

LMT200 non-intrusive magnetostrictive level transmitter

Reboiler condensate level measurement



An easy to apply level measurement solution for your toughest applications

Measurement made easy

Reliable and accurate condensate level measurement

Introduction

Reboilers are found throughout refineries and are critical to reliable plant operation. Reboilers are designed to operate with no liquid condensate level. Unintentional condensate flooding of reboilers results in a greater risk of corrosion since corrosion processes occur in the liquid phase. Uncontrolled corrosion can lead to reboiler failure and unplanned shutdown costing billions of dollars.

The application

The customer is a fractionation plant in Houston Texas which produces ethane and propane. The application, reboiler condensate level, is critical to the plant operations. Process conditions: The transmitter is mounted as a non-intrusive device, so pressures are of no consequence.

- Ambient temperature: -2 to 43 °C (28.4 to 109.4 °F)
- Process temperature: 65 °C (149 °F)
- Process pressure: 22 barg

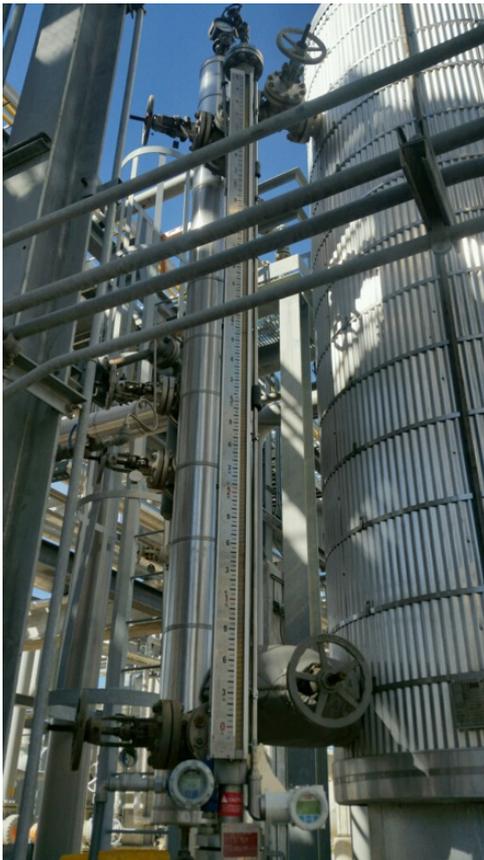
The challenge

The condensate-pot level indicator was unreliable and insensitive to the variations in level-control-valve opening. Condensate-pot level control was poor, and the control valve had to be operated on manual. Finally this competitor transmitter failed and was replaced by the earlier generation magnetostrictive AT200 transmitter years ago. The customer is now looking to upgrade the measurement system.



The solution

ABB offered the advanced next generation LMT series magnetostrictive transmitter for the level measurement. The LMT200 initially was added as a redundant measurement for ensuring the performance and reliability. The customer appreciated the advanced features including the Easy setup, built-in waveform and diagnostics capabilities of the LMT. This resulted in a higher confidence and switched the LMT measurement loop as the primary for the level control through the control system.



LMT200 higher level of confidence in measurement

LMT200 features and benefits

- High accuracy: 0.01 % of full scale or ± 1.27 mm (0.05 in), whichever is greater
- Superior sensor (patent #5,473,245)
- Local indication with HMI display
- Never requires recalibration: set it and forget it
- Dual compartment housing with separate field terminal compartment
- Probe lengths up to 15 m (50 ft)
- Total and/or interface level measurement
- Field replaceable/upgradable electronics module
- Built-in RFI/EMI filter
- 4 to 20 mA HART®, FOUNDATION™ Fieldbus*
- Certified for use in SIL2/3 rated systems per IEC61508
- DTM, EDDL and FDI software available
- Waveform display (no need for an oscilloscope)
- 360° display rotation
- Mounting orientation field changeable
- Standard sealed sensor tube
- NAMUR NE107 messaging

*HART® is a registered trademark of the FieldComm Group

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LMT series with built-in waveform and NAMUR compliant diagnostics

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