engineering and technologies.

In this context, the elevated level of expertise has led to the development of state-of-the-art combinations of solvents, known as Tectiv solvent, that substantially enhance extraction per-

formance in GT-BTX units. In addition, they support the optimisation of the facility itself, in terms of stability and mass transfer efficiency.

Furthermore, these co-solvents allow refineries to avoid special feed preparations and handle a wide range of BTX feedstock while delivering substances with purity levels of 99.99 per cent wt. per cent or more at high recoveries rates (99.9 per cent or higher).

## SINGLE POINT OF CONTACT FOR TOWER SERVICES

Finally, refineries should choose full-service providers for aromatics recovery projects. By selecting a mass transfer specialist that can provide turnkey projects, installation and start-up activities can be streamlined and the number of subcontractors can be reduced.

By offering complete project support, Sulzer GTC is able to help businesses benefit from GT-BTX units as quickly and efficiently as possible.

Furthermore, the company's Tower Field Services division can carry out planned and emergency repairs, design and implement upgrades on equipment from multiple vendors. In this way, it ultimately delivers continuous support in a timely manner, minimising equipment downtime and optimizing its performance.

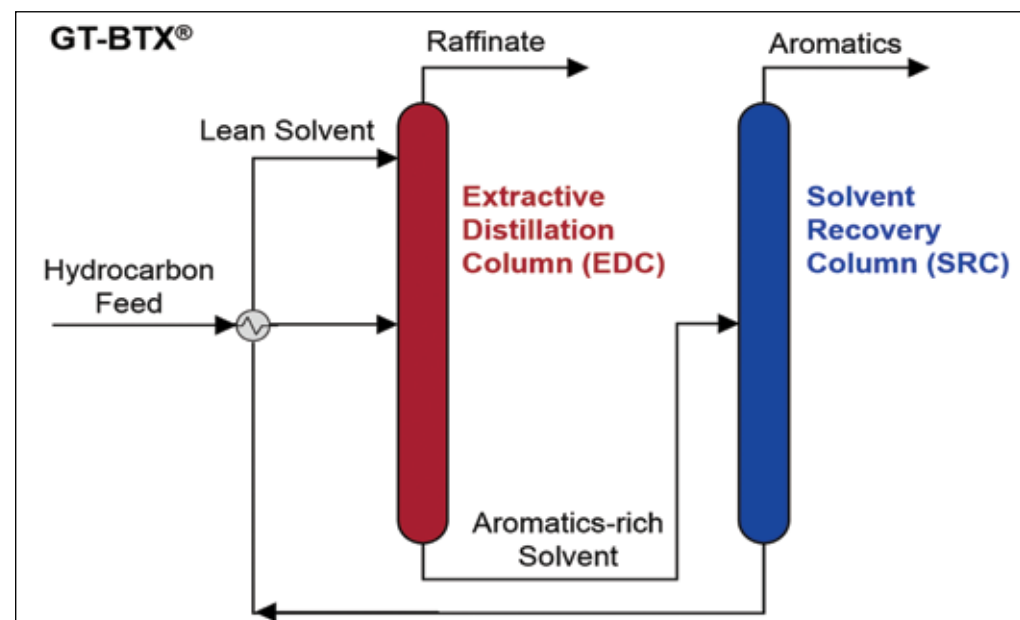
## CASE STUDY: GT-BTX FOR REVAMPS

GT-BTX technology is supporting the revamp of a benzene production unit at a leading integrated petrochemical complex specializing in olefins in Eastern Europe.

By leveraging advanced aromatics recovery solutions, the project will turn the facility into one of the most modern of its kind and allow it to act as a hub for processing pyrolysis gasoline (pygas) from multiple locations.

Thanks to this revamp, the plant will be able to produce higher purity benzene and more efficiently, increase product quality while reducing production costs.

In addition, the facility will be able to recover non-aromatics for subsequent processing, thereby increasing overall in-house capabilities. Furthermore, the higher processing capacity will allow the petrochemical complex to gather full range pygas from various facilities for downstream activities.



Solvent	S/F	Relative Volatility ( $\alpha$ ) n-C7/Benzene
<b>Tectiv® (GT-BTX®)</b>	3.0	2.44
Sulfolane	3.0	2.00
N-methyl pyrrolidone	3.0	1.95
N-fomil morpholine	3.0	1.89
Tri-ethylene glycol	3.0	1.44
Tetra-ethylene glycol	3.0	1.39
Glycol blends (CAROM)	3.0	1.35
No solvent	3.0	0.57

Different Solvent Systems in ED process for Aromatics Recovery



The new BuildIT Construction version not only analyses flatness of surface but also steel structures, piping systems and tanks in real time

# Faro software measures surfaces to exact millimetre

**I**N March, Faro released the latest version of BuildIT Construction, the first fully integrated building lifecycle Quality Control (QC) management tool. The software empowers construction professionals to continuously evaluate projects in real time comparing CAD and BIM designs with reality 3D scan data.

