



# FLOW-TRONIC SA NV

NEWS N°6  
February 2007

Dear All,

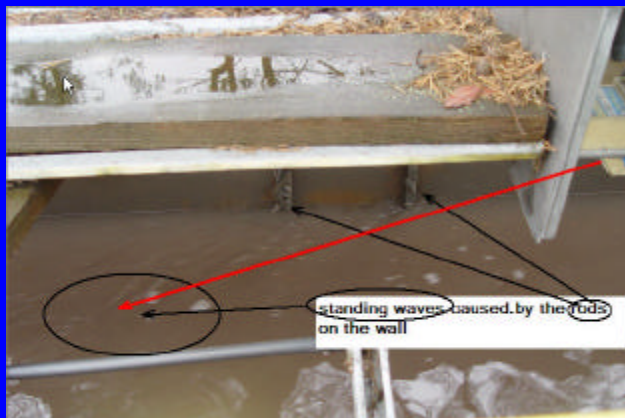
Just a few things to follow:

Something for our 1st class FLO-DAR sales people who have a technician heart.

**How to trouble shoot multiple hump sites and make the FLO-DAR read the right velocity.**

Rainer Heckters was called for trouble shooting an application in Switzerland where a FLO-DAR was systematically reading high due to wrong high velocity readings.

The sensor was mounted to read the velocity into the flow direction. Rainer could immediately notice very strong diagonal standing waves caused by two cable channels mounted just in front of the spot where the FLO-DAR sensor was scrutinizing the water surface for the velocity readings.



He recorded a couple of FTT's and found a triple hump situation caused by three distinct velocities at the measuring spot.

The very low velocity spectrum was induced by vertical water fluctuations, sometimes called "pumping". Those effects usually result in a very low velocity spectrum where the FLO-DAR sensor would not see any velocity (below 20 cm/s). This hump is of course ignored by the FLO-DAR sensor. Very rarely this hump gives readings high enough to be considered by the sensor as a good velocity reading. It may happen that a mirror flat surface moves vertically (pumping). In that case the real velocity hump has very low energy and the sensor could choose the wrong low velocity reading. This has been rarely noticed when measuring just in front of Flumes since Flumes smooth the water surface in the upstream section and induce vertical pumping.

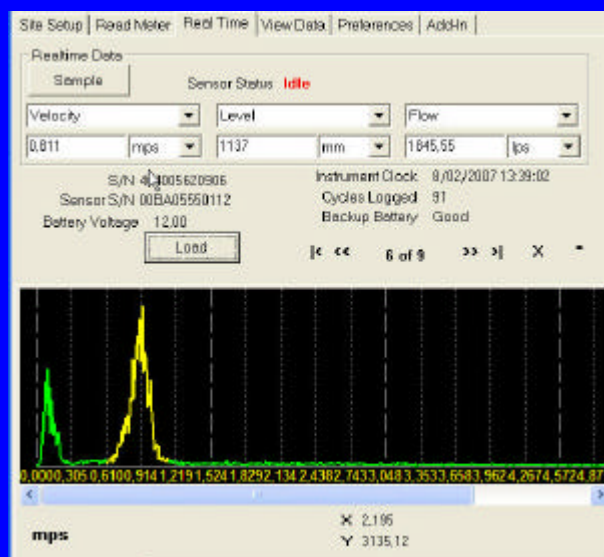
If somebody wants to install a FLO-DAR close to a Flume for comparison we recommend to look carefully at the FFT readings to make sure FLO-DAR is reading the right velocity. Sometimes, the option for a better installation option is the down streamside of the Flume.



In our case the second hump is the right velocity spectrum and the third highest energy hump is caused by the induced waves of the cable channels. An easy way of finding the right velocity hump is a comparison with a FLO-MATE reading.

In this particular case Rainer decided to install the sensor in the downstream sense (this is the most common installation), in order to measure at a location without any disturbing waves.

The new FTT's are showing a dual hump picture, but the sensor is of course choosing for the right velocity spectrum.



At our European Sales Meeting (April 22-25, 2007 in Breda NL) we'll introduce a new Software feature forcing the sensor to pick-up the velocity hump within a predefined window. More details will be given during our training session.