

Storm water metering made easy with SITRANS FM MAG 8000 W water meter

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water & WASTEWATER

Himmark wastewater treatment plant use the new battery operated SITRANS FM MAG 8000 W water meter for Combined Sewer Overflow (CSO) measurement - with great succes.

For many years it has been common practice to discharge storm water directly into the sea without measuring the amount or analysing its possible environmental impact on the water.

The new EU directive - the Water Framework Directive (WFD) - brings the water environment into focus and requires from all EU member countries the establishment of CSO-measurement programmes to improve water status. The fundamental objective of the WFD is to prevent any deterioration in water quality and to achieve 'good status' for all waters by 2015. In Denmark such concepts are already in use.

SIEMENS

Storm water metering made easy Himmark wastewater treatment plant



Nordborg Municipality is in the lead

Nordborg is a small municipality on the island Als in the southern part of Denmark with approx. 15,000 inhabitants.

For many years the municipality has been in the forefront of a sustainable development and already in 1998 they implemented CSO measurements of storm water.

“When rain water gets into the sewer system it mixes with household wastewater. Under normal circumstances this mixture is piped to the wastewater treatment plant, where it is purified and subsequently discharged into the sea,” explain Tommy Jensen and Jan Detlefsen who are responsible for the wastewater treatment at Himmark wastewater treatment plant.

“In peak periods the rainwater is conducted into a basin containing mechanically purified household wastewater. Here it is stored until the situation has normalized and then led into the sewer system. But heavy shower or constant rain can fill up the basin, which has the result that the overflow pipe discharges the storm water directly into the sea. Danger for the environment as the storm water can contain environmental damaging substances like oils, nitrates and phosphates and thus have a detrimental impact on the environment.

That’s the reason why Nordborg Municipality decided to meter the storm water in order to determine where to improve the sewage system.”

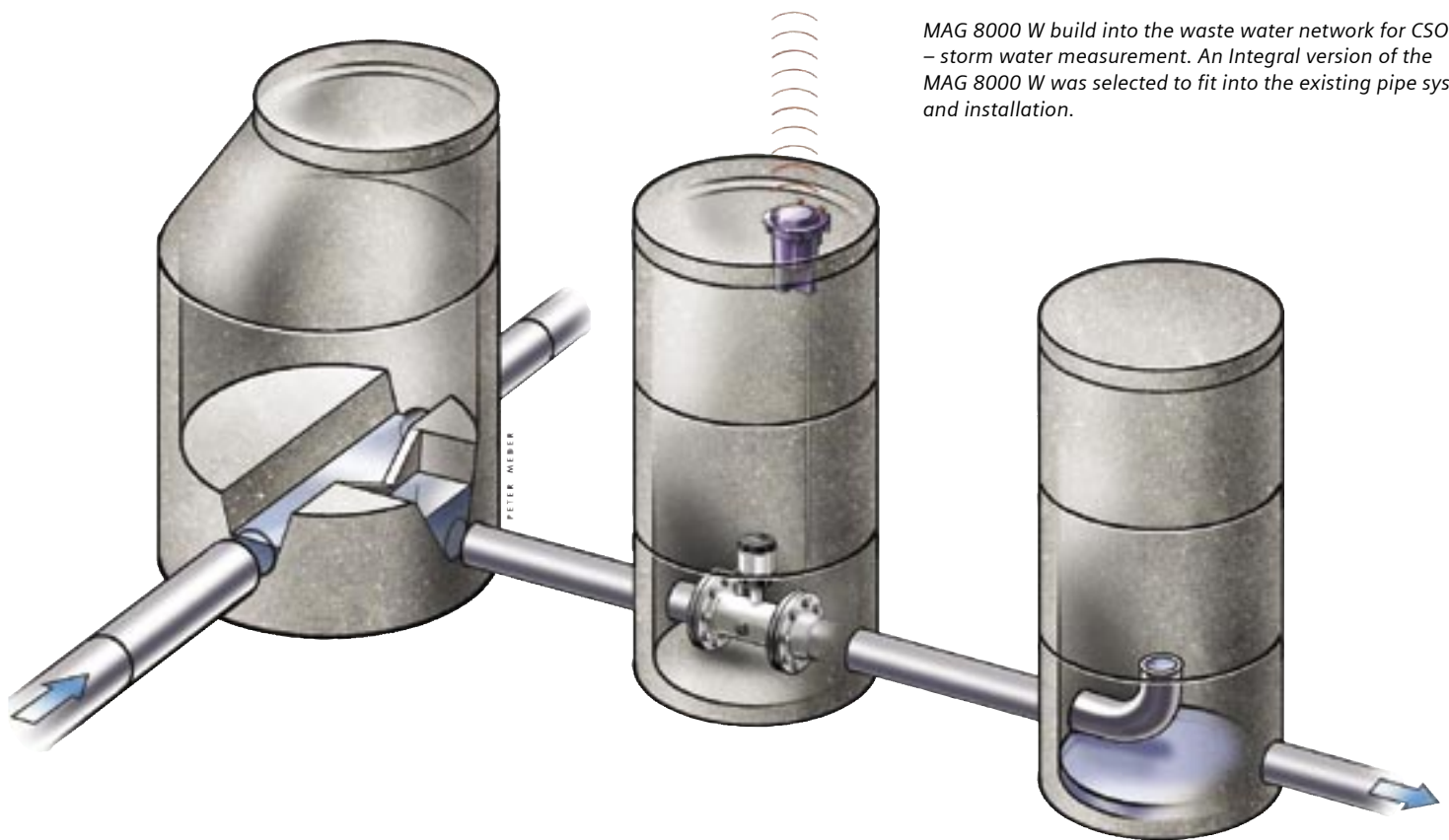
The Water Framework Directive (WFD)