Some of the major improvements of the new version are the support of levelness and flatness analyses according to TR34/DIN EN 15620 or DIN18202 and the support of both American and metric units for analysis according to ASTM E1155.

## HARD CONCRETE - EXPENSIVE REMEDIES

All over the world, analyses are required when pouring concrete floors and ceilings to prove the correct execution of construction work. The protocols supported by BuildIT Construction are used not only in the countries where they are originated but in most countries around the world.

When inspecting small areas, it is possible to measure the fresh concrete for flatness and levelness using walkable auxiliary structures that bridge the fresh area. The measurements are time-consuming; after a grid has been defined, many individual points must be measured manually.

Bridging fresh concrete surfaces with appropriate auxiliary structures is impossible when casting several hundred or even thousands of square meters of industrial floors for factories and warehouses. Until now they could only be measured when the concrete was walkable.

For this purpose, the surface is divided into a grid and the corresponding points are measured with total stations and prisms.

Other methods are the use of spirit level and measuring wedge or walking down the grid with a measuring device that is pulled on wheels behind the person measuring.

The procedures are time-consuming and error-prone, they only record grids or individual points, and the documentation and preparation of the reports is also laborious.

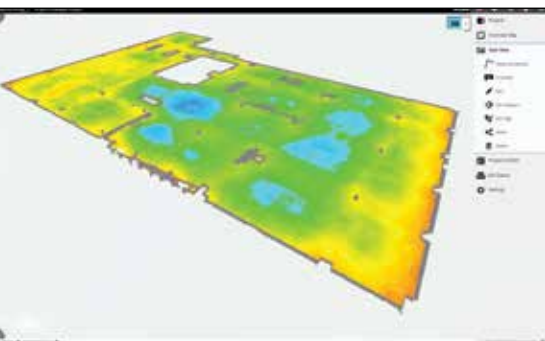
Worst of all, however, measurements can only be taken when the concrete is cured- far too late for corrections. Rework becomes expensive and time-consuming - if it is possible at all.

"You pour a concrete surface and a few minutes later you have recorded the surface in all details to the exact millimetre; without touching it. Then you get a visualisation of the levelness, the inclination, the deviation from your construction model, etc. It enables the contractors to fix the fresh concrete until everything is perfect. That's it," says Udo Haedicke, Product Manager for BuildIT with Faro.

"The documentation and the corresponding protocol are created on the site" he adds.

## MAKING MAGIC WITH SCANNER, LAPTOP AND PROJECTOR

What sounds like magic is a workflow that consists of the interaction of a 3D laser scanner with the analysis software, BuildIT Construction.



Result of an analysis, shared as coloured point cloud in SCENE WebShare Cloud

BuildIT Construction can process data from all common 3D scanners, but also point clouds from other sources like mobile mapping systems, drones or photogrammetrically generated point clouds.

The freshly poured concrete surface is captured by the 3D scanner

like the FARO Focus, which sends the data to a laptop or tablet. The measurement and analysis process takes only a few minutes. The range of the device is 70 to 350 m depending on the model. This

*Continued on Page 16*



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line with latest European – Japanese machinery and technology.

In addition, ASP offers a wider range of complementary stainless steel products, as used predominantly in the Oil & Gas, Petrochemical, Desalination, waste water treatment, and construction sectors. ASP success is dependent on total customer satisfaction from R&D to Delivery. The Company recruits highly skilled professional people to produce high pipes and continuous technical service & support for customers.

