



## APPLICATION NOTE Food & Beverage

### Inventory of mustard using non-contact level measurement

- Continuous level monitoring, no risk of overfilling the vessel
- Correct amount of product supplied at the correct time
- Maintenance-free measuring devices

#### 1. Background

Inventory must be checked regularly to ensure that the finished product is continuously supplied to the filling area. The minimum or maximum levels of mustard in the tanks were previously detected using limit switches. Mustard production only started once the minimum limit had been reached which often resulted into shortages.

#### 2. Measurement requirements

A mustard producer in France was looking for a suitable measurement solution for his new warehouse. This included the installation of several non-pressurized buffer tanks that were 4-5 m / 13-16 ft high. The task was to continuously measure the level of different varieties of mustard in these tanks. Continuous measurement would permit the operators to study usage trends and make sure that the finished product is ordered at the appropriate time and supplied in the correct amounts. The customer requested non-contact measurement.

### 3. KROHNE solution

KROHNE delivered several OPTIWAVE 7300 C FMCW radar level meters with DN 80 / 3" Drop antennas made of plain PP. One device was fitted on each tank roof. This contact-less, 2-wire transmitter continuously measures the level and thereby calculates the product that remains in each tank.

### 4. Customer benefits

This solution allows measurement of the product level in the tank at any time, enabling the user to optimize supply inventory and reorder batches in a timely manner, without the risk of overfilling the tank. Measurements can also be taken during the filling process. No costly aiming kit is required to install these devices due to their compact design and exceptionally high signal dynamics – an advantage of using FMCW radar technology. Deposits on the antenna are prevented thanks to the ellipsoidal shape, smooth polypropylene surface and completely encapsulated design. This eliminates the need for purging systems or periodic cleaning. The meters come pre-configured; at the time of their commissioning, only a few parameters such as tank height and blocking distance need to be programmed into the transmitter. The OPTIWAVE 7300 gives stable and reliable measurement results while being simple to set up and use.

### 5. Product used

#### OPTIWAVE 7300 C radar level meter

- 2-wire FMCW 24...26 GHz radar
- Continuous, non-contact level measurement
- Maintenance-free
- Calibrated at the factory
- Wizard driven setup
- DN 150 / 6" Drop antenna for measuring range up to 80 m / 260 ft



#### Contact

Would you like further information about these or other applications?  
Do you require technical advice for your application?  
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