

Energy and Innovation

While the country is constantly chided for not being an innovation hub, PetroCom's innovative use of the Smart Pumper is but another example of the local energy industry helping to create paradigms for new and sustainable growth.

PetroCom Deploys Smart Pumper Locally and Regionally

In the Trinidad and Tobago energy sector, engineering and automation solutions are frequently imported to address local problems; however, they often turn out to be unsuitable to our specific needs. In one such case, local innovation has been used to create a tailor-made technology solution that precisely fits the local operating conditions.

PetroCom Technologies Limited is currently adding to this local innovation in Trinidad and Tobago's energy sector, by developing and field testing the Smart Pumper Automation and Monitoring System for oil production operations in the Parrylands acreage.

The Smart Pumper automatically controls and regulates any variable frequency drive (VFD) electric, hydraulic motors or valve in response to wellbore conditions or operator input. It also facilitates the inexpensive collection of data from sensors and meters. As a universal platform, the Smart Pumper is equipped with

built-in communication and systems integration giving operators the capability to monitor and control any artificial lift device in real time from anywhere in the world. PetroCom's Managing Director David Borde noted that operator companies deploy the Smart Pumper to drive cost, production and safety efficiency.

"Every oil company wants to decrease down-time, decrease expenditure and increase production. This all becomes feasible with the use of the Smart Pumper. Pump failure results in a great deal of money being spent on part replacement, and leads to down-time losses and a decrease in production. The most avoidable pump failure is caused by either mechanical problems or by low fluid levels in the wellbore. Measurable indicators, for example torque and temperature, are common precursors to mechanical failure. Being able to monitor these indicators is an invaluable asset to a producing oil company.

The Smart Pumper not only monitors such indicators, but it can automatically shut down the pumps when levels become threatening, to keep the equipment safe." The product has also been receiving its share of solid reviews from PetroCom's local and regional clientele.



Smart Pumper™ Automation System

Jim Oberkircher, Director of Fram Explorations Trinidad operations, recognises the difference the product has made in maximising the company's production output and data monitoring capability.

"Our remote block located in the rainforest of Trinidad would not have been as successful without the Smart Pumper automation used in conjunction with Direct DriveHead," he said. "Not only can we remotely control our wells, but we've learned to trust the Smart Pumps to manage our wells. The user interface is easy to use and the well data collected is invaluable".

To date, the technology has been implemented not only in Trinidad and Tobago but also regionally in Suriname by the state oil company, Staatsolie. The Smart Pumper has also been embraced at the international level in China, Canada and in several states in



Smart Pumper™ Installation training



Smart Pumper™ system on water well in Parrylands, Trinidad



Solar powered Smart Pumper™ Gas Lift Application

the United States (such as Texas, Michigan and New Mexico) and Borde contends its usage is only going to grow. "Smart Pumper applications have now expanded beyond the oil and gas industry. The University of the West Indies (UWI) and the Water and Sewerage Authority of Trinidad & Tobago (WASA) have teamed up to use the Smart Pumper to monitor Radon gas levels in observation water wells in Tobago," he added. Borde's vision for Trinidad as the starting base for Smart Pumper innovation is not static and currently, PetroCom also runs a training centre at Parrylands, near Point Fortin, which hosts industry workshops and offers exposure to university students.

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