

COVERAGE: O&GME AND R&PME AWARDS 2016 CELEBRATES SUCCESS

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INTERVIEW

AUTOMATION PIONEER

Multinational technology giant ABB is involved in some of the key regional oil and gas projects and is transforming the industry with its innovations

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**Per-Erik Holsten,
the head of ABB's oil,
gas, and chemicals
business, talks about
how a dedicated
portfolio is enabling
the global giant to lead
the regional industry
towards digitally
efficient operations**

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PROPELLING DIGITALISATION

WORDS: INDRAJIT SEN

The global oil and gas industry is seeing conventional methods of operations challenged by uncomfortable crude oil prices. Against this backdrop, ABB is demonstrating how the concepts of automation and digitalisation can be applied to oil, gas, and chemicals operations to make them more efficient and productive.

The Swiss-Swedish multinational corporation is celebrating its 125th anniversary this year and has firmly established itself as a pioneering technology leader, working closely with companies around the world to drive the fourth industrial revolution. In the Middle East, where ABB has been a

dominant player for around three decades, the behemoth caters to its clientele throughout the region, as well as in Africa, from its hub in Abu Dhabi.

The technology leader's managing director of the Oil, Gas, and Chemicals business, in an exclusive interview, explains that ABB's industrial offerings are structured into four distinct portfolios. "We are a pioneering technology leader in four key areas: robotics and motion, which provides drive systems, rotating equipment, motors, and machines; the power grid segment, which provides utility equipment for the electricity sector; industrial automation, which provides equipment to industries such as mining, oil and gas, and so on; and the electrification segment, which offers products to various industries and businesses,"

COVER FEATURE

→ ABB's portfolio caters to all businesses in the automation, power, transport, infrastructure, and utilities sectors.

→ ABB is currently involved in two high-profile oil and gas projects in the GCC, an upstream and a downstream venture.

→ Per-Erik Holsten, ABB's managing director of the Oil, Gas, and Chemicals business.

says Per-Erik Holsten, an ABB veteran with a career spanning 30 years, who started out as an engineer at the organisation in 1986.

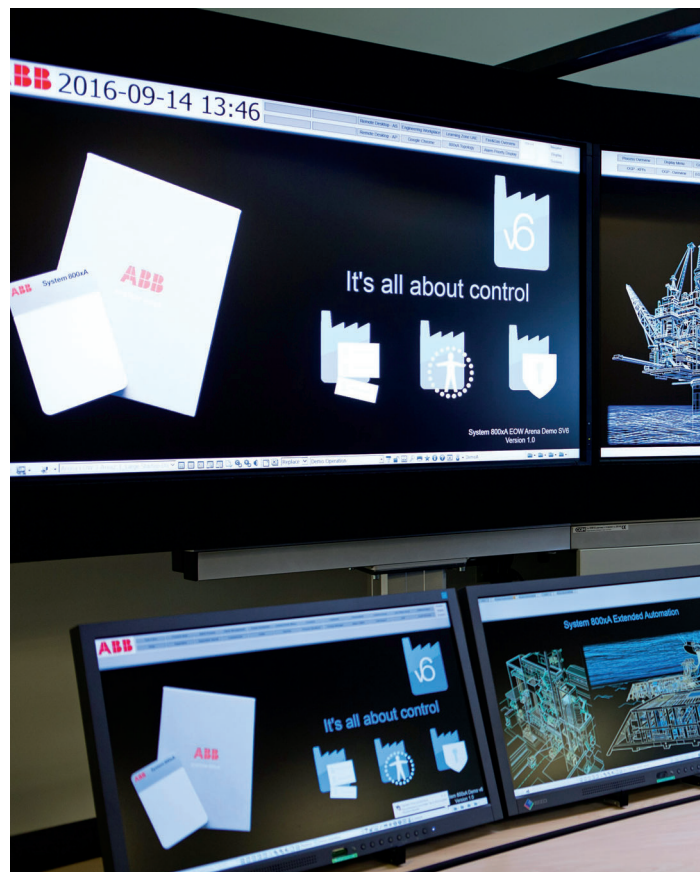
"Our portfolio is wide and covers most of the electro-technical and automation sides. We cover all businesses within the sectors of automation, power, infrastructure, transport, and utilities," he continues.

