

# WELL TESTING SOLUTION FOR LOW PRODUCING WELLS

## Customer

An operator in UAE

## Application

Offshore rotational well testing

## Challenge

An offshore platform requires individual well testing for 11 wells, using one measurement instrument. The metering philosophy adopted was the use of a Roxar™ 2600 Multiphase Flow Meter (MPFM) performing rotational well testing, however this was experienced to be unsuitable for a small number of the wells. 3 of the wells saw significantly lower flow rates than the others, falling outside the operating range of the instrument.

## Solution

There was already a Roxar 2600 MPFM in use on the offshore platform. The goal was to provide flow data for single well streams, for all 11 wells.

The first step was to continue rotational single well measurement for the 8 wells within the operating range of the meter. The challenge of the remaining 3 wells needed to be resolved with a different measurement approach.

Emerson introduced the concept of test by difference. To achieve this, the flow stream of one of the 8 wells mentioned above is first flowed through the Roxar 2600 MPFM. When rotational well testing would, under normal circumstances, change to one of the low flowing wells, the low flowing well stream is instead added to the well currently flowing through the meter.

## Results

- Test by difference approach proven in field
- Individual well stream data provided by the Roxar 2600 MPFM



**Image 1.** The Roxar 2600 Multiphase Flow Meter

# WELL TESTING SOLUTION FOR LOW PRODUCING WELLS

In effect, each of the 3 low flowing wells will see their flow combined with one of the higher flowing wells, when the flow is routed through the Roxar 2600 MPFM.

The flow rates from the initial, higher flowing well are known, and the Roxar 2600 MPFM will then provide the combined flow rates, including one of the low flowing wells. By then calculating the difference within the operator DCS, the flow rates of the individual well streams of the lower flowing wells are established.

This measurement approach was adopted by the operator, ensuring they continue to achieve the individual flow rate measurement they require.

*Test by difference approach used to achieve single well stream measurement for low flowing wells, proving the versatility of the Roxar 2600 MPFM*

## Resources

Multiphase Flow Measurement  
[Emerson.com/RoxarMultiphaseFlowMeasurement](https://emerson.com/RoxarMultiphaseFlowMeasurement)

Roxar 2600 Multiphase Flow Meter  
[Emerson.com/Roxar2600MPFM](https://emerson.com/Roxar2600MPFM)

For more information, visit  
[Emerson.com/Roxar](https://emerson.com/Roxar)

The Emerson logo is a trademark and service mark of Emerson Electric Co.  
Roxar is a registered trademark of one of the Emerson family of companies.  
All other marks are the property of their respective owners.  
©2024 Emerson Electric Co. All rights reserved.

MS-00830-0300-2600 Rev AA, July 2024

**ROXAR**<sup>™</sup>

  
**EMERSON**<sup>™</sup>