

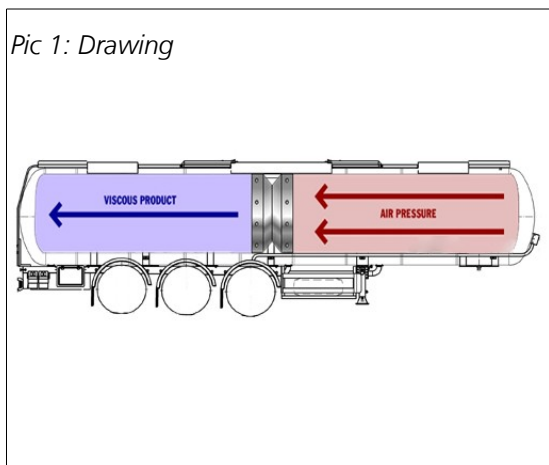
DIMETIX APPLICATION EXAMPLE

AE-0504

LEVEL MONITORING IN TANKER TRUCK

Industry : Logistics
Application type : Position measurement

Brief description



The Dimetix laser distance sensor has been used to retrofit piston trailers commonly used to transport viscous materials, such as peanut butter, chocolate, and grease. The Dimetix laser monitors the position of the internal piston as the tank is filled or the tank's contents are pumped out under pressure. The laser has proven to be a reliable non-contact method of monitoring piston location for piston tanker operators.

Accurate and reliable piston location monitoring is important for inventory control both when emptying and filling a tanker overfills occurring when the piston contacts the front head can also cause structural piston damage.

A piston tanker is a tanker truck with an internal piston running its length. Cargoes of highly viscous bulk materials are unloaded from the cylinder by applying air pressure to the piston that travels the length of the cylinder. In this application, a Dimetix series laser distance sensor is mounted on the trailer to measure the piston location. The laser used in this application is class II eye safe and measures with a system accuracy of 3 mm, but can also be equipped with a laser capable of up to 1 mm accuracy.

Integrating the Dimetix laser sensors on the piston tanker improved process quality and reduced waste by accurately monitoring piston position so that the material volume unloaded could be maximized. The system used in this application also provided the following advantages:

Customers advantages

- No contact with the material being transported
- Measurement range extends the entire trailer length
- Minimal maintenance – no breakable moving parts on laser
- Simple analog monitor displays level of material in tank
- eyesafe Laserclass 2

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