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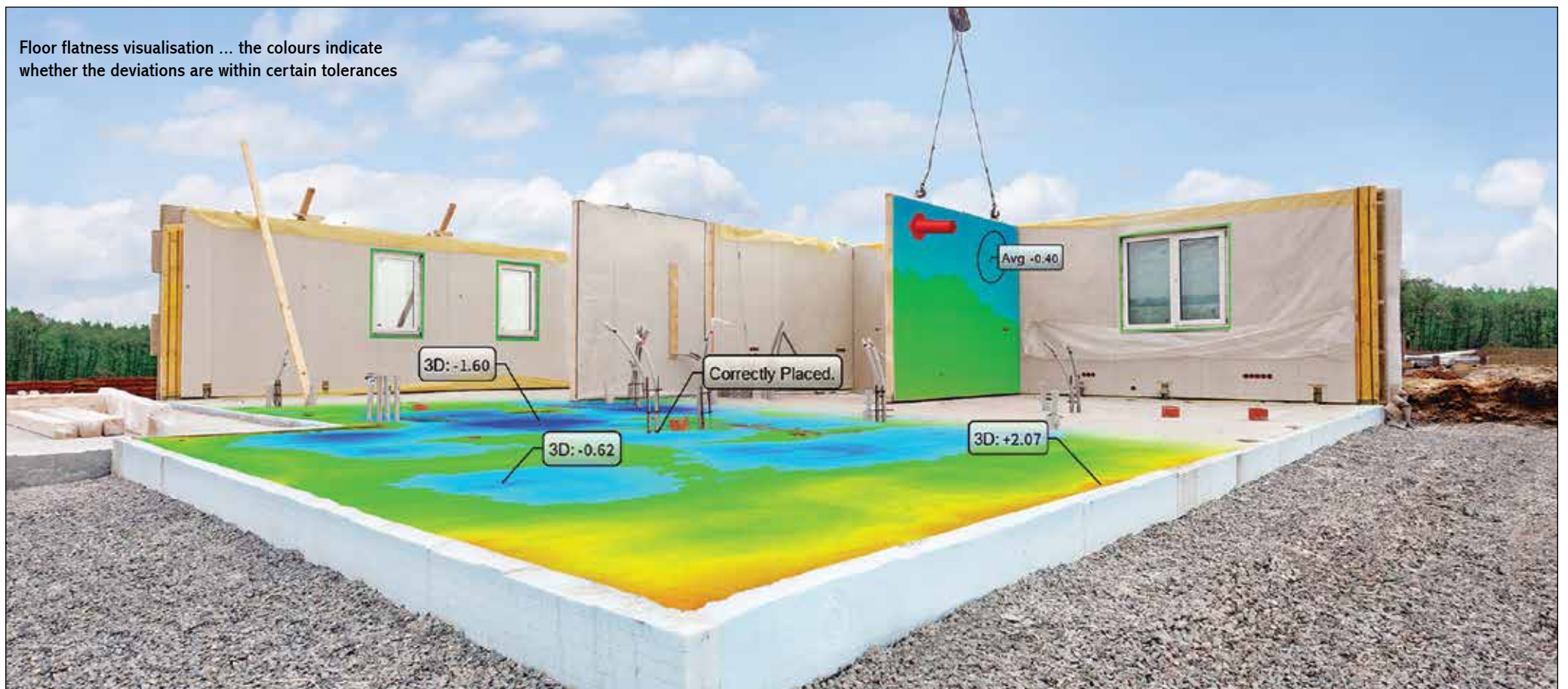
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# ... Faro software measures to mm

Floor flatness visualisation ... the colours indicate whether the deviations are within certain tolerances



Continued from Page 15

means that large areas can be recorded, also from various scanner locations.

BuildIT Construction analyses the data accord-

ing to the selected standard. The results can be visualised in different ways, as coloured areas, as sections, by labels with the measurement and analysis values, as outlines or also by diagrams.

As the process only takes a few minutes, the measurement and analysis can be carried out again immediately after fixing the issue, and the scans can be evaluated and be compared.

"In the prefabrication of concrete parts, BuildIT Construction controls also a laser projector like the TracerSI to display assembly points and geometric objects such as embeds and openings. It can also mark areas that deviate from the CAD model," says Haedicke.

"At the 2019 Autodesk University in Las Vegas, we presented a prototype of a small mobile projector with the same functionalities. Final customer validations on their construction sites clearly show the immediate need for such a projector. They are eagerly waiting to embed the solution in their workflows to visualize deviations to wet concrete".

## ENORMOUS SAVINGS

The use of this workflow provides certainty during construction and saves reworking, which can be enormously expensive for large areas. Whereas larger tolerances can be corrected or tolerated when building small areas in private homes, they have a strong impact on the entire construction when casting large floors of apartment blocks and office buildings.

Particularly high demands are placed on the huge concrete surfaces of factory and warehouse

floors. The assembly of high racks and machinery, which must stand horizontal over long distances, requires plain and level surfaces.

Unevenness would cause forklift trucks, which move loads at great heights, to swing and inclinations would make trolleys and goods roll more easily. The Faro workflow accompanying the construction not only provides documented reliability but also saves expensive repairs.