ABB has an admirable record of serving the region's oil and gas industry with its innovative products and services. The global company boasts of an impressive client base in the oil and gas sector that includes NOCs like Qatar Petroleum, Kuwait Oil Company, and Kuwait National Petroleum Company, and major EPC contractors like Petrofac, Technip, and Saipem. "Our customer base is formed of players that are dominant in the industry, from significant global companies to the national oil companies," Holsten says.

ABB is currently involved in two high-profile oil and gas projects in the region – an upstream and a downstream venture. The company is working on an offshore oilfield project operated by the Abu Dhabi Marine Operating Co (ADMA-OPCO), a subsidiary of ADNOC, and bagged a significant deal in Q4 2015 from the main contractor, National Petroleum Construction Company (NPCC), for the delivery of electrical and telecommunication systems to the Al Nasr full field development, located about 130km northwest of Abu Dhabi.

As part of the contract, reported to be worth \$18mn, ABB is providing electrical distribution systems and equipment, power management and telecommunication systems for the entire Al Nasr project, which will help both ADMA-OPCO and NPCC maintain the highest levels of efficiency, reliability and safety for the development, which Holsten describes as "a large electrical project for us".

"[The Al Nasr offshore oilfield] is a large project and our scope of work is the electrical delivery, which is part of the process power management and forms the umbrella structure of all the electrical offerings of ABB – such as low voltage



"WE HAVE EIGHT REGIONAL CENTRES OF EXPERTISE IN ABB'S OIL, GAS, AND CHEMICALS BUSINESS. FOR THE MIDDLE EAST REGION, ABU DHABI IS WHERE THE LARGEST TEAM IS BASED."



transformers,” Holsten describes. “Process power management involves collecting the electronic signals of the operation and making sure it functions in a reliable way. The technical feature of such a system is that every time you have either a general shutdown or lack of power, or your equipment is sucking [more] power from the system than the normal rate, you’re offloading some of the power. Now that is a critical element.”

With regards to the downstream project, ABB, as the MAC (main automation contractor), is providing integrated power and automation solutions to the Sadara complex in Saudi Arabia – a \$20bn project, estimated to be the world’s largest petrochemical project ever built in a single phase. The project won the Downstream Project of the Year award at the *Oil & Gas Middle East and Refining & Petrochemicals Middle East Awards 2016* (for more, see page 52). Also, as a measure of ABB’s commitment to nurturing and employing local talent in the region, Holsten reveals that the ABB team working on the Sadara project comprises 30 Saudi engineers.

He elaborates: “We have eight regional centres



of expertise in ABB’s oil, gas, and chemicals business. For the Middle East region, Abu Dhabi is where the largest team is based. Now, that is not to [say] that we are focussing only on the UAE, or that our biggest successes have been in the UAE. Our successes in the region lie in different countries. Take, for example, Saudi Arabia – we have built up our capabilities in the oil and gas industry, as our involvement in the Sadara project demonstrates.”

Holsten says that ABB is working on a number of greenfield projects in the Middle East, which have either been recently completed or are at various stages of execution. “We are taking up study or study-type work for some of our customers. Some of the projects are significant and there are some really good opportunities,” he says.

“The region is developing its oil and gas industry towards productivity, and is looking at more efficient measures for exploring and producing oil in a more productive way. ABB is clearly capable of helping with that. Our portfolio is all about driving productivity, and we have several applications that can help, like process power management systems, making sure that the platform is reliable and stable.”

Exhaustive oil and gas offering

ABB has, for decades, been known as a global major, scaling new heights by providing outstanding digitalisation and automation solutions to a whole host of industries. “ABB is in the sweet spot to help our customers face this IoT [Internet of Things] revolution, with more than 70 million connected devices and more than 70,000 installed control systems across the world. That’s the world’s largest installed base of connected

→ ABB's oil and gas portfolio includes telecommunications, electrification and automation services.

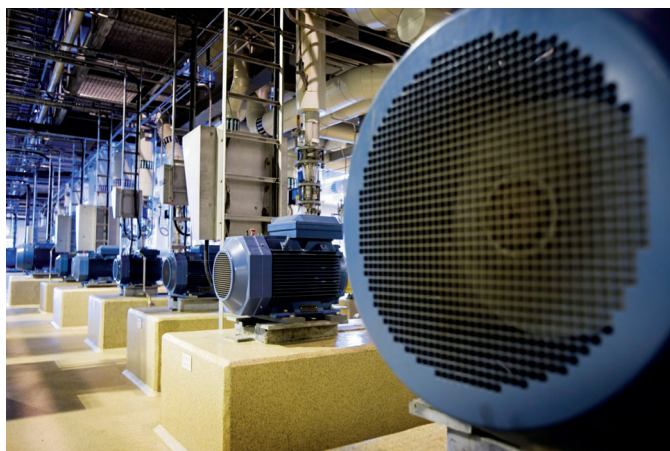
Research and development plays a crucial role in helping ABB forge an innovative path. ↓

industrial devices,” says Holsten. “Utilising this network, we help our customers go further by turning data insights into the direct action that ‘closes the loop’ and generates customer value in the physical world.”

