

LEVEL MEASUREMENT 'THROUGH THE WALL'

Level measurement using ultrasonic 'through-the-air' principles has been widely used in the process industries for many years, but it has its limitations with regard to the application. Pressurised vessels, varying gas densities and surface foam can all cause loss of the echo signal!

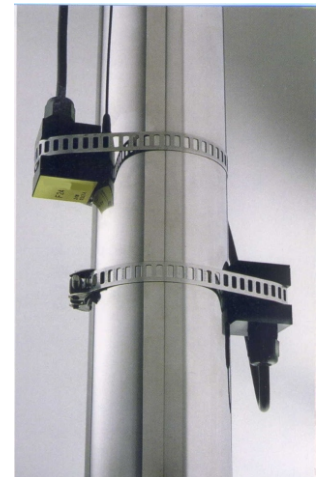
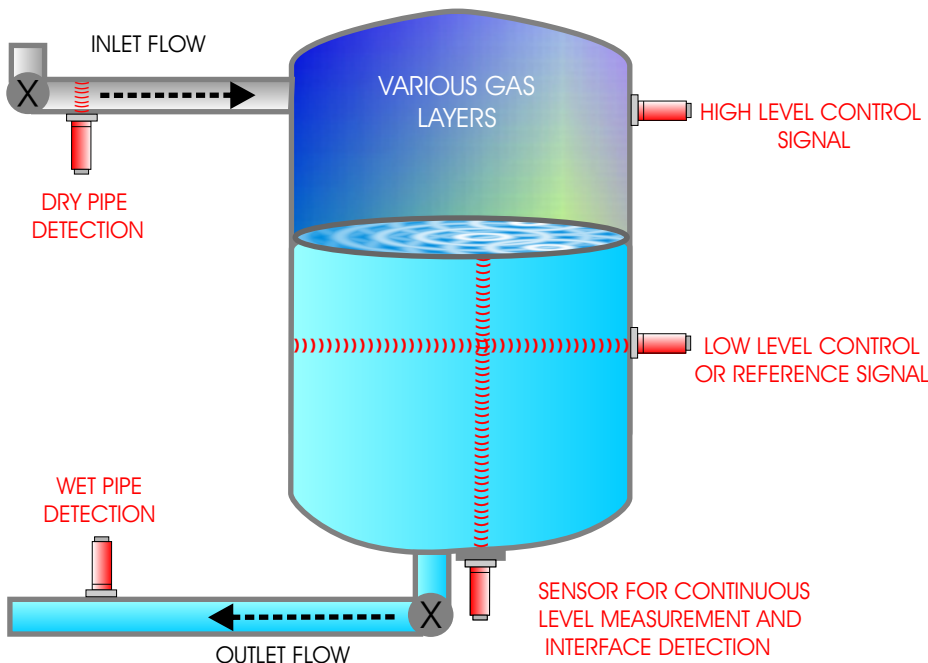
Hycontrol's new non-contact ultrasonic instruments are capable of monitoring levels with novel 'through the wall' techniques which overcome these fundamental problems.

This enables level measurement in totally enclosed vessels without the need to enter or cut into the tank or silo. These systems can provide a wide range of control options, from single point level switching to continuous level measurement and can be installed on a wide range of applications including hazardous and aggressive media.



PRESSURE VESSEL

PRESSURISED VESSEL



DRY PIPE DETECTION

THE ADVANTAGES

- ♦ Easy to install as the sensors are fastened to the outside of the vessel or pipe and there is no interruption of the manufacturing process.
- ♦ Simple to install on existing plant.
- ♦ Ideal for aggressive, toxic, pressurised and sterile applications as there is no contact with the product.
- ♦ Measurement is possible even with foam on liquid surface.
- ♦ Suitable for all hygienic applications.
- ♦ Hazardous area certified for zones 1 & 2 [code EExmIIT6].
- ♦ Will not interfere with cleaning processes.
- ♦ fixed installation and portable units available



LEVEL SWITCH

THE PRINCIPLE

The instrument transmits a pulse of high frequency sound from the transducer attached to the outside of the tank or vessel. This pulse passes through the tank wall and through the fluid until it reaches the fluid surface. It is then reflected back to the transducer and is received as a transit echo. The micro controller times this reflection and with the aid of patented window technology, calculates the distance accurately and reliably.

