



FLEXIBLE CERAMIC HEATING PADS

MALTEC-H

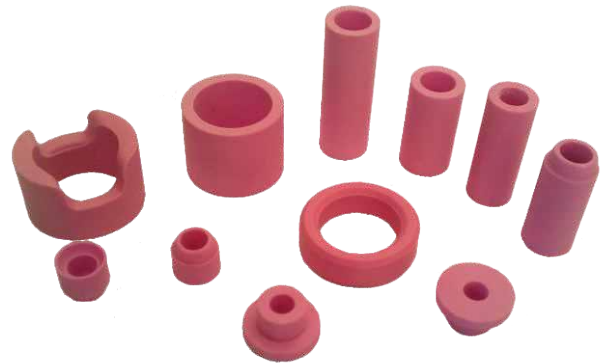
FLEXIBLE CERAMIC HEATING PADS

Alumina Ceramic Beads

95% Alumina Ceramic Beads is manufactured by dry press method and sintered at temperature up to 1650° C. The production is under careful material selection of high grade alumina spray drying granulation from what is called as calcined alumina, thus the stability is maximally ensured. It enjoys high temperature resistance, excellent insulating property, and efficient thermal conductivity and heat transfer. Thanks to its excellent characteristics, the ceramic beads is widely used as components of ceramic heating pad at operation of pre-and post-weld heat treatment, welding process, stress-relieving, shipbuilding, other heat-resistance- environment. Compared with hot press method in the market, it proves higher density, better surface finish and better uniformity, and can be repeatedly used much longer.

Technical Parameter

Alumina Content	: 95%
Fired Density	: 3.65-3.70g/cm
Grain Size	: 6um
Mohs Hardness	: 9
Rockwell Hardness	: 78(R45N)
Compressive Strength	: 2000 MPa
Flexural Strength	: 320 Mpa(ASTM C1161,3 point)
Young's Modulus	: 325 Gpa
Thermal Conductivity	: 21W/ m



Application

As parts of flexible ceramic pad heater, preheater, tank track heater, channel heater, finger heater element at operations of pre and post weld heat treatment; welding process, stress-relieving, pre-heating & post heating, ship-building, other resistance-heating environment.



Main Body Beads



Male End Beads



Small Tail Beads



Main Body Beads with hole



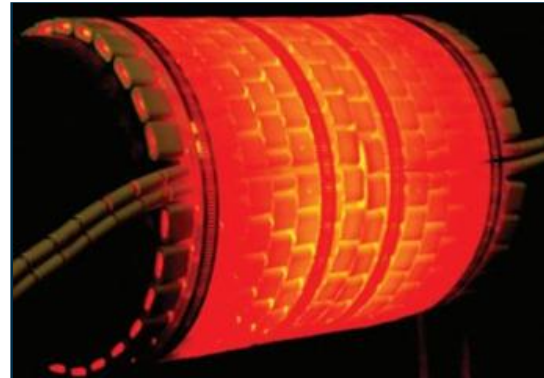
Female End Beads



Tank Track Bead

FLEXIBLE CERAMIC HEATING PADS

Flexible Pad Heater | MALTEC-H **Flexible Ceramic Heating Pad (FCHP)**



Flexible Ceramic Heating Pad, also called ceramic mat heater, is manufactured with quality multi-strand 80/20 nichrome heating wire (NiCr80/20) high alumina ceramic beads and designed for pre and post weld heat treatments. It has standard 9" cold tail length which is welded to the heating wire with pure nickel wire to keep the 60A brass camlock connector from being heated. Heating elements are butt welded to the cold tails of ceramic eliminates the cold heater core wire which eliminates the cold tail/core wire junction failures often seen with low quality heaters which use steel ferrules. Any pipe size or pipe configuration can be covered from the extensive range of MCHP heating elements, so that the correct amount of heating power can be applied to successfully heat treat the pipe weld or other fabrication. The ceramic bead is made of sintered 95% alumina (95% Al₂O₃) with high temperature resistance, excellent insulating property, and efficient thermal conductivity, which provides "MCHP" heaters with exceptional electrical insulation, and thermal shock resistance and thermal conductivity qualities.

