

Corrodium Flow Loop

For best corrosion management and monitoring



Probes, coupons, and other sensors in a flow loop

The best corrosion management and monitoring is done with a flow loop. Corrosion is highly defined by the flow rate. With a frequency controlled pump, the flow rate is controlled. The best way for controlling corrosion inhibitors is using this flow loop. With a coupon the metal weight loss in mm/year corrosion rate of the steel or other alloy is defined. The probe measures the corrosion rate in accordance with ASTM G59. The formula in ASTM uses a constant, called B-constant. With the result of the coupon analysis, B-constant can be calibrated for the medium applicable. In this way the probe delivers real time results of weight loss and corrosion rate in mm/year or mils at high accuracy.

The SensCorr HART interface gives the following parameters over 4 channels:

1. The corrosion rate in mm/year in accordance with ASTM G59. This is the highest I_{pr} resistance out of anodic I_{pr} value or cathodic I_{pr} value.
2. The pitting corrosion rate in mm/year. This is the anodic I_{pr} resistance. Corrosion inhibitors are film formers and thus they highly influence the anodic I_{pr} resistance.
3. The pitting index in accordance with ASTM G199. This is a value between 0 and 1. A value of 0,6 and higher means that the corrosion is more local (= pitting corrosion) than uniform corrosion.
4. The conductivity of the electrolyte in Ohm.cm.

Also other sensors, like pH, temperature or flow, can be installed in the Corrodium Flow Loop.