CONTAINER AND PIPE MATERIALS

- ◆ Steel ,stainless steel and other metals.
- ◆ All types of plastic including PVC and compound materials.
- ◆ Enamelled containers.
- ◆ Glass and glass lined vessels

APPLICATION EXAMPLES

- ◆ Level measurement of liquids and liquified gases.
- ◆ Wet and dry pipe detection.
- ◆ Pump protection from dry running or air lock.
- ◆ Distance measurement in pressure vessels.
- ◆ Ice level detection
- ◆ Detection of air and gas bubbles in pipes and flexible tubes
- ◆ Leakage detection of double lined tanks .
- ◆ Cylinder position sensing.
- ◆ Interface detection between different liquids e.g, oil and water.
- ◆ Overflow protection.
- ◆ Emptying and filling process controls .

INDUSTRIES SUPPLIED

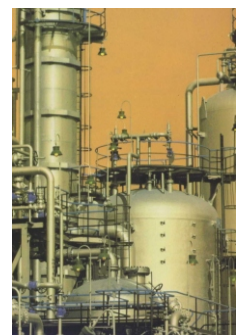
- ◆ Chemical
- ◆ Pharmaceutical
- ◆ Food
- ◆ Biotechnology and Medicine
- ◆ Power Generation Industries
- ◆ Automobile
- ◆ Water and Waste



PORTABLE UNIT



TRANSDUCER
VARIATIONS

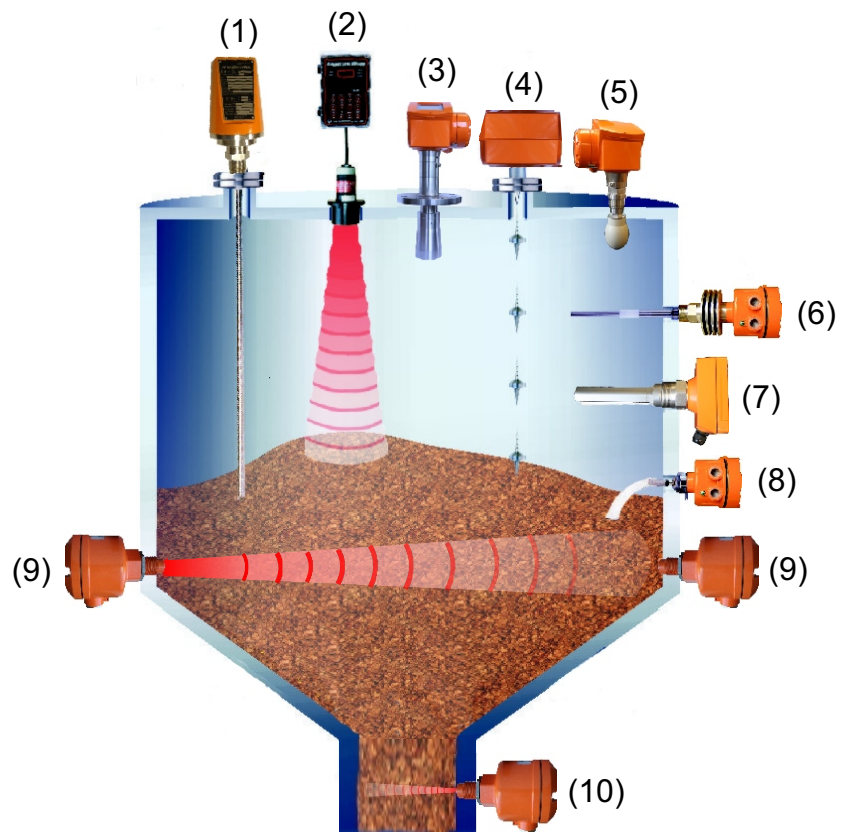


PETROCHEMICAL
SITE

HYCONTROL LEVEL TECHNOLOGIES

Product Range For Solids :-

- (1) TDR Radar For Solids
- (2) Ultrasonic, 'Through Air'
- (2) 2 Wire Ultrasonic Transmitter
- (3) FMCW 2 Wire Radar
- (4) Continuous 'Servo' Level Indicator
- (5) FMCW 2 Wire Radar
- (6) Capacitance Level Switch
- (7) Vibrating Probe Level Switch
- (8) Rotating Paddle Level switch
- (9) Microwave Level Switch
- (10) Doppler Flow Switch



Product Range For Liquids :-

- (1) By-Pass Level Indicator With Radar
- (2) TDR Radar For Liquids
- (3) 2 Wire Ultrasonic Transmitter
- (4) FMCW 'Horn' Radar 2 Wire
- (5) Magnetic Float Switches
- (6) FMCW 2 Wire Radar
- (7) Capacitance Level Switch
- (8) RF Admittance Level Switch
- (9) Side Mounting 316 SS Float Switch
- (10) Tuning Fork Level Switch
- (11) Tuning Fork Level Switch
- (12) Ultrasonics 'Through Wall'
- (13) Mini Magnetic Float Level Switch

