



APPLICATION REPORT Food & Beverage

Portable flow measurement of wine and juice

- Electromagnetic flow metering to automate transfer operations
- Monitoring the quantity of juice and wine moved from one tank to another
- Highly flexible solution for temporary flow measurement and pump control

1. Background

Based in Tenterden in Kent, England, the award winning Chapel Down winery produces truly world-class Traditional Method sparkling wines and a range of still wines, as well as premium beer and cider. They boast some of the best winemaking facilities in England.

2. Measurement requirements

Daily work at the winery frequently involves transfer operations where wine or juice is moved from one tank to another. In order to monitor the quantity of transferred products as well as to control the pump accordingly, Chapel Down previously used sight glasses running down the side of the tank. However, this manual way of checking was labour intensive.

The winery operator was therefore looking for a portable measurement device that could provide accurate measurement and volume monitoring of juice and wine during those transfer operations. Josh Donaghay-Spire, winemaker at Chapel Down, specifies: "We were keen to automate the transfer process, however we needed a flowmeter that could cope with dissolved CO₂ as this makes the more traditional flowmeters ineffective."

3. KROHNE solution

After careful consideration, they decided to have a portable device manufactured that incorporated KROHNE's OPTIFLUX 2100 C electromagnetic flowmeter. The device consists of the OPTIFLUX 2100 (DN 32 / 1¼") attached to an inlet and outlet pipe and mounted on wheels. The device can then be easily moved around the winery to perform accurate measurement wherever it is required. The inlet pipe is attached to a tank and the medium is then pumped through it at a flowrate of 5...10,000 l/hr [1.32...2642 gal (US)/h]. It passes through the electromagnetic flowmeter and then via the outlet pipe into another vessel. The OPTIFLUX 2100 accurately measures the volume of the medium and once the desired quantity has been reached the pump is switched off.



Portable measuring device incorporating the OPTIFLUX 2100

4. Customer benefits

By automating the process using KROHNE's OPTIFLUX 2100, the Chapel Down winery now has consistently accurate measurement and instead of two people being required to carry out the transfer operation, the process can be carried out by one person alone.

Josh Donaghay-Spire of Chapel Down comments, "We were aware that KROHNE had previous experience with a similar application and that their OPTIFLUX 2100 could easily cope with the process conditions whilst providing accurate and reliable measurement. We can now not only make more efficient use of manpower but we can also calibrate certain tanks which previously didn't have calibration charts."

5. Product used

OPTIFLUX 2100 C

- Electromagnetic flowmeter
- Bi-directional flow metering
- Tamper proof, fully welded construction
- Also available in customer specific constructions
- Standard in house wet calibration of sensors up to DN3000 / 120"
- Extensive diagnostic capabilities
- Maintenance-free
- On-site verification of flowmeter with OPTICHECK



Contact

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