



The secure platform provides summary views and colour-coded maps that simplify complex analytics into easy-to-understand visuals. This facilitates the transition from periodic to predictive maintenance. Intelligent Asset Management eliminates the need to manually review data, providing a time-efficient, reliable solution giving consistency across multiple sites. Mike Pelezo, Director of Rotork Site Services said: "Our customers have found iAM to be a perfect solution as they journey towards digitalisation. iAM allows the user to utilise the operational and performance data stored inside their actuators to reduce downtime and operational risk. Unlike other performance monitoring equipment on the market today, Rotork has been building actuators with data log capability for over 20 years. Our customers can realise the significant benefits of iAM with very minimal investment outlay."

### IQ3 Pro range

Another of Rotork's key assets is their IQ3 Pro range of intelligent actuators. These can be operated and configured through the Rotork app on a smartphone. The actuator offers intelligent control and communication options.

The app and actuator are coupled by a secure PIN pairing to help prevent unauthorised access. The app offers multiple smart features such as a dashboard that always displays detailed status information and offers easy navigations to all other app functions. These include the valve configuration wizard, a manual configuration tool that allows experienced engineers to take control over all main commissioning settings, a setting tool that gives access to the actuator on-screen setup menus, data logs that enable the user to download data logs from multiple IQ3 Pro actuators. The configuration wizard helps users configure and commission the actuator installed on the valve. It is available for all major valve types and provides an easy, guided setup for engineers based on the valve type chosen. This helps the user confidently set up the valve and includes tailored tool tips if needed for the specific valve. The IQ3 Pro actuators have built-in data loggers which can be extracted using the app. Downloaded files can then be sent to Rotork Insight 2 software or the Intelligent Asset Management system. The data logger can record up to 3,000 events, providing a comprehensive record



*The Hanbay Hero.*

of actuator performance. The data log files include torque and operation, temperature, vibration, and event log information. Other metrics, such as partial stroke profile, maximum starts per hour, and motor run time, are also available. Ross commented: "The IQ3 Pro App compliments the Rotork digital journey, providing the user with a seamless interface between the actuator, smart device and the Rotork Intelligent Asset Management System." He continued: "We have been helping customers specify and size electric actuators for their valve types and applications from on/off to continuous duty for over 60 years. We work closely with our customers to ensure that the actuator selected is optimal for the valve and application. With more than half a million IQ3 multi-turn and part-turn actuators in service, it is one of the most robust actuator designs in the industry, providing exceptional reliability." The non-intrusive design means the actuator can be securely installed and commissioned whilst being permanently

protected from the ambient environment. They can operate reliably without an internal heater at even the lowest temperatures. The key to this proven benefit is the actuator's double-sealed enclosure, combined with 'non-intrusive' setting and commissioning. The separately sealed terminal compartment enables site wiring to be completed without exposing internal parts to the ambient environment. Through oil bath lubrication, the range's lifecycle is also extended, and the actuator can be mounted in any orientation. Typical position encoder designs are very complex, but Rotork's patented IQ absolute encoder can measure up to 8,000 output turns and has redundancy and self-checking built in. If there is a loss of power, the absolute encoder retains the latest position of the valve. Even if the handwheel is used to move the actuator during power loss, the new position of the valve is displayed as soon as power is restored. Additionally, many commissioning tasks can be completed without the need for mains by using the internal 9V battery.



*Keith Barnard, Oil & Gas Managing Director.*

For all actuator sizes, the thrust base types are separate from the main gear case, facilitating easy installation. Without a detachable thrust base, when an actuator is fitted, the engineer has to rotate the actuator onto the threaded stem to mount it to the valve. With a detachable thrust base, the engineer can do this in advance and then mount the electric actuator afterwards, making sure it is safer and a lot simpler. The large clear display provides a 'window into the operation of the plant' and shows



*Mike Pelezo, Site Services Director*

real-time asset management data at the actuator. The advanced display allows large segment character position displays down to -50 °C while the matrix display provides detailed setting, status and diagnostic multilingual screens. For critical areas, an optional Safety Integrity Level 2 (SIL2) Emergency Shutdown (ESD) function. The actuators are certified for use in an SIS up to SIL level 2 for a single actuator or SIL level 3 for two actuators in a redundant



*Ross Pasco, Chief Technology Officer.*

system. These actuators are equipped with the Rotork SIL safety module, which monitors the standard IQ3 control board and provides diagnostic coverage and redundant control to perform the desired safety function. A safety function status relay provides a remote indication of the actuator availability and the redundant safety function operation, with the same status duplicated locally on the actuator display.

### Hanbay, Inc. acquisition

Rotork recently announced the addition of Hanbay, Inc. to the Rotork Group. Through the acquisition of the Canadian Montreal-based company, Rotork has enhanced their product range by adding precise, compact, miniature electric actuators to their portfolio. In addition to their space-efficient and high-torque design, these actuators offer great compatibility with small valves and instrument valves for use in both hazardous and non-hazardous applications. Traditionally, actuation for small valves (typically below 2") and instrument valves has been done through manual or pneumatic operation. However, increased recognition of the benefits of automation and digitalisation is driving the market to more electrification. Rotork can now extend its offering of electric actuation solutions for medium and large-size valves down to these smaller instrument valves, which opens a new technology platform for the company. The Hanbay products are expected to play into this electrification trend and comply with all of Rotork's end markets, including decarbonisation, which has a particular advantage in modular and packaged equipment solutions. The acquisition is part of Rotork's Growth+ strategy. ■



*A look into the IQ Pro app.*