



APPLICATION NOTE Chemicals

Loading tanker at manufacturer of road building materials

- easy to operate loading station for filling tankers
- product temperature up to 90° C
- reliable quantity measurement of mass to be filled

1. Background

A manufacturer of road building materials in Switzerland fills thermally insulated tankers with the various end products. In the past, visual inspection or rod measurement from the top of the tanker were the only ways to see if the desired fill volume had been achieved. The products must remain in liquid form until use, which means that the temperature must be a minimum of 80° C e. g. for a bitumen water solution. For billing purposes, the quantity supplied is determined by weighing the tanker before and after filling.



Tanker being filled

2. Measurement requirements

The road building materials manufacturer wanted a cost-effective and reliable method of filling the tankers using a loading station that could be manually operated. It had to be easy to operate, meaning that all the user needs to do is input the quantity to be filled as a weight. In addition, the filling of the tanker was to stop automatically once the previously set quantity had been reached. A scale would then be used to enable precise billing of the quantity supplied.

3. KROHNE Solution

KROHNE supplied the OPTIMASS 1300 C mass flowmeter, version S50 / DN 50 / PN 40, in conjunction with a BM 110 C batching master for metering for the manual loading station.

To start filling, only the weight needs to be set on the BM 110 C batching master (e.g. 15 tonnes).

Once the preset quantity has been reached, the BM 110 C batching master ends the filling process.



Filling plant

4. Customer benefits

As the OPTIMASS 1300 C mass flowmeter can measure both temperature and density, the need for any recalibration is eliminated, even if different road building materials are to be filled one after the other. Simple operation and automatic stop of the filling process shorten the overall procedure. This in turn reduces operating costs. The KROHNE instruments have already proved their worth in this application.

5. Products used

OPTIMASS 1300 C

- First choice for universal applications
- Best price-performance ratio
- Many options available
- Innovative twin measuring tubes
- Easily drained and easy to clean
- Any mounting position, independent of operating influences
- Optimised flow divider for minimum pressure loss
- High measuring accuracy



Batching Master BM 110 i

- Clearly laid out on-site operation
- All information displayed for reliable filling
- 5 passive digital outputs
- Active current output
- 3 passive current inputs, 4–20 mA
- 2 pulse inputs
- 4 active digital inputs
- Modbus interface



Contact

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