

# LMT200 non-intrusive magnetostrictive level transmitter

For a higher level of safety in hazardous applications



Level technology that shall offer accurate and reliable measurements with a higher confidence of safety while lowering the total cost of ownership.

## Measurement made easy

Precise level measurement for environment friendly operations

## Introduction

Ammonia is a colorless gas or compressed liquid with an extremely pungent odor. It reacts violently with water and can seriously damage the skin, eyes and respiratory system. Ammonia vaporization systems are designed for changing the state of anhydrous and aqueous ammonia from liquid to gas form while maintaining the desired pressure conditions and delivering the gas vapors to selective catalytic reduction (SCR) reactors.

Ammonia vaporization changes the state of ammonia from a liquid to a gas. Vaporized ammonia is important for use in industrial refrigeration and in pollution reduction purposes, such as selective catalytic reduction (SCR) systems used to neutralize nitrogen oxides from large electric utility and industrial boilers.

## The application

The customer has a critical ammonia (NH<sub>3</sub>) vaporizer unit used for NO<sub>x</sub> control. The application had an existing K-TEK KM26 and transmitter installed on it since 1998.

- Ambient temperature: 60 °C (140 °F)
- Process temperature: ambient
- Process pressure: 34.5 barg





**LIQUID AMMONIA**

AMT-80A

ANHYDROUS AMMONIA (NH<sub>3</sub>)

NO HOT WORK  
OR WELDING  
PERMITTED

Inventory of Assets  
Date: 10/10/2018  
Location: Area 80



## The challenge

Ammonia is a critical part of NOx emission control at power generation facilities and process plants. Maintaining operation and control of the processes controlling NOx emissions is important for the environment, plant operations and avoiding government penalties for excessive emissions. As part of the safety measures, the customer decided to upgrade this level measurement system.



New LMT200 installed on KM26 MLG

## The solution

The original KM26 was designed with oversize chamber with guide rods so that the effects of flashing on the float would be minimized; and therefore, the local indication and transmitter output would be reliable.

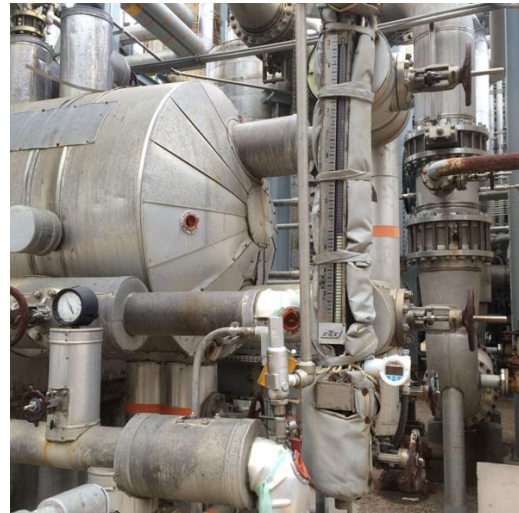
With the new LMT200 non-intrusive magnetostrictive level transmitter which can be mounted outside of the KM26 gauge chamber, exposure to vapors and leak potential are eliminated as a problem when a technician works on it. The LMT being having all global hazardous approvals and certifications also provided the confidence to use in this environment and application.

On installation, the technician only needed to check the signal quality on the built in waveform display which was acknowledged by the customer as a huge benefit for commissioning and troubleshooting. No additional tools or software were required unlike other level technologies.

Sales



Service



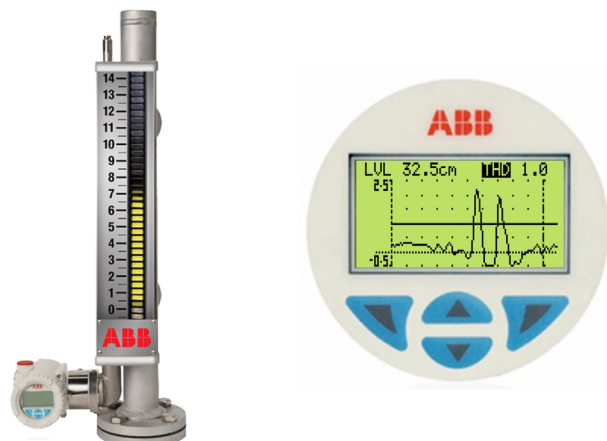
Ammonia level measurement with LMT200 transmitter

## LMT200 features and benefits

- High accuracy: 0.01 % of full scale or  $\pm 1.27$  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 15m (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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Non-intrusive design of LMT200 and built-in waveform

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