INDEECO

Indeeco explosion-proof flanged immersion heaters are one of the most widely used solutions for heating fluids and gases in hazardous locations.

Performance Features

- Wattages up to 8.5 megawatts
- Watt densities up to 200 W/in^2
- Voltages up to 600 V
- Process temperatures up to 1,200º F (650º C)
- Flange sizes up to 24" and 2500# ASME B16.5
- Multiple Flange and Element Materials

Classifications

- Class I, Division 2, Groups A, B, C and D
- Class I, Division 1, Groups B, C and D
- Class II, Division 1, Groups E, F and G
- UL STD 50, Type 4 or 4X
- ATEX and IECEx
  - CE 0539 Ex II 2 G D,
  - Ex db IIB+H_2 T1-T6, Txxx°C Gb
  - Ex tb IIIC Txxx°C $T_L$xxx°C Db
- IEC 60529 rating for IP66
- Ambient: -60°C to 60°C

Typical Markets

- Oil and gas
- Petrochem
- Powergen
- Mining
- Water and waste water

Typical Applications

- Fuel Conditioner
- Water
- Hydraulic oil, crude, asphalt
- Lubricating oils
- Gases
- Caustic solutions
- Glycol solutions

C SP US

FastTrack Availability
Divison II only

Our products do more in a wide range of applications. Expect **More.**

Standard Features

- ANSI B16.5 150# or 300# flange 3" up to 24"*****
- Designed to fit into schedule 40 or schedule STD pipe for the given flange size
- Flange material A105 or A350 carbon steel, A182 304/304L or 316/316L stainless steel*****
- Element sheath materials available: steel, 304 SST, 316 SST, 321 SST, incoloy 800, incoloy 840, copper
- Epoxy or RTV sealed heating elements to prevent moisture absorption
- Stainless steel welded bussing to eliminate loose connections
- Heater circuits divided into 48A max as default
- Heavy duty, low pressure drop design, 304 SST element support spacers provided on 24" centers
- Spacer support rods provided for immersed length greater than 30"
- Lifting lugs for heaters 4" and larger
- Nitrile bonded fiber, or SST/graphite spiral flange gasket provided as a standard

Optional Features

Extended terminal box
Provided when necessary allow for cooler operation of the terminal box. This allows the heating elements to be sealed with epoxy or RTV and for the customer to provide incoming wire with a much lower insulation temperature rating.

ASME
The heater can be supplied in accordance with ASME section VIII Div. 1 U-Part stamped and certified.

PED
The heater can be supplied with materials and welding procedures in compliance with the European Pressure Equipment Directive (2014/68/EU).

NACE
The heater can be supplied with materials, welds and their heat affected zones with hardness testing values in compliance with ANSI / NACE MR0175/ISO15156

Thermostats (Div. 1 only)
Bulb and capillary pilot duty or load carrying thermostats can be provided to control the heater. The thermostat bulb can be installed in a thermowell to sense process or element sheath temperature.

Thermocouples
Type J or K thermocouples can be provided to monitor the process or element sheath temperatures. Thermocouples provided with a ceramic wafer head and screw terminals for ease of wiring. Alternate type E or T available.

Hermetically sealed element terminations
A ceramic to metal soldered seal can be provided to eliminate the possibility of moisture from entering the heating element.

Removable bussing
Allows troubleshooting and isolation of a failed heating element.

Cross-baffle
Construction utilizes alternating half baffles spaced closely to cause increased flow velocity across the heating elements to allow better heat transfer from the elements to the fluid.

Add support rods for flange heaters with length less than 30"
Support rods can be added to high flow heaters to keep the element support spacers in place.

Larger heater circuits for greater than 48A per circuit

Heavy wall pipe design
Element bundles with smaller outside diameter can be provided for any flange size requested.

Pickle and Passivate
A chemical treatment in nitric acid can be performed to remove free iron from the outer surface of stainless steel for applications sensitive to contaminants.

Electro-polish
Is a process similar to plating using cathode and anode reactions but material is removed rather than added to the heater surfaces in order to provide a clean and bright finish.

Ring and cover weatherproof or corrosion resistant enclosures

* FastTrack 2 week delivery available for all standard features with flange sizes 3" thru 6" for divison II applications. Excludes 316/316L flange.

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