ABB's oil and gas portfolio offering can be clearly segmented in four parts: telecommunications, electrification, automation, and service. When asked about which component in the organisation's oil and gas business line witnesses most demand from the regional industry, Holsten answers: “I see an even interest or demand for all our oil and gas products. ABB is known in the industry for developing high-quality products that improve both efficiency and productivity. I wouldn't say a particular equipment or line sticks out in terms of demand from the region. Our ability to seamlessly integrate across electrification, automation, and telecommunications is where we see customers find significant savings.”

Talking about the impact of digitalisation on this industry, he explains: “Our integrated operations offering is leading the way when it comes to connecting the power of the Industrial Internet of Things [IIoT]. To explain, how do you make sure that your operations, from an end-user perspective, are streamlined in the most efficient way? It is an IoT-driven offering that facilitates collaboration between people and things – tying together engineering, infrastructure, applications, and services, into a single interface. When all of these pieces are tied together, we ensure customers have actionable insights to optimise their performance.”

Quite naturally, research and development (R&D) plays a crucial role in helping the organisation to forge a pioneering, innovative path.



“WE ENSURE CUSTOMERS HAVE ACTIONABLE INSIGHTS TO OPTIMISE THEIR PERFORMANCE.”

Holsten also reveals that, as a global entity, ABB invests a whopping \$1.5bn into its R&D activities annually.

“That is a significant undertaking for us, as an organisation, and oil and gas is obviously part of that effort,” he says.

“In terms of ABB's capability to provide disruptive technologies to the market, that has been tremendous. If you look at our history, we have been a pioneering technology company. We have a significant track record and, within the oil and gas industry, we have quite an offering in the form of the integrated systems and products portfolio, and the power management systems.”

Continuing on the subject of R&D for innovation, Holsten reveals a certain initiative that ABB has been working on. “Our customers want to cut their costs by 30 or 40%. One of the technology developments we are working on to help them do this is subsea technology,” he explains.

“We are integrating seabed equipment with our automation platform to provide actionable information to the remote control room. At the same time, we are making this seabed equipment more reliable and durable than ever before. So you don't have to build an infrastructure for an existing well



\$1.5BN

AS A GLOBAL ENTITY, ABB INVESTS \$1.5BN INTO ITS R&D
ANNUALLY, IN ORDER TO PIONEER TECHNICAL INNOVATIONS

↑
ABB's 2020
strategy for the
oil and gas
sector is all-round
efficiency,
standardisation,
productivity,
and safety.

any more in the subsea field. Our drive is now to bring these solutions to customers around the world, for which we are putting in a lot of R&D."

Sub-par crude oil prices have not just affected oil and gas producers in the region and globally, but have also taken a toll on the industry's service providers. Stakeholders across the board – from upstream companies, to EPC contractors, to technology providers, to consultancy firms – have all had to bear the brunt of the free-fall in oil prices. However, a tough economic climate has led the regional oil and gas industry to strive to become leaner and more effective by digitalising their operations.

"The market has changed for everyone, for sure.

What is most important to ABB during this time is that we help our customers deal with these impacts on the market and stay competitive. We are doing this by focussing on innovative solutions that help cut costs, improve uptime, and reduce project risks," Holsten says.

From a global perspective, the Middle East's oil and gas industry is one where, interestingly, investments are still being made, according to the executive. "We are seeing the [regional] operators coming out with productivity measures to drive up oil prices. I think we will swing back into action soon," he states.

"ABB's 2020 strategy for this important industry is all-round efficiency, standardisation, productivity, and safety. We want to make sure we are serving our customers with exactly what they need [in] this changing market, helping them transform their business with innovative solutions that add real value."

Holsten concludes: "The world is changing. ABB's pioneering spirit for technology leadership is helping our customers lead the way." ○