Model CorrDATSTM
Corrosion & Deposit Monitoring System

Features:
- Complete Integrated Corrosion and Deposit Monitoring System
- Corrosion Rate and Pitting Tendency of Heated Surface
- Corrosion Measurements of two Alloys
- Field Proven Technologies

Rohrback Cosasco Systems and Bridger Scientific have collaborated to produce the Rohrback Cosasco Systems CorrDATSTM integrated corrosion and deposit monitoring system. The main parameters required for control of a water treatment program have been combined into this integrated system providing analog outputs of:

- Heat Flux
- Heater Block Temperature
- Wall Temperature
- Water Temperature
- Heat Transfer Resistance
- Flow Rate
- Corrosion Rate on Heated Surface
- Pitting on Heated Surface
- Corrosion Rate on Non-heated Surface
- Pitting on Non-heated Surface

In the actual field environment of water treatment, it is necessary to maintain the proper balance between low pH (more acidic) which increases corrosion, and high pH (more alkaline) which increases scaling tendency. Consequently, to achieve this balance, the operator must control pH, conductivity, corrosion, scaling and deposition. The CorrDATSTM unit was developed to specifically blend comprehensive, sophisticated yet field-proven technologies into an economical package.

The heat exchanger flow tube of the system is matched to the alloy of the plant heat exchanger to be monitored in the field. The flow through the tube is programmed and controlled to represent the most critical plant condition, usually the lowest flow velocity. The heated surfaces are programmed and controlled to represent the most critical heat transfer conditions, normally the highest heat flux, and connected to the highest water temperature from the plant heat exchanger outlet. This sets up the system for scale and deposit monitoring.

In many systems, the heat exchanger tubing is a copper-based alloy and the rest of the system is carbon steel. Separate elements of the corrosion inhibition must be simultaneously regulated to prevent corrosion of both of these alloys. In addition, the corrosion rate on the heated exchanger tube material can change with temperature. The CorrDATSTM system is unique because:

1. It provides CORRATER® measurement from electrodes which are made from the same material as the heat exchanger, and;

2. The electrodes are under the same heat flux conditions as the deposit monitoring section of the system.
The 9030-Plus corrosion monitoring electronics are used in the CorrDATS™ system, for increased flexibility (see bulletin #301 for more details). The 9030-Plus unit monitors multiple parameters, including corrosion rate and pitting tendency from two CORRATER® probes.

**Specifications:**
- **Maximum Heat Flux:** 50,000 Btu/hr.ft²
- **Maximum Fluid Temp:** +180° Deg F
- **Flow Velocity Range:** 1-10 ft/sec
- **Tube Size:** 7/8” dia.
- **Tube Alloy:** Any Commercially available
- **Enclosures:** Plastic sealed enclosures Stainless steel/ Aluminum heat exchanger case
- **Corrosion Rate:** 0 - 1000 mpy
- **Imbalance (Pitting Index):** 0 - 1000 pitting units
- **Operating Range:** Conductivity (µmhos/cm) divided by corrosion rate (mpy) > 4
- **9030-Plus Inputs:**
  - 2 Channel Corrosion Rate
  - 2 Channel Imbalance
  - 2 Channel Temperature

**Ordering Information:**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>CorrDATS™</td>
<td>Corrosion and Deposit Monitoring System</td>
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**Code** | **Heated Tube Alloy and Heated Corrater Probe Alloy** | **Unheated Corrater Probe Alloy** |
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<tr>
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<td>Enter UNS Code (See Table 1)</td>
<td>Enter UNS Code (See Table 1)</td>
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**Code** | **Supply Voltage**          | **Flowmeter Option**              | **Internal Modem Option** |
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<td>115 VAC 50/60 Hz</td>
<td>0 Paddle Flowmeter</td>
<td>0 No Modem</td>
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<td>230</td>
<td>230 VAC 50/60 Hz</td>
<td>1 Magnetic Flowmeter</td>
<td>1 DATS III Analog Output</td>
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<td></td>
<td>2 Ultrasonic Flowmeter</td>
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**Example:**

CorrDats — C44300 — K03005 — 115 — 2 — 0 — 1