

A tough slurry demands a tough consistency measurement solution

In an environment where other instruments failed to make the grade, BTG consistency transmitters' ability to deliver accurate, reliable measurements is translating into substantial savings for Canadian manufacturer Louisiana-Pacific.

Nova Scotia-based Louisiana-Pacific Canada Inc. manufactures a wide range of fibre- and particle-based building products including LP Canoxel®, a stylish, rugged siding that shields homes from chill north winds and driving rain, snow and sleet. A tough assignment.

The Canoxel manufacturing process is not unlike that of paperboard – pulping, stock preparation, sheet forming, pressing and drying. Raw materials consist of 80% mixed random northern hardwood, such as maple and oak (including bark), and 20% mixed recovered fibre. A tough slurry.

Because consistency is a critical parameter in the Canoxel manufacturing process, consistency measurements for this demanding slurry are performed in the mixed stock, at the machine chest and in the broke chest. Manufactured in a plant established back in the 1960s, Canoxel had long been produced using rotating consistency transmitters from Dezurik to measure consistency at each of these three key positions on the factory's two manufacturing lines.

But according to Ed Moar, LP's Electric & Instrumentation Superintendent, time had taken its toll on the equipment. "We had a lot of reliability issues with our old transmitters. The units would run out of oil, the shaft would seize up and sometimes bend. It was clearly time to look into new equipment, and that meant conducting trials on various types of transmitter from different suppliers."

The first candidate was a blade transmitter from a major Finnish supplier. But Moar's team noted some accuracy problems, with readings drifting over time. The supplier tried installing their rotating transmitter, with no luck – the results were the same. In the end, neither of the products from this supplier was able to perform satisfactorily in such challenging conditions.

Next up was BTG. A MEK-2400 rotating consistency transmitter was installed after the machine chest, and within a few days Moar observed a substantial improvement in the control and stability of this consistency loop. To evaluate performance and stability over time, he evaluated the transmitter for one full month (see Figure 1).

"The MEK-2400 was able to measure up to the task of providing us with accurate and reliable results in this tough environment," says Moar. "We were so satisfied we purchased five more MEKs, which now measure consistency in the mixed stock, at the machine chest and in the broke chest on both our manufacturing lines." Moar says the new BTG instruments have cut LP's Canoxel production costs by 1.2% while significantly reducing the quantity of poor quality output.



Brady Burke, LP instrument technician (left), and Ed Moar, Electric & Instrumentation Superintendent.

"The MEK-2400s have helped us deliver excellent quality output while cutting our manufacturing costs by 1.2%."

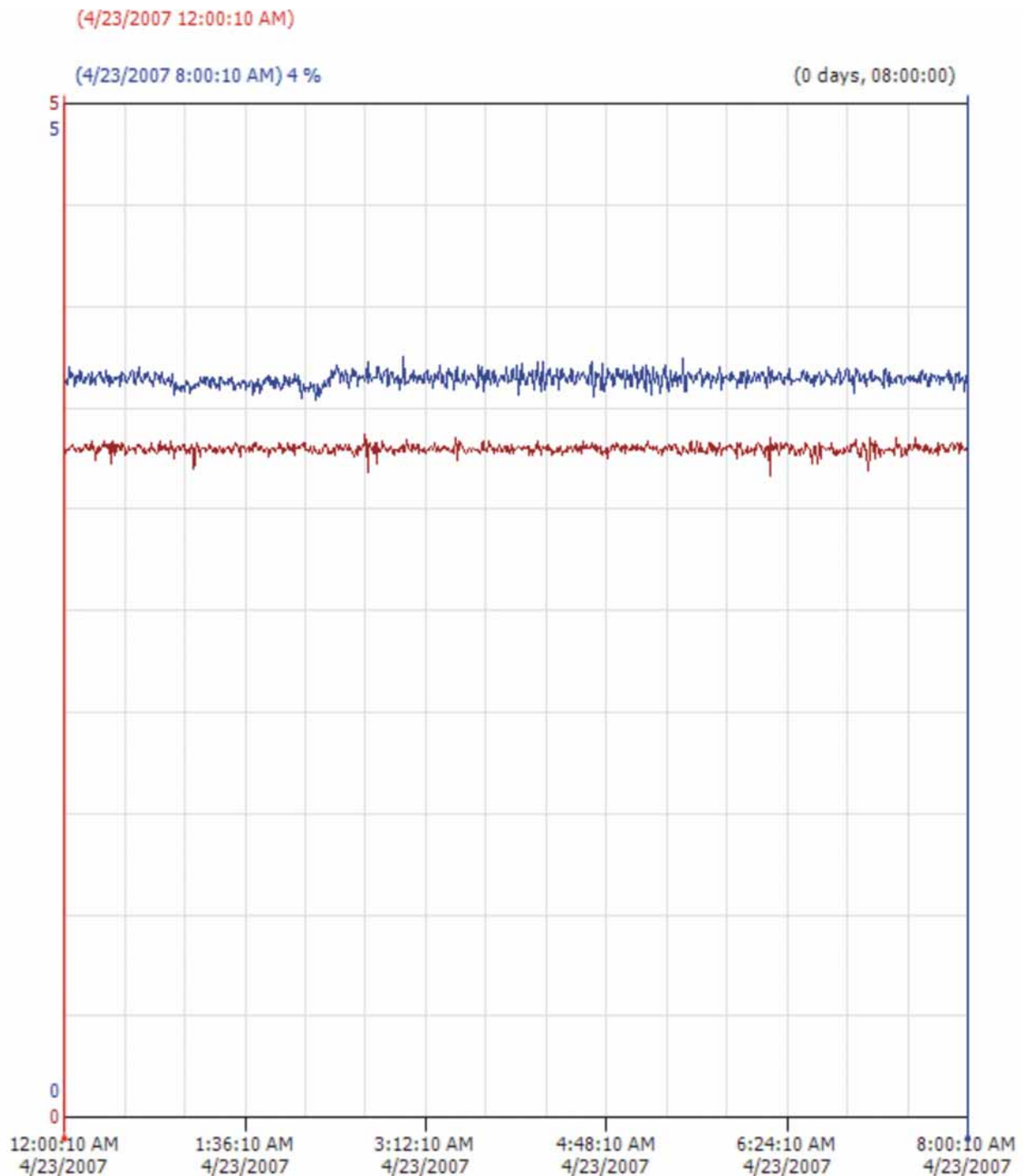


Figure 1. Machine chest consistency application. The blue trend shows the stable but active consistency measurement from the MEK-2400, while the red line indicates the output of the control valve.

“Since the startup of the MEK-2400s we have less reject, and virtually no off-spec product resulting from poor consistency control that needs to be sold off locally at discounted prices. What’s more,” he smiles “I no longer get phone calls in the middle of the night.”