

Introduction

This describes the measurement system support service provided by KELTON® offering a cost effective service utilising innovative metering support expertise developed over many years. This together with operational experience gained within the fields of engineering, third-party auditing, supervision, project management, field operations & support, training, measurement reporting systems design and production on hydrocarbon measurement facilities for all types of fiscal, custody transfer and allocation measurement applications both in the UK and overseas is invaluable for customers.

Metering System Support

KELTON® fully understand the need for continuing the search for better ways to produce operational cost efficiencies and believe that this can be achieved while at the same time improving system performance and reducing mis-measurement risk exposure. This could be undertaken by 'smarter working' through the extensive use of the KELTON® Fiscal Metering Management software (FM²P®.net) to automate many of the current routine metering system operational and management tasks.

System integrity would be further enhanced as these tasks can be monitored 24 hours a day either locally or remotely and could include checks which perhaps are not currently being undertaken as they are too costly or labour intensive to appear cost effective and/or too repetitive. Benefits include:

- A reduction in operational expenditure from contract year 1 to end of contract
- A reduction in system management expenditure from contract year 2 to end of contract
- Improve system measurement integrity and traceability by the use of FM²P®.net
- Reduce routine onshore system management costs by automating routine tasks
- To automate routine metering system operational tasks

The metering management approach can also deliver other services that could be applied by KELTON® and offer the customer additional benefits in the following services:

- Metering design review for new or existing facilities
- Audit of metering facilities and procedures
- Tracking, trending and analysis of equipment performance
- Traceability to National, International Oil and Gas measurement standards and local regulatory requirements
- Metering equipment spares and test equipment management
- Interface between third parties
- Training and personnel competency
- Mis-measurement reporting
- Remote monitoring

About KELTON®

KELTON® is an independent and accredited company specialising in flow measurement consultancy, auditing, training and the provision of specialist software. Founded in 1991, the company employs more than 50 people with 30 consultants who have over 500 man years of experience in the management, operation and maintenance of flow measurement systems. KELTON® has an outstanding reputation in the industry. Services include:

- Audit and Certification
- Uncertainty Calculations & Models
- Measurement Training
- Engineering Studies
- Metering System Documentation & Support
- Software Applications

Currently service is provided worldwide for; major oil & gas operating companies, gas transmission & distribution companies, LNG terminal operators and system integrators. Presently, service is offered from three strategic locations: UK, Qatar and Abu Dhabi.

If additional information is required on KELTON® flow consultancy services or software applications visit:

www.kelton.co.uk



In support of the above, find below in greater detail the services provided by KELTON® on a regular basis to customers.

Maintenance & Calibration of System Equipment

The primary objective of this service is to provide customers with an insight to a more efficient way of operating metering systems that will provide accurate data with minimum intervention.

Test Equipment

Test equipment can be supplied and maintained by KELTON® such that all required equipment used in the maintenance of the fiscal and custody transfer standard metering systems is covered by the use of equipment traceable to either International or National Standards.

Spares Management

A comprehensive spares list for each site will be produced based on a risk based approach and maintained by KELTON®. Each item would be clearly identified and given a unique part number such that they can be allocated and located efficiently.

Communications

Technical discussions to resolve problems will initially be between personnel on-site and the KELTON® metering specialist.

System Equipment Performance Evaluation

The periodic calibration results for each critical item of equipment on the metering systems will be evaluated at regular intervals with a view to reducing the required maintenance and hence the overall associated cost of the system.

Mis-Measurement Reporting

If an error occurs in the fiscal/custody transfer metering system or the daily reporting the KELTON® metering specialist will compile a report in accordance with the mis-measurement reporting procedure detailing the nature of the fault, the remedial action taken and the corrected production figures for that given period.

Oil & Gas Metering Log Books

A fiscal/custody transfer standard metering log book will be maintained on each site for each of the following, where applicable. This could be either paper or the KELTON® K-LOG®.net electronic log book system, for each meter stream, common equipment and prover equipment and will be maintained in accordance with the relevant procedures.

The Benefits of Metering Management

KELTON® believe that for the customer to gain financial benefits by setting up a metering support service, benefits can only be gained by a long period of commitment between the service provider and customer. Therefore, KELTON® can provide different models for the delivery of the measurement services from between one and five years. The benefits include;

- Use of experienced personnel improving the effectiveness of activities carried out
- Optimal and innovative solutions provided in a cost-effective manner to reduce Opex
- Delivering 'best in class' service for custody transfer metering and allocation equipment
- When specifically requested, the customer can access the services of other specialists
- Production reporting and hydrocarbon accounting review
- Review of data collection and hand-off reporting (SCADA) telemetry systems review
- Manning requirement reviews
- System development/upgrade analysis