

EUROPEAN OIL & GAS

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Calculated change

David Delvin on
an E&P supply chain
under pressure

The fast and the furious
Advanced planning
improves refinery
profitability

Protecting pipelines
The dangers of
sand erosion
to vital pipelines

THIS ISSUE: Optimising asset performance



The pressure of pipelines

The history of T.D. Williamson (TDW) dates back to 1920 and for nearly a century the company has traded as a family-owned business. In the first three decades the company's scope grew rapidly, reacting to industry demand for pipeline cleaning and service. Approached by pipeline operators to develop solutions, the business engineered the first form of cleaning scraper, later introducing hot tapping and plugging technology, allowing maintenance to lines without disruption to flow.

Through the development of techniques for intervention and isolation of pipelines, whether high pressure or low pressure, onshore or offshore, steel or polyethylene, and of all sizes, the business has built a reputation in the industry as a technology leader. This position was further enhanced by the acquisition of a pipeline inspection company in 2003 and the further development of the business with the capability to carry out pipeline inspection, corrosion protection and geometry identification.

Danny Haykal, TDW's director for the Middle East and Africa, talks about the company's technology and its future as it continues to develop: "One of our most valued technologies is the SmartPlug® tool, which is an inline high-pressure isolation tool, specialised for subsea applications. The tool can be used to isolate one platform from another in an offshore environment, or to isolate a valve from a platform. Recognised as experts in intervention and isolation, TDW embodies the concept of

find and fix. We are able to assess the condition and understand the major anomalies within a pipeline, and provide a solution to repair the line or isolate and replace entire sections."

Offering comprehensive solutions, TDW provides operators with a truly unique value, an attribute that continues to attract customers of international standing. "Many operators still have the equipment that we supplied to them in the 1960s. We have established very long collaborations with them. They understand the true value of the products and services, and rely on TDW's expertise to meet their day-to-day needs," explains Haykal.

As a family-owned business the decision making structure resides with the owners, who are driven to ensure that regardless of cost and time consequences, no issue shall be left unresolved. This high level of confidence gives the business an edge in an industry that faces tight regulations. Based on its expertise in maintaining production, TDW is able to advise its customers on the best way to maximise throughput and maintain production as pressure increases to maintain and extend the life of ageing pipelines. "If a pipeline was shut down for a period of two weeks for maintenance, it could be very costly for the operator. We are driven to ensure the integrity of the pipelines, per the local legislation. It is a matter of understanding, holistically, the operators' challenges and ensuring that the solutions address these issues. 

Above
SmartPlug isolation system and SmartTrack system by TDW

Below
TDW's SmartPlug tool emerges from temporary launcher





1974
2014
years



o v e r c o m e t h e p r e s s u r e



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Keeping offshore pioneers well connected

Offshore pioneers require top notch communication systems with high levels of redundancy. The North Sea Giant, one of the largest and most advanced offshore construction vessels ever built, relies on state of the art systems delivered by Telenor Maritim Radio. Our solutions are designed to optimize complex operations – even in the roughest and most remote waters.



“The amount of R&D and investment into technology has been enormous. We are working on the customers’ most valuable assets, so it is vital that operations are carried out to plan. We have developed a lot of safety features in terms of the new technology we are offering, not just from an equipment point of view, but also from the method statements and the way that we perform the work,” Haykal highlights. TDW also operates a very thorough training programme with the technicians undertaking comprehensive training before any work on site. “We do not cut corners, we are well prepared, properly trained to several scenarios. We review the risks and make sure that we go through these with plans of what we will do should the need arise,” he adds.

Faced with oscillating conditions, the global business works within regionally varying markets as Haykal points out: “There is a major boom in the US with shale gas, good stability in Northern Europe, and a boom in Russia. However, Southern Europe is experiencing economical difficulties. The revolutionary wave of demonstrations seen in the Arab Spring has really affected the Middle East and North Africa markets, whereas there is strong growth in Far East Asia. This is an industry governed by political movements, which affect production rates and the ability to expand or launch new refineries.”

Utilising its SmartPlug technology, TDW has been busy with many contracts, including a 53km gas export line where the tool was used to hydro-test the line with the requirements of the client, whilst keeping the flow going, eliminating client downtime. Haykal says: “In addition to delivering standard double-block isolation for maintenance, the SmartPlug tool can also act as a block for hydro-testing. The double seal, which is remotely set and monitored topside via the SmartTrack™ communication transponder, once set, requires no further intervention. The control unit switches itself off, other than for the monitoring purposes, and the two seals, which are effectively maintaining the pressure, are energised by the two levels of differential pressure. This independence and redundancy of



the seal is something which is quite unique in the offshore industry.”

Another recent project, completed in Indonesia, where a rig was sinking slowly into the seabed, highlights TDW’s capability to fulfil particular customer needs. By successfully cutting into nine subsea pipe locations to provide simultaneous isolation and constructing a bypass, the rig was then jacked up to a safe height before reconnection without interrupting the flow. With the gas effectively supplying half of Jakarta, over ten million people, it needed to remain live.

“We are focused on response time, planning and how we react to customer needs. Present in more than 50 countries worldwide, we have a major shift now on regionalising our expertise, not just in offices but also in operational execution. The customer needs us to be in front of him ready to resolve pressures and problems with planned action and emergency solutions. By regionalising our capabilities from a technology point of view, equipment, manpower and expertise, we ultimately improve the communication between TDW and the customer. A local presence ensures we can work in line with our customer’s emergency pipeline repair systems (EPRS). And coupled with the new technologies, we are in a position to change the way that operators maintain their pipelines,” concludes Haykal. 

FULGOSI S.R.L.

FULGOSI S.r.l. provides TD Williamson with a range of products that enables fast, efficient and productive operations and the successful completion of projects. FULGOSI was founded in 1974, initially manufacturing rolled and welded large diameter tubes and consequently gaining much experience also in providing flexible, efficient services. At present, the company is also a primary manufacturer of pressure vessels components in its sector and is one of the leading direct dealers to the petrochemical industry in Italy and abroad.

Above
Final preparation prior to a TDW SmartPlug isolation

Below left
SmartPlug isolation tool by TDW

T.D. Williamson
tdwilliamson.com

Services
Pipeline maintenance, modification and repair products