Maltec-H Flexible Ceramic Pads heating elements are manufactured with a range of power ratings for use with a selection of standard voltages. If you require any special heating element configuration, voltage or power rating, Dpstar will use their heat treatment engineering expertise to provide you with a heating element custom built to meet your exact needs. If handled correctly, MCHP heating elements can be used approximately fifty times at temperatures up to 1050°C (1922°F). Dpstar can provide higher temperature heating elements if required which can be used repeatedly at temperatures up to 1200°C.

Construction

Highest quality materials available in the construction of our Maltec Ceramic Pad (MCHP) heating elements.

- Reduce work time
- Highly Durable
- Extended Life
- Reduce annual repair costs

Ceramic Beads

- High Resistance to Thermal and Physical Shock
- High grade sintered alumina ceramic beads
- 80/20 nickel cold tail wire.
- Flexibility and high heat transfer

FLEXIBLE CERAMIC HEATING PADS

Advantages

- Reduce worktime
- Highest Quality materials
- Highly Durable
- Extended Life
- Reduce annual repair costs

Physical Properties

- Alumina Content: 95 %
- Bulk Density Fired: 3.7 MG/M3
- Grain Size: 6 um
- Vickers Hardness: 12.5 (GPA@Hv 0.5 kg)
- Rockwell Hardness: 78 (R45N)
- Compressive strength: 2000 Mpa
- Flexible strength: 320 MPA (ASTM C1161.3 point)
- Young Modulus: 325 Gpa
- Thermal Conductivity: 21 W/m3

Cheat Treatment Pads | MALTEC-H **Channel Heater: Four Bank, Double and Single Channel**



MALEC-H Channel Heater has been designed to provide modular heating units of a robust design suitable for connection to a mains or low voltage electrical supply. The heaters are portable and solid and are suitable for use in temporary furnace design or for the heat treatment of pressure vessel welds and sections, or other large fabrications. Heat transfer to the component is affected by combined radiation and convection. The heater element is manufactured from nickel-chromium coiled wire. The coil may be embedded into a high conductivity cast refractory material within each of the unit stainless channels trays that form the heater. Alternatively, the heaters can be manufactured with the traditional ceramic sleeves.

The standard heaters are suitable for heat treatment temperatures up to 750°C. Temperatures above this value can be achieved by variation of the composition of the case/coiled wire and heater design. Standard heaters are supplied for arrange of voltages up to 240V. Standard heaters should deliver a current of 55 amps and unit heaters are designed for arrange of voltages between 30 and 277V. The higher rating permits the connection of the heaters in groups of three to suit 3-phase supplies. The heaters may be mounted onto supports for vessel heat treatments or directly to the components as may be suitable. Avoid contaminants (grease, paint, oil and etc) on the metal surface.

FLEXIBLE CERAMIC HEATING PADS

Ceramic Pad Heater | MALTEC-H **Magnitized Flexible Ceramic Heating Pad (MCHP)**



Magnetic Ceramic pad heater with high temperature blanket & stainless-steel backing. Magnetic elements can also be supplied utilizing 60 V or 80 V supplies which can be powered and controlled via standard 60 v and 80 V output, 50 kVA or 70 kVA heat treatment machines. This is the best practical solutions to hold Heaters in proper positions. Magnetic heating elements can be used for post weld heat treatment. Usually of large, welded constructions, including steam drums and vessels or for use in Furnaces.

Ceramic Pad Heater | MALTEC-H **Finger Flexible Ceramic Heating Pad (FCHP)**



Maltec Finger Flexible Ceramic Heating Pad is robust and require minimal maintenance. It is made with NiCr wire threaded through ring beads and can be used for pre and post weld heat treatment. The tails are beaded with regular tail beads and a connector block is attached to the ends to make the connection with the power source cables. Each finger of the element is rated at 120 amps, 1.3 volts. The standard 60 volt, 2.7kW finger element is made from 46 fingers, each finger holding 5 beads. If an alternative voltage finger element is required, the required size can be calculated.

FLEXIBLE CERAMIC HEATING PADS

Braided Rope Heaters

Applications

Rope elements can be used for pre heating. Industries: heat treatment. **Nuclear Industry, Construction Industry.**

Description

Voltage 30, 60 and 80 Volts. Very Robust and easily wrapped around pipes. Manufactured with ball and socket beads which are threaded by NiCr wire.



Industry We Serve



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