

## Case Study

# Tire Manufacturer Reduces Costly Product Losses with VorCone™



## **RESULTS**

Significantly reduced costly product losses due to improper curing

Increased manufacturing throughput

Reduced energy costs

Identified and corrected problem areas in steam piping

## **Application**

A major tire manufacturer in the Southeastern United States seeking to improve their steam curing process.

## **Challenge**

As part of their maintenance schedule, this facility requires weekly shutdowns in key areas of the plant. When restarting these key areas, they often experience high levels of condensate in their steam piping. This condensate makes its way to the steam curing area. The process of steam curing requires very high-quality steam to be effective. As such, the presence of condensate can cause improper curing resulting in lost product. Any amount of lost product at this stage in manufacturing is at a very high cost to the company. So, the challenge was to determine the source of the excessive condensate and eliminate it.

## **Solution**

After careful consideration, this facility selected VorTek Instruments' VorCone™ meter for its unique steam metering capabilities. Specifically, the ability to provide a continuous steam quality measurement and total mass flow measurement (steam & condensate mixture). The VorCone meter was installed on the main steam header leaving the boiler. This allowed operators to confirm the quality of steam leaving the boiler. Also, pressure and temperature sensors were installed on each curing row to identify the presence of condensate further away from the boiler at the curing presses.

The VorCone meter confirmed that the boiler was providing relatively high-quality steam (94-98%) with little carryover. This led to a review of installed steam traps and subsequent replacement of underperforming traps. Now when condensate is identified in a curing row, the operators first look at the VorCone steam quality measurement to determine if the boiler's output is of sufficient quality. If the steam quality is high leaving the boiler, they can then look at other potential problem areas in their steam piping. As these problem areas are identified and corrected, the plant also benefits from an increase in energy efficiency and a reduction in overall energy costs.

Installing the VorCone steam quality meter along with temperature and pressure sensors has led to this facility significantly reducing product losses due to the presence of condensate in their steam curing process. Additionally, this facility received corporate recognition for achieving a reduction in their overall energy costs.



**For more information visit**

[www.bestobell.com](http://www.bestobell.com)

your local VorTek Instruments sales representative

**Bestobell Aquatronix**  
2880 Argentia Road, Unit 3  
Mississauga, ON, L5N 7X8

☎ (905)826-1953  
✉ [salesdesk@bestobell.com](mailto:salesdesk@bestobell.com)