On the other hand, BuildIT helps to keep specified slopes, for example, to ensure the drainage of water, or to maintain and repair old floors. Here, too, the levelness analyses detects reliably the areas where the floors have deformed or moved.

## UNIVERSALLY APPLICABILITY

Flatness analysis is only a small part of the BuildIT Construction functionality. BuildIT is universally used for construction supervision. The software not only evaluates point clouds according to various criteria, it is also frequently used to compare CAD and BIM models with reality data or to compare point clouds with each other.

Fields of application are not only quality control during construction, but also the monitoring of buildings, industrial plants, tanks and infrastructure are classical fields of application, as well as the use during the modification of existing buildings and plants.

For these purposes BuildIT Construction has numerous special functions, such as the analysis of steel structures, piping systems and tanks, which makes using the software highly profitable in all AEC industries.

The results of analysis reports can be shared worldwide as colored 3D point clouds with all relevant stakeholders leveraging FARO's cloud service SCENE WebShare Cloud. For more information please visit <http://www.builditsoftware.com/>



Quick detection of areas beyond tolerances ... indicated by the value and highlighted in red

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# Sabir aligns efforts with vision

SEVERAL landmark internal decisions in 2019 helped Saudi Basic Industries Corporation (Sabir) emerge as a pioneer in the development of the circular economy – where renewables, resource conservation, waste reduction and recycling contribute to business growth, a recently released report said.

The company continues to invest heavily in Saudi Vision 2030 and has aligned its engagement and collaboration efforts with the vision and with its own goal of creating ‘Chemistry that Matters’.

Sabir’s Sustainability Report 2019 covers performance over the past year and details how sustainability fits into the company’s broader global business strategy.

Titled “Toward a Circular Future”, the report builds on the reputation of the company as a global leader in chemicals that embeds sustainable practices not only into its own business, but also into its entire value chain.

“We are driven by concern for plastics in the environment, the search for new ways to reuse and re-purpose materials, and a desire for effective regulations, especially in packaging. These priorities have led to investments in circular product-solutions and our ability to accept chemically recycled feedstock,” says Dr Abdulaziz Saleh Aljarbou, Sabir Chairman.

Yousef Abdullah Al-Benyan, Vice Chairman and CEO, says: “Sabir witnessed excellent progress and we continued to recognise global concerns for creating a more sustainable society. Demand for circular solutions increased this year, as did opportunities for renewable energy and regional climate regulations. We have circular economy strategies that will lead to industry-leading projects in all our global regions.”

Sabir’s impressive and growing range of circular solutions include a chemical recycling mega-project that will turn mixed plastic waste back into the original polymer; a semi-commercial, pre-treatment facility to increase the supply of chemically recycled feedstocks; and the TRUCIRCLE portfolio of circular solutions, which are already helping Sabir’s customers in several key markets to reach their own sustainable goals.

On the circular economy, Sabir has embraced the ground-breaking TRUCIRCLE initiative. Its solutions encompass the company’s circular materials and technologies, including certified circular polymers from the chemical recycling of mixed plastic waste, certified bio-based renewable polymers, mechanical recycled products, and design for recyclability.

Sabir is determined to increase the amount of circular and certified products it processes in Europe to 200 kilotons by 2025, in line with an EU Commission pledge.

Building on this pledge, Sabir will set a target in 2020 for global circular and certified products by 2030.

In Saudi Arabia, Sabir is enabling the government to fulfill the waste-management enables objectives of Saudi Vision 2030, including commitments to reduce landfill waste and increase collection and recycling.

The Sustainability Report highlights how Sabir works with – and is sometimes a driving force behind – international organisations that are contributing to a sustainable world and helping to tackle some of the biggest challenges facing the industry and the planet.

With climate resilience being central to Sabir’s climate and efficiency goals, the company continuously improves energy efficiency, targeting to reduce the intensity of its energy and greenhouse-gas emissions by 25 per cent from 2010 to 2025.

The company also aims to reduce the carbon footprint of its products and supply chain, while advancing the deployment of renewable energy.



Sabir's Home of Innovation Center in Riyadh, Saudi Arabia

Realsing that it is the future, Sabir is actively transitioning to renewable energy. Its plans to install 4 gigawatts (GW) of wind and solar energy capacity by 2025 and 12 GW by 2030.

Sabir strives to maximise resource efficiency and minimise environmental impact. Last year, its global headquarters in Riyadh achieved carbon neutrality by offsetting greenhouse-gas emissions. The company continues to make progress on its goals to reduce material-loss intensity by 50 per cent and water intensity by 25 per cent from 2010 to 2025.

