

## NEWS FLASH 20 - NOVEMBER 2002

SECTION: WASTEWATER TREATMENT

### USING **SCALEWATCHER**<sup>TM</sup> AT WASTEWATER TREATMENT PLANT KEEPS OPERATION RUNNING AND ELIMINATES CLOGGED BELT FILTER PRESSES

*No more obstructions in the belt filter presses*

#### **Waterschap Zeeuwse Eilanden [the water board for the islands in the Province of Zeeland] profits from non-stop purification process**

Wastewater can be purified in several different kinds of installations. The most important similarity shared by all these plants is that they use effective processes to separate reusable water from sludge. A frequently occurring problem confronting most of these plants is the clogging of the holes through which the machinery filters the water from the sludge in order to make the water usable again. The use of the Scalewatcher<sup>TM</sup> eliminates these obstructions.

The Waterschap Zeeuwse Eilanden has ninety-five sewage pumping stations that pump their wastewater to eleven wastewater treatment plants where organic methods are used as much as possible to purify this sewage. Bacteria added to the wastewater consume the waste products found in the sewage so that the processed water re-entering the surface water system is virtually free of contaminants. What is left behind after the treatment process is a gigantic quantity of sludge (6,500,000 kilograms every year in the Province of Zeeland) that is then incinerated in the Moerdijk incinerator.

#### **Dewatering**

At one of these wastewater treatment plants, the Waterschap Zeeuwse Eilanden uses a belt filter press as a sludge dewatering method. (photo no. 1).



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This piece of machinery ensures that water can be extracted from the sludge contained in the sewage coming into the plant (photo no. 2). Once this is accomplished, the water can be released into the natural hydrologic cycle. This belt filter press uses a roller that applies just the right amount of pressure in order to push the water through the holes in the filter and leave the sludge behind.

FOR NORTH AMERICA: SCALEWATCHER NORTH AMERICA INC, OXFORD PA 193631, EMAIL [SWNA@SCALEWATCHER.COM](mailto:SWNA@SCALEWATCHER.COM)

FOR EUROPE: SCALEWATCHER NL BV, THE NETHERLANDS, EMAIL: [SWNL@SCALEWATCHER.COM](mailto:SWNL@SCALEWATCHER.COM)

FOR SOUTH EAST ASIA: SCALEWATCHER VIETNAM LTD, HANOI, EMAIL [SWVN@SCALEWATCHER.COM](mailto:SWVN@SCALEWATCHER.COM)

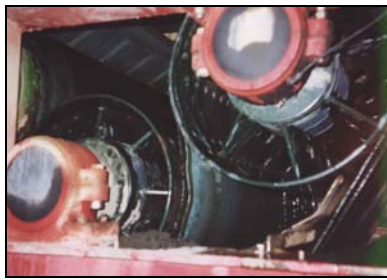
FOR THAILAND: SCALEWATCHER (THAILAND) Co., LTD, EMAIL [SWTH@SCALEWATCHER.COM](mailto:SWTH@SCALEWATCHER.COM)

## Obstructions

The combination of sludge and water (sludge cake) is actually dewatered between the belt filters in stages, the first set of rollers applying a certain amount of pressure and each succeeding set of rollers applying increasingly more pressure. This sliding friction thus releases the water contained in the sludge cake. But in spite of this innovative and effective concept, the holes in the rollers that act as a filter will always become obstructed after a certain length of time. Deposits in and around the holes let less and less water pass through until they eventually clog up completely. This situation involves a substantial maintenance operation. (photo no. 3)



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## Continue process

To prevent these deposits – consisting mainly of calcium deposits – from forming around the holes in the roller, the Waterschap Zeeuwse Eilanden had a **Scalewatcher**<sup>TM</sup> installed. After a nine-month testing period, the holes in the rollers were practically free of deposits and any small deposits were easy to remove. (photos no. 4 and 5) The wastewater treatment process was no longer in danger of having to close down for maintenance operations and could become a continual process. Ultimately, two **Scalewatcher**<sup>TM</sup> units were installed: one of the units was placed before the location where the polymer is added in the treatment process and the second one was placed right in front of the press. (photo no. 6)



6