

## HUMIDITY MONITORING IN SEWAGE TREATMENT PLANTS



In sewage treatment plants, the sludge must be removed from the tanks at regular intervals with scrapers. These scrapers run along the rim of the tank, which subjects the rim to heavy static and dynamic loads.

In order to counteract these loads the tank rims are covered with stainless steel or hot galvanised plates. To ensure that the scraper functions correctly, icing of the plates must be prevented. Mostly heaters are used in such cases. These should be operated in a way to save as much energy as possible.

The danger of icing can not simply be established via the temperature, but must also be defined in connection with the humidity of the air. The heating should only be switched on at low temperatures and high air humidity. To measure this, EE14 series hygrometers are

used to determine the humidity below the rim of the tank.



EE14 Hygrostat

Although it must be assumed that this application is subjected to severe chemical contamination, an extended test with two devices, one with and one without additional protection of the sensor, did not produce any significant difference.



Sewage tank with scraper

### • Application conditions

Measurement range: 0 - 300 g/m<sup>3</sup>, typical measurement value: 10 g/m<sup>3</sup>  
 Output: 4..0000.20 mA  
 Operating temperature: ~ 20 °C  
 Operating pressure: ~ 70 bar vacuum

### • E+E Product



**EE14**  
 Hygrostat for wall and duct mounting

The hygrometer with a proven capacitive humidity sensor offers excellent long-term stability and reproducibility.