It is committed to reducing emissions from flaring by 65 per cent, and also reduce hazardous and non-hazardous waste to below 2010 levels, as a percentage, all by 2025.

As part of its contribution to Saudi Vision 2030, Sabir uses local materials and services where reasonably possible, and reduce its reliance on imports, by supporting capable local manufacturers and stimulating employment for the local workforce. In addition, its local sourcing strategy utilises shorter transportation routes, enables a flexible logistics strategy, and lowers carbon emission from inbound logistics.

Sabir believes that cultivating human capital plays a major role in its success. It continues to develop best human resources practices in Saudi Arabia and prepare young Saudis for the emerging labour market by advancing their skills and potential.

Furthermore, Sabir also seeks to help communities across the globe by investing in social and environmental initiatives that benefit people and the planet, while supporting sustainable business development at a global scale

The company’s corporate social responsibility (CSR) initiatives focus on four strategic priority areas: science and technology education, environmental protection, health and wellness, and water and sustainable agriculture, contributing to Saudi Vision 2030 and 10 of the UN’s Sustainable Development Goals.

In 2019, Sabir invested more than \$15.6 million into CSR initiatives that meet these criteria – 185 programmes in 103 cities and 22 countries. Some 2,531 Sabir volunteers contributed a combined 10,874 hours, benefiting more than 340,000 people worldwide.

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# Committed to Vision 2030

Companies in Saudi Arabia have set out goals in line with the Kingdom's ambitious Vision 2030 that include manufacturing locally through IKTVA initiatives, streamlining logistics and supply chains, decreasing emissions, rolling out training programmes for Saudis, and increasing Saudisation in their workforce



## Alkhorayef Petroleum

At Alkhorayef we are proud to be 'made in Saudi' and we are fully committed to the ambitious goals set out in Vision 2030.

For over 35 years, we have provided electrical submersible pumps (ESPs) to the oil and gas and water industries from our headquarters in Dammam. We have grown to become a diversified oil service company with Artificial Lift, Cased Hole Wireline and Production Facilities divisions and export to 11 countries across the Middle East, Latin America, Africa and Asia.

At Alkhorayef we are 'Always Advancing' and have been investing in sourcing and developing the finest Saudi talent at every level. We have implemented a career development program to nurture the next generation of leaders and we champion female nationals in a range of HR, financial, commercial and technical roles, most recently in the motor manufacturing, where a female team hand wind all Alkhorayef motors.

We are also constantly working, in step with the IKTVA program, to enhance the local supply chain and expand our in-country Research and Engineering (R&E) capabilities, doing all we can to develop local competencies and keep our profits in-Kingdom. We too have ambitious goals and embracing Vision 2030 is a key strategy in realising our aggressive international expansion plans.

— Rayyan Mofty, Vice-President Middle East



## Baker Hughes

Baker Hughes has more than 80 years of presence and partnerships in Saudi Arabia, and we continue to build on our presence as an energy technology company adding value to our partners. We're contributing to the Saudi Vision 2030 through technology development, talent growth and localisation of our products and services to strengthen our footprint; as well as deliver focused solutions to address customer and industry challenges.

When it comes to the way we work, we are reducing the carbon intensity of our operations, applying proven low-carbon technologies to help our customers meet their environmental goals, and

innovate for the future of the energy industry.

We are also collaborating with our customers to utilise these technologies and explore new industries to tap into. Our non-metallic joint venture with Saudi Aramco is a great example of how we are transferring knowledge and utilising non-metallic materials to help reduce emissions, contribute to better efficiency and reliability. It also has the potential to apply this expertise into other industries, supporting the diversification of Saudi's economy.

Lastly, our focus on additive manufacturing and digitisation of our everyday operations will be a game changer for the industry and support better outcomes for the customers.

— Zaher Ibrahim, Vice-President, Saudi Arabia, North Gulf & East Mediterranean



## Endress+Hauser- Saudi Arabia

Saudi Arabia's Vision 2030 is a solid road map for the Kingdom's future, challenging the traditional observes and striving to create a new norm.

It is proposed to be a transformational procedure that in the long term will have a great impact on the nation's economy, culture and society.

In my opinion, the principle driver of the vision is that Saudi Arabia has vast potential to develop its non-oil economy and focusing on downstream activities would bring in some of the expected results.

Keeping this in mind, Endress+Hauser took a big step forward back in 2018 and invested \$4 million in building a state-of-the-art calibration and training center in Jubail, drawing on our intrinsic strengths to support the strategic objectives of Saudi Vision 2030.

