Real-Time Well Testing Solution Reduces Costs and Optimizes Well Production

RESULTS

- A highly cost-effective, compact and flexible means of improving production management and well optimization for an offshore Indian operator.
- Combines Bettis Multiport Flow Selector and the third generation Roxar Multiphase meter 2600 (MPFM 2600) to offer an alternative to traditional test separators.
- Entire system is fully accessible remotely, allowing greater flexibility and reduced costs

The solution consists of a compact, multi-component assembly that, through being connected to the Roxar MPFM 2600, and Valve Automation Multiport Flow Selector, provides reduced piping costs, improved HSE with less helicopter and boat transfers, and reduced maintenance and operational costs.

APPLICATION

- Well-testing - replacing test separators
- Unmanned platforms
- Remote operations

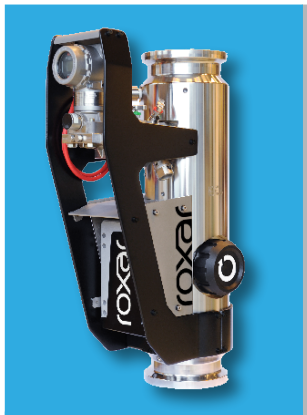
CUSTOMER

Major operator, offshore India

CHALLENGES

The Indian operator wished to progress with an alternative to traditional well test separators. The operator required an effective and reliable well testing system that would optimize production, provide real-time operational data and could be accessed remotely. As the platform was unmanned, the operator wished to minimize transfer of people to and from the platform.

The operator was also looking for a compact solution with limited weight and space requirements due to platform restraints as well as optimal power consumption as most of the power for platforms was provided by solar panels.



Roxar MPFM 2600

Valve Automation Multiport Flow Selector

ROXAR™ For more information: www.Emerson.com/Roxar

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SOLUTION

As an alternative to the limitations of well testing separators, Emerson installed its real-time well testing solution on the Indian operator's unmanned platform.

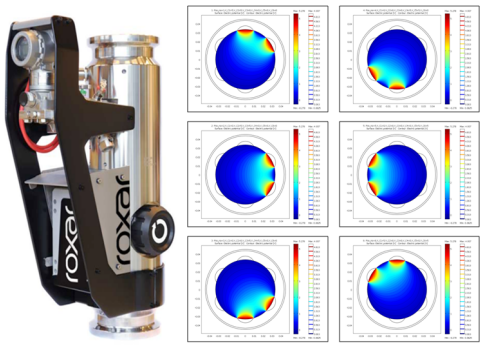
The solution consists of a compact, multi-component assembly that connected to the Roxar MPFM 2600 to Emerson's Valve Automation Multiport Flow Selector. The result is a highly cost-effective, compact and flexible means of improving production management and well optimization.

The Emerson solution supplied has several principal elements:

- The Valve Automation Bettis Multiport Flow Selector
- The Roxar MPFM 2600
- The EIM Electric Actuator
- The HART Communications Interface
- Roxar Fieldwatch Software

The inclusion of the Valve Automation Bettis Multiport Flow Selector (MPFS) allows the diversion of fluids from a single flow line into a test outlet or sampling device. Up to seven wells can be operated by a single MPFS. The Roxar MPFM 2600 supplies the measurement function required, providing full multiphase flow measurement for the well being tested without the need for phase separation.

The Roxar MPFM 2600 allows for highly sensitive, rapid measurements in separate segments, in addition to the full cross-sectional area, and provides a comprehensive mapping of flow regimes. This ability also allows the MPFM 2600 to perform in both multiphase and wetgas modes.



Roxar MPFM 2600 and graphics relating to the Zector® technology electrode plane

SAVINGS

	Dimension	Weight
Typical Test Separator	Length: 5.7 meters Width: 2.3 meters Height: 2.5 meters	15,000 kg
Roxar MPFM 2600	Length: 65cm (3" meter)	150 kg (3" meter)

Table 1: A brief comparison of the Dimension vs Weight savings between a typical test separator and Roxar MPFM 2600

	CAPEX	OPEX
Typical Test Separator	Varies, up to $1.5 million initial investment*	$50-100k/year*
Roxar MPFM 2600	Less than 10% of test separator*	Less than 20% of test separator*

*Note: Can vary

Table 2: A comparison of the capital expenditure (CAPEX) and operational expenditure (OPEX) savings between a typical test separator and Roxar MPFM 2600

For more information:
www.Emerson.com/Roxar

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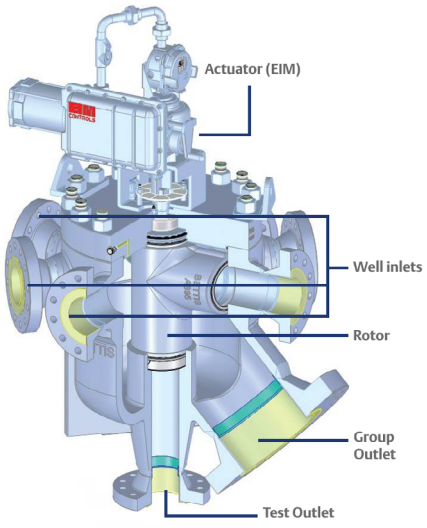
RESOURCES

Roxar
http://www.Emerson.com/Roxar

Valve Automation Solutions
http://www.EmersonProcess.com/Bettis

The Multiport Flow Selector rotor rotates 360 degrees to internally align one well inlet port with the test outlet port. The remaining inlet ports continue to allow flow into the body, and out of the group outlet port.



A cutaway view of the Valve Automation Multiport Flow Selector

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