APPLICATION REPORT

Food & Beverage

Flow measurement of bright beer with high CO_2 content

- Coriolis mass flow and density measurement of beer transferred to the bright beer tank (BBT)
- Maintaining operation even with high levels of entrained gas (CO_2)
- Accurate and consistent measurement results from the start to the finish of the batch

Backus
Orgullosamente parte de ABInBev

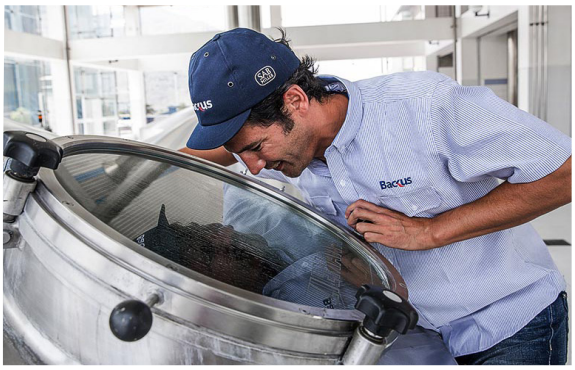
1. Background

Backus, a leading company in the Peruvian beer and beverage market, is part of the global brewing giant AB InBev. With five beer production plants located in Lima (Ate), Arequipa, Cusco, Motupe and Pucallpa, Backus produce some of the country's most popular beers and non-alcoholic beverages. Their brand portfolio includes Cristal, Pilsen Callao, Cusqueña, Backus Ice, Pilsen Trujillo, Arequipeña, San Juan, Fiesta Real, Abraxas, Miller Genuine Draft, Peroni Nastro Azzurro and Grolsch.

2. Measurement requirements

Bright beer is the clear beer that forms after primary fermentation when the yeast drops out of suspension. It is stored in the bright beer tank (BBT) or serving tank before being packed in kegs, bottles or cans.

The brewery was searching for a flowmeter to continuously and reliably measure the beer flow to the BBT. The presence of CO_2 in the various types of beer makes this a very challenging application particularly at the start and finish of the batch.



Bright beer tank (BBT)

KROHNE

3. KROHNE solution

After testing Coriolis meters from a number of leading manufacturers, Backus found that the OPTIMASS 6400 C with Entrained Gas Management (EGM™) delivered the most accurate and consistent measurement results. The adverse process conditions had caused other Coriolis meters to go into re-start mode or "freeze". Despite the wide range of gas volume fractions found in the process the OPTIMASS 6400 maintained operation allowing the process to continue uninterrupted.

The 6400 meter is able to measure sudden changes in density caused by changing CO_2 levels and gives an alert when two phase flow is detected allowing continuous measurement.

Installation of OPTIMASS 6400 (DN100 / 4") with SMS connections for hygienic flow measurement of bright beer

4. Customer benefits

Backus is very satisfied with the performance of the OPTIMASS 6400 and EGM™ function which solved the entrained gas problems that had been disrupting production. While the other Coriolis manufacturers claimed similar features they were found to fail when tested. KROHNE´s EGM™ solution is now the standard for this challenging process in all Backus plants in Peru.

EGM™ continues to prove itself in challenging entrained gas applications even with larger line size meters such as the DN100 / 4" now in use with Backus.

5. Product used

OPTIMASS 6400 C

- Twin bent tube Coriolis mass flowmeter for flow and density measurement of beer to bright beer tanks (BBT)
- Entrained Gas Management (EGM™): continuous measurement across a wide range of gas fractions and challenging process applications
- Certified for hygienic applications (EHEDG, 3A)
- Available with various hygienic connections
- Digital communication options: HART®, FOUNDATION™ Fieldbus, PROFIBUS®-PA/DP and Modbus

Contact
Would you like further information about these or other applications?
Do you require technical advice for your application?
application@krohne.com

Please visit our website for a current list of all KROHNE contacts and addresses.

www.krohne.com