This premise can cater to the calibration and training requirements of not only Saudi Arabia but also extend the competence to the requirements of the entire region, and is the first and only vendor managed gravimetric calibration facility in the region.

The high quality and globally recognised trainings offered to fresh Saudi engineers and students facilitate in increasing local engineering technical competence which will further aid the Saudization drive.

Endress+Hauser continues to practice equal opportunities at workplace and diversification of workforce, encourage sustainability and safety, and is committed to the Saudi Vision 2030 in more ways than one.

— Mohamed Abdellah, Managing Director



## Applus+ Middle East & Africa

Applus+ in Saudi Arabia is proud to be involved in the Vision 2030 plan through a number of projects and initiatives. We are committed to creating over 200 job opportunities for Saudi nationals over a five-year period, and have developed and implemented a comprehensive training programme for Saudi youth.

We are developing a capacity building programme for employees of the Ministry of Environment, Water and Agriculture, and training young Saudi civil engineers at the Ministry of Transport.

Applus+ is also actively working with the Ministry of Municipalities and Rural Affairs to develop quality assurance systems to improve the cleaning services in the cities. We train inspectors from the Waste Management and Cleaning Departments of the Kingdom's municipalities.

Additionally, Applus+ has helped more than 130 Saudi trainee engineers to qualify as Aramco-approved Technical Specialists and Quality Inspectors.

Applus+ is working on major infrastructure and transportation projects, including the Riyadh Metro Project. We are fully committed to and compliant with IKTVA stipulations and have successfully increased our IKTVA score from 27 per cent in 2018 to 42 per cent in 2019, according to 3rd party IKTVA audits.

— Brian Dawes, Executive Vice-President





### Total Safety

Total Safety fully supports Vision 2030 and the related In-Kingdom Total Value Add (IKTVA) and Saudisation programmes. We are teaming up with schools and

universities to have more Saudi nationals working for us and have a very active hiring programme. Our business grows steadily, so we are always looking for high potential Saudi employees.

Employees get a full internal training programme to learn all aspects of our integrated safety solutions that we offer to our customers. Whether it is in business support, sales, administration or operations, we guide our employees to be successful in their job and provide sustainable learning to grow.

— Peter van der Sluijs,  
General Manager MEA



### S.A. TALKE

The Kingdom of Saudi Arabia is undergoing unprecedented transformation due to Vision 2030 led by His Royal Highness Prince Mohammed Bin Salman. The speed and depth of this change is truly amazing.

We can clearly feel the positive impact on the ground. Mega infrastructures are being built, downstream industries and manufacturing development have picked up speed, and digitalisation of government support services is now at its best.

Saudi Arabia is encouraging and supporting private investment as part of its diversification programme.

Certainly, logistics plays a major role in the economic success of countries. It is the delivery vehicles of goods and services internally and an enabler of international trade.

And Prince Mohammed has placed high emphasis on this critical industry.

We are witnessing several state-of-the-art logistics parks being developed, network connectivity is being brought up to international standards, and major road and rail are all taking shape now. This will play a major part in improving the logistics sector.

S.A. TALKE supports and participates in achieving Vision 2030. We are focusing on attracting and training Saudis in our field and increase their participation in every aspect of our business.

We have further diversified by creating employment opportunities for ladies—a successful venture which we would like to expand in the future.

On the investment aspect, we have committed to develop a 300,000 sq m logistics park in Jubail. This will include temperature control warehouse space, specialised DG storage and ambient storage space. This major investment cements our confidence in vision 2030 and our ongoing support of the local economy.

Saudi Arabia has opened its doors to the world and is still rapidly changing. I am confident that the future ahead is bright, and this transformation will turn Saudi into a global economic powerhouse in its own right.

— Makhlof Benzahia, Managing Director



### NOV Completion & Production Solutions

The Kingdom of Saudi Arabia is a key player in the oil and gas sector in the region and the world. The country provides a healthy investment atmosphere associated with its leveraged geographical positioning.

NOV has for decades dictated its investments and local manufacturing capabilities for the upstream industry. In the past few years, several incentive programs have emerged, including but not limited to Saudi Vision 2030, which provided a platform of incentivized growth in local manufacturing and a base of young local professionals.

Our manufacturing capabilities in Saudi Arabia have reached out to leverage most of the drilling and production echo system, whereas our investments in Saudi Arabia have grown over \$250 million representing a 150 per cent increase from 2015 to the present day. As such, these manufacturing capabilities are the Aramco-NOV JV for rig manufacturing, downhole drilling tools and bits, surface production and processing packages, choke valves and non-metallic spoolable fiberglass pipe.

