

Emerson's Fisher Lifecycle Services Cuts \$700K in MRO Costs at HVAC Engineering Design Center with In-House Valve Validation Procedure

RESULTS

- Total site calibration savings of \$700,000 per year
- Annual savings of up to \$14,000/meter
- Eliminated unnecessary downtime
- In-line calibration reduced emissions and helped to maintain ESH compliance
- Reduced risk to personnel due to less handling



APPLICATION

Accurate, timely reporting of the measured use of refrigerant gases.

CUSTOMER

HVAC Engineering Design Center — Syracuse, New York

CHALLENGE

HVAC's facility relocation in 2000 changed the facility's process from measuring water flow to measuring refrigerant flow directly using Micro Motion® meters as the primary measurement tool. They wanted to increase the energy efficiency ratio for their residential chiller units.

The facility faced two major challenges during this process change: validation of their calorimeters and the risk of unnecessary downtime because of the validation procedure. To validate Research and Development improvement claims and meet industry standards, HVAC had to prove that their calorimeters were being held to accuracy standards.

Standard procedure for validation of flow meter calibration requires removal of the meter, posing a safety concern as the meters are large, heavy, and awkward. The meters must then be returned to the factory, leaving the customer without the meter for up to a month. During this time, the facility could either shut the process line down or install a complex and cumbersome system of back-up meters for the change-out with each back-up meter costing up to \$10,000 each.

“The service provided by Emerson saves our company thousands of dollars every year. Their ability for adapting to our needs proved to be a positive asset for our company.”

Engineering Laboratory Supervisor

For more information:
www.assetweb.com/ivs

SOLUTION

Emerson's patented, in-house validation technique enabled the facility to stay up and running, saving time and money, while eliminating the hazard of meter removal and handling.

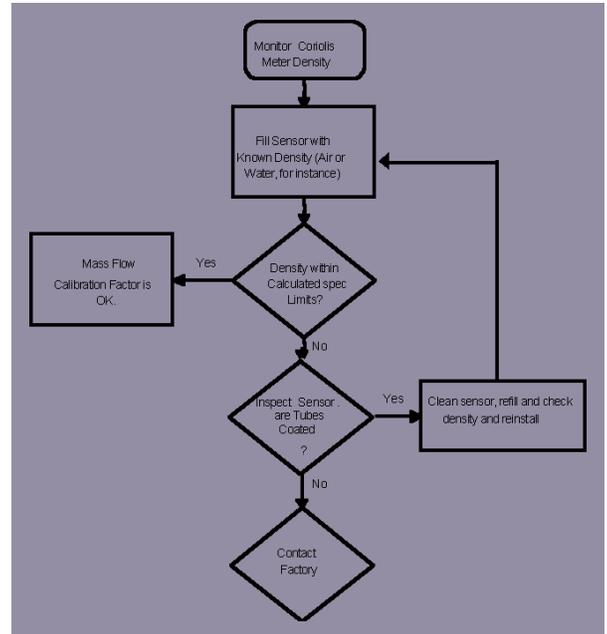
Density measurement is the quickest, easiest, and most cost-effective inline test method available. This method drives testing time down from an average month-long cycle to only 30 minutes. The process also eliminates the need for back-up meters onsite.

To use this patented procedure, a Fisher Lifecycle Services technician takes a density and temperature measurement in situ to be matched within the limits of a known substance and concludes if the meter is calibrated properly. A correct density reading signifies no physical changes with the meter, implying the original calibration is unchanged and therefore accurate.

Light or heavy density readings indicate calibration issues, and the technician then makes a recommendation to either examine the process, correct the issues in the next turnaround, or to send out the meter for further testing.

Emerson's onsite diagnostics encourage proactive maintenance and promote confidence in accurate testing. HVAC experienced annual savings for each of their 70 meters, including the elimination of a \$2400 calibration cost, \$2000 cost of downtime, and purchase of \$10,000 back-up meters.

Emerson's Fisher Lifecycle Services proved to be a valuable partner, saving money, ensuring compliance with regulatory agencies, and providing adherence to quality and safety regulations.



The density-measurement test method drives testing time down and eliminates the need for back-up meters on site.

Emerson Process Management
Asset Optimization Division
Fisher Lifecycle Services
205 South Center Street
Marshalltown, IA 50158 USA

©2015, Emerson Process Management.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

All rights reserved. Micro Motion is a mark of one of the Emerson Process Management group of companies. The Emerson logo is a trademark and service mark of Emerson Electric Company. All other marks are the property of their respective owners.