RMG by Honeywell Helps Improve Reliability and Meet International Gas Standards for a China Project

“RMG by Honeywell’s products are excellent in the field and all of the metering equipment conformed to international gas standards and China and Turkmenistan metrology. We were very pleased with the Honeywell service engineer who applied his vast experience for a reliable product commission and operation.”

Project Manager of a China based Petroleum EPC

Benefits
An Engineering & Construction company in China needed to install reliable gas control, measurement and metering tools at its construction area in Turkmenistan. With a new gas exporting station project, the company was looking to partner with a reputable leader in the gas industry.

The upstream pipeline project from Turkmenistan to China was already using RMG by Honeywell metering stations for their custody transfer metering. Using this as reference this EPC also selected the same expertise to help install ultrasonic flow meters, a gas chromatograph and water dew point analyzer and H2S analyzer and cabinet.

Working with RMG by Honeywell, the company was able to install advanced ultrasonic meters ensuring the highest accuracy available. Other benefits included:

- Highly accurate measurements of gas reading data thanks to path geometry, 6-path technology and signal amplitude
- Conformed to and met all international gas standards
- Because RMG equipment was already approved by Turkmenistan and Chinese authorities it enabled an easier startup operation
- Enabled long-term stability of measurements
- With the ultrasonic control computer gas meters were much easier to operate

Background
This company which has been listed in “The Top 225 International Contractors” by Engineering News-Record (ENR) is abundant in financial capabilities and technical strength, and boasts a large group of technical talents and management professional familiar with international practices, high in technological level and rich in experiences.

Challenge
The Engineering company had a new project underway at its gas exporting station in Turkmenistan. The company needed a new metering system to help measure and analyze its gas meters onsite.
The biggest challenge was that of dealing with the strict international gas standards and approvals needed to work in the regions of Turkmenistan and China.

**Solution**

RMG by Honeywell was selected for its leading reputation in the design and manufacturing of gas control, measurement and analysis equipment. Having already achieved success with the upstream of the Central Asia pipeline project from Turkmenistan to China, RMG metering stations were already in place for the custody transfer metering and made the decision an easier one.

RMG by Honeywell provided a complete metering system with two sets of ultrasonic flow meter and ERZ 2000 flow computer, one analysis system which included the PGC9000 gas chromatograph, water dew point analyzer, H₂S analyzer and analyzed cabinet, and any related assembly that was needed.

The ultrasonic flow meter is an advanced measuring system which meets the requirements for accurate and stable measurements. These include:

- Virtually no pressure loss during operation due to the fact that no components are located within the cross section of the pipe.
- Safely protects against overloading since the gas meter has no sensitive components.
- Shortened response time due to the entirely electronic measuring method.
- High accuracy of measurement thanks to multistage correction methods.
- Bidirectional measurements, i.e. measurements in both directions with automatic detection of the flow direction and separated totalizers for both directions.

The RMG advanced ultrasonic meters include state-of-the-art features, such as the path geometry, 6-path technology and signal amplitude, which permit the gas meter to achieve a high accuracy of measurement. Additionally, two-stage error curve linearization can be made, which will even increase accuracy. The first correction uses the calibration curve from air testing, and the second correction the results from high-pressure testing. There will be no offset of the curves for various pressures. Flow disturbance tests have shown that the error of measurement for common disturbances in gas measuring stations is within half of the error range.

“We were very pleased with RMG’s service engineer who demonstrated his experience and dedication in taking on the responsibility of the product commission and operation,” said the Project Manager of the China based engineering company. “RMG products have excellent performance and have helped increase the reliability and value on the accurate measurements which help us make the right business decisions.”