The investments have leveraged the development of Saudi local suppliers and most importantly the development of the female and male pool of talent. Hence, development and training programs have been put in place and are applied and upgraded continuously.

We can proudly say today that NOV has doubled the number of Saudi local hiring in three years to reach above 50 per cent Saudization ratio.

Our further future short-, medium- and long-term outlook to Saudi Arabia is clearly headed towards more investments in local manufacturing capabilities and the target goal is to achieve over 70 per cent localization.

— Rami Bakir, Vice-President Operations Middle East & North Africa



### Halliburton

Halliburton stands firm in its commitment to the Saudi 2030 Vision through ongoing efforts to increase workforce nationalisation, local content sourcing, and employee development. In the last year, we attained our first workforce nationalisation target of 70 percent, commenced in-house manufacturing of downhole assemblies and developed 42 local vendors to supply parts and

completed products for our operations in the Kingdom and around the world.

Our in-country technology team also engineered innovative new solutions for the Saudi market enabling us to move away from some imported products.

Additionally, we are excited to open the new Halliburton Chemical Manufacturing Reaction Plant in Saudi Arabia in the coming months. Upon the facility's completion, we will be able to begin local manufacturing of specialty chemicals that will help our customers maximise production from the reservoir to refinery and more. It is our largest capital investment ever in chemicals manufacturing and is an excellent example of our commitment to the Saudi 2030 Vision.

— Scott Regimbald, Vice-President, Saudi Arabia



### GSCCO

Gulf Stevedoring Contracting Company (GSCCO), a subsidiary of the GulfTainer Group of companies, has been operating in Saudi Arabia for 35 years.

During this time, the company has operated 20 port and logistics concessions across the Kingdom and moved over 35 million containers, leading the development and economic growth of the Kingdom.

With the announcement of His Majesty's 2030 Vision and under the National Development Logistics Program, the company is further investing in port and logistic operations to handle increased volume of containers, vehicles, bulk and project cargo, supporting the oil and gas and manufacturing industries in the Eastern Province and Yanbu.

Through GulfTainer's Momentum Logistics and GSCCO, we are able to provide an end-to-end supply chain service solution offering trucking, customs clearance, port operations, yard storage, distribution, and document management.

The GulfTainer Group of companies is providing its assets and experience to deliver the 2030 Vision, making Saudi Arabia the primary logistics hub of the region, and enabling it to take its rightful place at the heart of the world's supply chain.

— Jason French, Managing Director



### LogiPoint

LogiPoint is an award-winning developer and operator of Bonded and Re-Export Zones and Logistics Parks in the Kingdom. The company has a rich history of over 20 years of bringing innovation, efficiency and operational excellence to the Saudi Arabian logistics sector and continues to play an important role in attracting international investment into the Kingdom's supply chain and logistics market.

LogiPoint has evolved into a unique platform for local and international collaboration in the field of logistics and supply chain management and is thus playing an active role in transforming the Kingdom into an international multimodal logistics hub in line with Vision 2030.

LogiPoint works extensively with the industry stakeholders including regulatory bodies, logistics and 3PL companies, importers, exporters as well as traders to continuously anticipate and address the needs of the market.

With an eye on the objectives laid out in Vision 2030, LogiPoint is developing the logistics infrastructure of the future through its many Logistics Parks and Zones across the Kingdom, while also highlighting the highly lucrative business opportunities in the Kingdom to the international logistics market.

— Farooq Shaikh, CEO



# ALAR ensures stable hydrogen supply

With hydrogen tipped as the fuel of the future, producers like Air Liquide Arabia are tapping into its potential to play a key role in a clean, secure and affordable energy for tomorrow

**A**IR Liquide Arabia (ALAR) is Saudi Arabia's leading hydrogen partner, with the infrastructure, capabilities and experience to deliver on its promises on innovative gas solutions and efficiencies and help Saudi Arabia to sustain its energy leadership.

Formed in 2007 as a joint venture between Air Liquide and TAQA (Air Liquide is majority shareholder with 65 per cent shares), ALAR was the first company to introduce hydrogen networks in the kingdom. Today it runs an unrivalled hydrogen pipeline infrastructure stretching a total length of 37 km and having a total hydrogen transport capacity of over 500,000 Normal cu m per hour each on both coasts. It boasts operations in Jubail, Yanbu and Qurayyah.

ALAR uses cutting edge technology to produce, store and help customers in Saudi Arabia use hydrogen in the most efficient way possible, resulting in feedstock savings of 20 per cent and the recovery of underutilised hydrogen from off gases that saves 20 per cent of carbon dioxide (CO<sub>2</sub>) emissions.

