



Successful Deployment of the Full Range Multiphase Flow Meter for Production Well Testing - Shrara Fields



APPLICATIONS

- Real-time well performance monitoring
- Production well testing
- Allocation metering
- Fixed at manifold / station and portable production testing
- Challenging flow conditions

BENEFITS - Sharara

- Suitable for all type of wells;
- One meter covers all the wells in the field
- Precise production allocation
- Potential reduction of cost of field development
- Early detection of water production
- No flaring
- Low pressure losses, hence, no production losses
- Simple installation and safe operation
- Acquisition of real-time well test data

SERVICES

- Training of local engineers
- Performance Guaranteed Service
- Frequent Maintenance
- Online Support Service
- 24 X 7 emergency callout support service to customer

JOWFE with its local technology provider “**PETECS**” has successfully deployed **HAIMO Full Range Multiphase Flow Meter (FRMPFM)** into Sharara Field, located West Libya operated by Akakus Oil Operations (AOO). The full range multiphase flow meter is the latest technology in the global multiphase flow metering market and has been lately introduced for the first time to Libya Oil & Gas fields. In addition to that JOWFE-PETECS JV are in the stage of deployment of other leading edge multiphase flow metering technologies and solutions such as High Performance Testers, Wet Gas Meters etc. The full integrated solution & services provided by JOWFE-PETECS JV includes selecting the best technology for each specific field / application, execution of multiphase well testing, data analysis, and most importantly performance guarantee to ensure superior data quality. The service also includes the deployment & maintenance of fixed and portable well testing packages, inter-filed production allocation and early production facilities for onshore & offshore applications.

Multiphase Flow Meter Application for Production Well Testing

In many Libya mature & green fields production well testing is limited by the unreliability and lack of availability of the fixed test separators. Prior industry attempts to utilize the new technology of multiphase metering to fill this gap has been hampered by the limited technology that can be used for portable well testing and the high cost of multiphase flow meters. Majority of the available technologies would require prior information about well & process conditions & fluid properties to ensure good data quality. However, in the majority of oil & gas fields, these sort of information is either limited or unavailable. This article describes the successful deployment of a reliable portable multiphase flow meter for all type of wells & for any process conditions without the need for any prior knowledge of well conditions. The meter utilizes the nuclear technology combined with double venture & a special design of partial separation of gas that enables the a very accurate measurement of WC 0-100% range. The combination of these techniques provides a a reliable metering package that can be mounted on trailer for portable well testing and could virtually could cover all wells in the field (100 to 12,000 BLPD, 0-100% GVF and 0-100 % WC).



Multiphase Flow Meter Deployment for Sharara Field

HAIMO full range multiphase flow meter was subjected to field qualification tests for 3 months prior to a full deployment in a Sharara field. The results from the qualification tests and the performance history during the 3 months of deployment in the field have been analyzed. The well test data from the multiphase flow meter has been compared to conventional test separator & other testing methods such as samples collection & analysis etc by AOO production & operations team in Sharara Field. Comparison between the test separator and the multiphase meter illustrates an average liquid flow deviation of about $\pm 3\%$. The water cut was measured within 1-2 points of the water cut from the test separator.

JOWFE-PETECS JV Well Testing Services

JOWFE-PETECS JV is focused on delivery a complete multiphase flow metering solution. Including in our field services are the deployment & maintenance for fixed installations, performance guarantee contracts, portable testing & production optimization solutions and online support services including 24 X 7 emergency callout support service to customer and training. We currently have 2 additional Portable Full Range Multiphase Flow Metering, 2 High Performance Test Testers (HPT) and 2 conventional 3-Phase Test Separators packages.