

Sigma Therm - IH : Pre-Post Weld Heat Treatment

The Sigma Therm is an inverter based preheating and post weld heat treatment unit especially for tubes and pipes. Depending on the size of the pipe, one or two units are used. Induction coils are placed on both the sides of the welding seam.

Induction Heating

- It is Clean, green and safest ways to pre/post weld heat treatment.
- Induction heating induces the heat directly into the metal, the heat is not conducted..
- It has a very quick setup time and can preheat much faster than gas fired or conducted heating methods.
- It saves time.

Heating Elements/ Induction Coil

Induction coils with maximum length of 50 meters can be connected to one power source. Induction coils are in ready to use lengths in

multiples of 5 meters. When using induction coils for pre heating, it is wrapped around the job with or without any insulation protection. The coil can be protected against welding spatter with insulation cloth / blanket. When doing post weld heat treatment, the job must first be insulated with 20 mm thick ceramic blanket after which the coil is wrapped around the pipe.

Digital Control System

PLC based system with touch screen HMI controls the Sigma therm to get the desired temperature profile. The advanced logic control helps to achieve the accurate heating temperature rate and maintain the cycle as desired. The heating cycle can be programmed to ensure correct heating rate (Degree C / HR), soaking temperature and soaking time, cooling ramp rate and cooling time. There are preset programs and any new heating cycle can be easily customized.



Temperature Range	Induction: 20°C - 760°C
Heating Power	5KW - 40KW
Connection Voltage	3-Phase 50Hz

Temperature Measurement and Recording

Temperature is constantly monitored with a thermocouple. If needed, the temperature can be recorded in soft format or temperature chart can be printed. Upto 6 thermo couples can be interfaced with the recorder. The temperature can be recorded, graphed and printed for reach cycle.

Optional Accessories

- Coil
- Heating Pad
- Temperature Chart Recorder/ Printer
- Cerawool Blanket
- Thermocouple

- Thermocouple Attachment Unit

Applications for PWHT / Pre Heating

- Components made from P91 grade materials
- Power piping
- Construction repair pipeline
- Petro chemical
- Shipbuilding
- Heavy fabrication
- Shrink fitting

Safety: Substituting gas burners for pre heating of welding joints



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