"We are a partner to the Kingdom in achieving Vision 2030. Our hydrogen infrastructure and industrial gas solutions and technologies have delivered strong performance and value to all our stakeholders in the Kingdom over the last decade," ALAR Olivier Randet, Vice-President, Middle East and India Cluster - Air Liquide, tells Abdulaziz Khattak of *OGN*.

But what is it about hydrogen that makes it seem like a favourite element.

Well, for one, hydrogen plays an important role in the oil and gas industry, particularly during the refining process. Refineries use hydrogen to process crude oil into refined fuels such as gasoline and diesel, and for removing contaminants such as sulphur, which helps prevent acid rain.

Hydrogen is also used in the petrochemical industry for the conversion of various basic feedstocks into intermediate and final products. In the polysilicon industry, manufacturing facilities require large amounts of hydrogen to react with trichlorosilane gas to produce silicon.

But Hydrogen is also dubbed as the fuel of the future and can play a critical role in lowering carbon emissions globally. The Hydrogen Council recently suggested that hydrogen could meet 18 per cent of the world's energy demand by 2050, and contribute 20 per cent of the abatement required to limit global warming to 2 deg C while creating a \$2.5-trillion market that would create 30 million jobs.

Randet says hydrogen is critical to a clean, secure and affordable energy future and has huge potential to lower CO<sub>2</sub> emissions



Randet ... partner to Saudi Arabia's Vision 2030

across sectors in the Kingdom and the Middle East in general, including long-haul transport and chemicals.

Technologies can enable hydrogen to produce, store, move and use energy in different ways. Hydrogen can also store energy from renewables, which is a space that is gaining traction in the region. This is true for the southern hemisphere, where the exposure of the sun allows to produce greater energy from renewables and therefore potentially opening up export opportunities, Randet says.

In a shifting energy landscape and the transition to a circular carbon economy, Hydrogen's role is seen as crucial.

## INFRASTRUCTURE IN YANBU

ALAR's hydrogen infrastructure in Yanbu consists of a global scale hydrogen production site of 340,000 Normal cu m per hour production capacity, which is connected to its 16-km hydrogen pipeline network.

As part of a long-term agreement, ALAR supplies hydrogen to the Yasref refinery in Yanbu. A joint venture between Saudi Ara-

mco and Sinopec, the refinery uses 400,000 bpd of Arabian heavy crude oil to produce premium transportation fuels. Made up of two global-scale hydrogen production units and one purification unit, ALAR's hydrogen production site is located within the YAS-REF refinery premises.

ALAR is also supplying hydrogen through its pipeline network to other leading refineries and large industries within the Yanbu basin.

## JUBAIL PIPELINE NETWORK

ALAR's pipeline network in Jubail industrial basin spans over 21 km, and has a hydrogen transportation capacity of over 200,000 Normal cu m per hour, connecting sources of hydrogen to industries that need it in Jubail I and II.

Through this network, ALAR provides hydrogen not only to large industries, but also to SMEs in industries such as petrochemicals, polysilicone and glass thus supporting the development of the downstream sector in Jubail and the country.

In Jubail, ALAR is focused on hydrogen recovery, utilising what already exists — since hydrogen can be a byproduct of other industrial processes — to meet customer demand and contributing to the creation of a circular economy around hydrogen.

Speaking of hydrogen recovery, ALAR's cryogenic process, which involves cooling and condensing feedstock, allows to recover 97 per cent of hydrogen that would otherwise be wasted, resulting in significant cost benefits and efficiencies for clients.

## COMMITMENT TO VISION 2030

ALAR's disciplined approach to investment, and its development of hydrogen production and recovery allow it to help optimise the Kingdom's natural resources, reduce its CO<sub>2</sub> footprint and contribute to a low carbon society, all contributing to Vision 2030.

As an early investor in the Kingdom, Randet says ALAR will keep developing its infrastructure to supply growing hydrogen needs and contribute to the development of Saudi Arabia's industrial sector.

Its pipeline networks are also significantly contributing to Saudi Arabia's downstream investments and localisation drive.

To help Saudi talent learn and grow, ALAR offers learning and development programmes in addition to partnering with renowned universities aim at developing national talent and helping them flourish in their careers.

"Our IKTVA score of 62 per cent and Saudisation rate of 60 per cent with an annual increase of 5 per cent is a testament to our efforts. In fact, we are the only company among our competitors to have an IKTVA score," says Randet.



ALAR's hydrogen production site in Yanbu



An ALAR SMR unit in Yanbu