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**OH-INS05**

**Over-the-Side Immersion Heaters**

All Bucan **over-the-side immersion heaters** incorporate a conservative design approach, use premium quality raw materials and are made by a highly skilled staff. You can expect top performance and by following these instructions you will benefit from many years of trouble-free service.

**Installation:**

1. Only qualified personnel are to install **industrial electric heating equipment** and must meet all national and local codes.
2. Ensure the power connections match the **voltage, phase and wattage** data on the nameplate.
3. You must allow adequate space for thermal expansion of the heating elements.
4. Heaters must be fully immersed when the heater is energized.
  - a. In the event that your system generates sludge, mount the heater above the sludge level.
  - b. In the event that scale or other matter may build up on the element surface, clean as required.
  - c. Optional sludge legs are available.
5. Ensure terminal box meets the requirements for installation in wet or outdoor locations, or subject to drips and spillage; box classification is Class 4 (CSA designation), NEMA 4 (UL designation).
6. Your heater may have a built-in thermostat; this control can be either a pilot duty device or under certain load conditions may be directly connected to carry the full load at the rated voltage.

**Operation:**

1. Before heater energization ensure heater is fully immersed.
2. Heater sheath material has a maximum recommended operating temperature; do not exceed the temperature shown in Table 1.
3. Sheath material selection depends on the application; check Table 1 for sheath material recommendations.

**Maintenance:**

1. Solutions may create scale and/or sludge build-up on the sheath, frequently inspect and clean as required.
2. Inspect and tighten the electrical connections as required.
3. Look for contamination inside terminal enclosure and seal properly to prevent potential leakage.

Table 1

Heater Sheath	Maximum Sheath Temp.	Used to heat
steel	750°F (400°C)	oil, hydraulic oil
copper	360°F (180°C)	water, tap/municipal only
Incoloy 800®	1500°F (815°C)	water, alkaline solutions, air, gases, radiant
Incoloy 840®	1400°F (760°C)	air, radiant
Inconel 600®	1600°F (870°C)	strong alkaline solutions, high temperature gases
stainless steel	1200°F (650°C)	De-ionized, de-mineralized, process water, some mild acids