

Interface Detection with Micro Motion® Coriolis Helps Major Brewery Minimize Waste

BENEFITS

- Reduced beer loss on product change-over and cleaning
- Accurate measurement at filling to better identify beer loss
- Reduced water treatment costs



PROCESS

One of the final steps in the beer-making process is to deliver beer from finished beer storage to high-speed filling machines (which in turn fill the beer bottles and cans). A major global brewery uses the same 12 filling machines, fed by 24 finished beer tanks, to fill bottles for all their brands and styles of beer. To switch from one brand to another, they switch out the tanks supplying the filling lines—any tank can be routed to any filling line.

After each switch, a small amount of the previous brand of beer still remains in the filling lines. A mixture of brands is present in the line until the new brand fully flushes the filling line. Likewise, when the filling lines are cleaned, there will be a mixture of water, cleaning solution, and beer in the line until the beer has flushed them out.

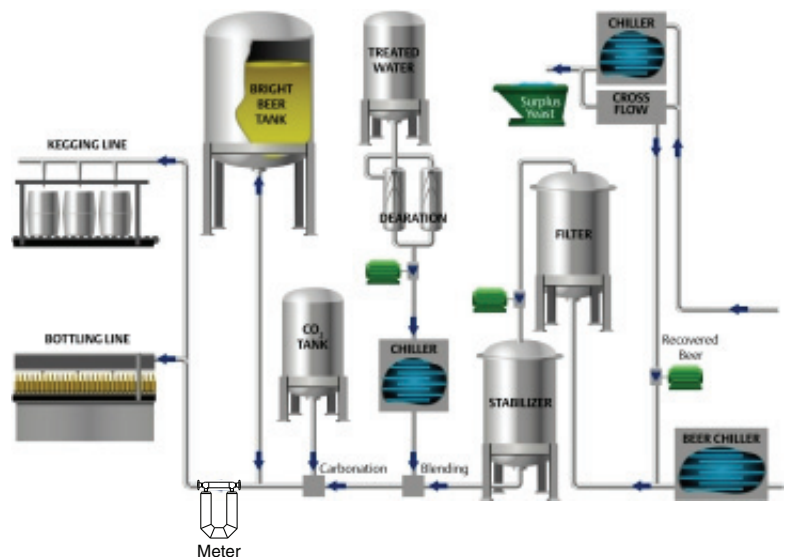
CHALLENGE

If the filling lines are under-flushed, the wrong beer brand (or worse, water and cleaning solution) ends up in the bottles. If the filling lines are over-flushed, beer goes down the waste drain unnecessarily.

For obvious reasons, brewers never want to deliver the wrong product to their filling machine. To avoid this risk, flow of good beer is prematurely diverted away from the filler and into the waste stream to ensure that cleaning solutions or other brands of beer do not go into the bottles or cans.

Identification of the product interface led to reduced beer loss.

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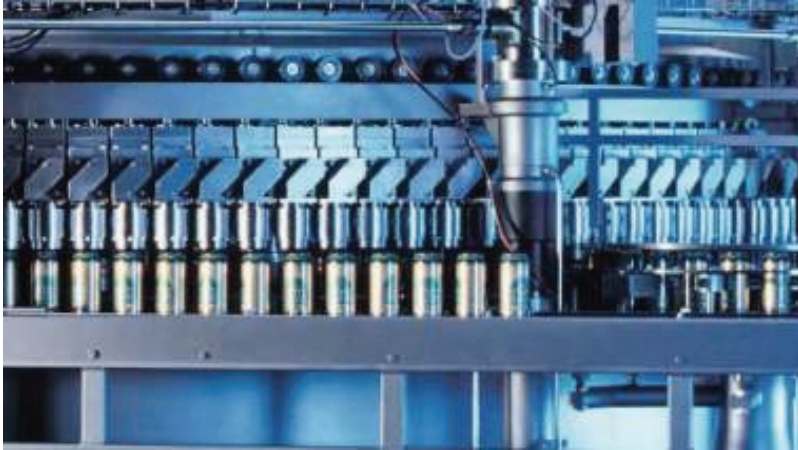


For more information:
www.EmersonProcess.com/solutions/food_bev
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SOLUTION

The brewery installed Micro Motion Coriolis meters upstream of the fillers. The high precision density measurement from the Micro Motion meters allowed the brewer to immediately identify the product interface—the point where one fluid switched to another in the pipeline. Utilizing automated valve control, flow to the filler could be diverted at precisely the right time to ensure only the desired beer was delivered to the filling machine. This resulted in much less good beer going to drain and significantly reduced beer loss at this process point.



In addition, the flow rate accuracy of the Micro Motion meters allowed the brewer to better measure beer sent to drain and more closely track the amount of beer lost.

Savings to the brewer were therefore realized by:

- Improved yield by increasing the volume of good beer delivered to the filler.
- Lower water treatment costs by significantly reducing beer in the waste stream.