In year 2000 the WFD (Directive 2000/60/EC) came into force. It sets a framework for comprehensive management of water resources in the European Community, within a common approach and with common objectives, principles and basic measures. It addresses inland surface waters, estuarine and coastal waters as well as ground water.

One of the fundamental principles of the Directive is that planning and management of all waters should consider water basins as comprehensive units, ranging from the very source of the water courses to their outfall into the sea.

The directive aims to achieve good water status in all natural surface waters and ground water in 15 years. For surface waters, the definition of ‘good’ is based on a new concept of ‘ecological quality’ taking into account biology, chemistry and their physical features. For ground water, it includes quantitative status. The approach taken is an integrated one, which has to consider all the naturally occurring and human factors, which affect the waters.





MAG 8000 W build into the waste water network for CSO – storm water measurement. An Integral version of the MAG 8000 W was selected to fit into the existing pipe system and installation.

The need to know

“We had an idea of where storm water occurred, but we did not know for certain,” tells Tommy Jensen.

“Therefore the municipality decided for more than a year ago to meter the storm water at 18 different places within 3 years. To begin with we measured the storm water with our own metering system. This meter required an external power supply and consequently the installation costs were very high. Moreover we used many man-hours to inspect and read the meter.”

“So when Siemens told us about their new battery operated MAG 8000 W meter and asked us to field-test it, we were fast to accept their offer. We already have five conventional MAG 5100 W meters with power supply in our plant and are very satisfied with their outstanding performance. Therefore we welcomed the new battery operated MAG 8000 W water meter with great expectations,” adds Jan Detlefsen.

MAG 8000 W - tailor-made for CSO storm water metering

“At the end of 2003 we began field-testing the new battery operated MAG 8000 W water meter and it completely fulfils our expectations. The perfect solution for CSO storm water metering: it is easy to install and integrate and the installation costs are very low. It was just what we were looking for,” state Tommy Jensen and Jan Detlefsen.

Just a fingertip away

“Now we need no longer visit the site in order to read the storm water. The MAG 8000 W system includes a GSM data logger which sends the data to a web server and publishes the results on a secure web site on the Internet. This means that we can read all measurement data on our computer screen, i.e. the amount of the storm water in cubic metres as well as the time period the storm water is counted. That’s really fantastic and has facilitated our work a lot,” conclude Tommy Jensen and Jan Detlefsen.

Features - MAG 8000 W

- No Mains power is needed - battery operated for typically 6 years operation
- No obstruction and moving parts - wastewater will not seize
- Can measure on water with particles
- Built-in data logger with up to 26 months data logging
- Real time clock for data collection
- Open communication interface as add-on with call up function
- Same product for potable water application like water distribution and billing
- IP68 enclosure - the whole product can be placed under ground
- Low maintenance and installation costs