CoriolisMaster FCB300
Measurement of carbonate slurry in the water/steam circuit of a power plant

High-precision density measurement with simple installation

Measurement made easy

Introduction and measurement task

A large proportion of the water in the water/steam circuit of a power plant evaporates through the cooling tower. This causes the minerals contained in the water to become increasingly concentrated. The addition of flocculants causes these minerals to form a carbonate slurry in the water. Once a defined quantity is reached, the slurry is pumped out.

The concentration of carbonate slurry can be determined by the density measurement function of the Coriolis mass flowmeter. If a defined limit value is exceeded, the slurry is drained.

Instrumentation

The Coriolis mass flowmeter FCB330 is especially suited for the described measurement task. It records both the mass flow and the density of a measuring medium. The device does not require maintenance, has no moving parts, and does not require recalibration. Thanks to the small dimensions of the device, the flowmeter can be integrated into any application with ease. Pipe elbows do not impede the measuring accuracy, which means that there is no requirement for straight inlet and outlet sections. The piping does not require special fixings. In addition, the device technology can be installed directly behind pumps. If slurry is to be measured as described, a vertical mounting position is recommended to avoid deposits forming in the device.
The installed Coriolis mass flow measurement is located in a piping system on the carbonate slurry tank in the additional water treatment system for the cooling tower.

**Product data**

<table>
<thead>
<tr>
<th>CoriolisMaster FCB330</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Measuring medium temperature</td>
<td>10 ... 25 °C</td>
</tr>
<tr>
<td>Measuring range for flow rate</td>
<td>0...80 m³/h</td>
</tr>
<tr>
<td>Measuring range for density</td>
<td>1000 ... 2000 kg/m³</td>
</tr>
<tr>
<td>Flow rate calibration</td>
<td>0.4 % of rate</td>
</tr>
<tr>
<td>Density calibration</td>
<td>10 g/l</td>
</tr>
<tr>
<td>Process connection</td>
<td>DN 80 (3&quot;) / PN 40</td>
</tr>
<tr>
<td>10 m signal cable for remote mount design</td>
<td></td>
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</tbody>
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