Emerson Flow Computer Solves CNPC Custody Transfer Transmission Error

RESULTS

- Corrected a 12% transmission discrepancy in custody transfer
- Site service determined cause to prevent future errors
- Schedule time was minimized and allowed customer to begin producing quickly
- Provided solution that was approved by Chinese certification agency
- Additional Emerson flow computers will assist on metering system updates

APPLICATION

Natural gas flow metering system at custody transfer point.

CUSTOMER

CNPC Qinghai Oil Field Natural Gas Company, Ltd., Sebei, China.

CHALLENGE

The Sebei field is the origination point in providing natural gas from the Qaidam Basin in Qinghai province to the major CNPC-operated Sebei-Xining-Lanzhou pipeline. The downstream customer did not accept the gas flow results from Qinghai Oil Field Natural Gas Company (Qinghai) as they felt the hardware was not properly certified for use. Because of a 12 percent transmission error discrepancy, the downstream customer’s payout for product received was increased, causing them a fiscal loss.

“We have been very pleased with Emerson’s service and the solution they provided with their FloBoss™ S600+ flow computer. Its certification and performance have demonstrated to our customers that our flow measurement data is reliable and consistently in agreement with their data.”

Mr. Wenjun Ma
Metering Engineer
CNPC Qinghai Oil Field Natural Gas, Co. Ltd.
SOLUTION

Emerson’s Remote Automation Solutions provided an on-site service team to determine the cause of the transfer discrepancy. The team traced the transmission error problems as emanating from the existing metering system that used an RTU controller and ultrasonic meters at the custody transfer point. They recommended a trial use of the newest generation Emerson FloBoss S600+ high accuracy flow computer. The FloBoss S600+ is certified by the General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China, the country’s measurement certification agency. This hardware solution allowed the downstream customer to compare its metering data with that generated by the FloBoss S600. The results were consistent and satisfied the downstream customer. As a result of this Emerson solution, Qinghai has continued to rely on Emerson and has since ordered nine additional S600+ flow computers for updating their metering system in the future.