



An ISO 9001 : 2015 Company



T Meeting **Thermal Challenges** Through Induction

THE COMPANY

We deal in Metal Heating & Melting and possess the strength to meet Thermal Challenges through Induction.

In 1989 as we sparked-off, we banked upon our troupe of Electro Thermal Processing experts and the capital of experience that we had gathered since the 70's. We made our presence felt across Steel, Foundry, Forging and various other Metal Working Sectors, surging forward with spirits held high and the fire burning within.

Today, Megatherm is recognized and preferred by its ever-extending list of domestic and international clientele. Our installations are spread over the globe in countries, such as Brazil, Argentina, Chile, Mexico in Latin America, South Africa, Nigeria, Egypt, Kenya in Africa; Georgia, Kazakhstan, Azerbaijan, Iran in Central Asia, Indian, Pakistan, Bangladesh, Malaysia in South Asia, Kuwait, Saudi Arabia, U.A. E., Yemen in Middle East Asia; Poland, France, Germany in Europe to name a few.

Megatherm is committed to customer delight and performance excellence. We have invested in progressive in-house R&D which in turn has yielded both profit and praise for the company. On an aggregate we have over 1500 satisfied customers of Electro Heating Equipment till date. Our systems are incorporated with the best contemporary technology that ensures optimum utility and comprehensive productivity.

Being certified as an ISO 9001-2015 Company, the name Megatherm today is synonymous to quality.



Induction Mass Heating

Various Metal working Processes such as Forging, Extrusion, Rolling, Annealing, Curing etc. depend on Induction Mass Heating technology, which is leveraged through various applications, such as:

Induction Billet Heater

The continuous feed Induction Billet Heaters manufactured by Megatherm are the outputs of the latest technology. These heaters come with static power supply, complete range of modular material handling mechanics, temperature measuring & monitoring system and other related accessories.

These induction heaters are suitably configured to through- heat cut billets of assorted cross sections uniformly to the forging temperature of $1200 + 50^{\circ}\text{C}$ (1250°C max). The uniquely designed induction coils assist in maintaining surface to core and nose to tail temperature within very close tolerance.

The Static frequency converters are customized in terms of power and frequency rating. The variables that determine the rating are- billet cross section, production rate and temperature profile, as specified by the customer. The procedure of continuous heating system initiates with a train of billets journeying through the closed coil box. As the hot billets are ejected one after the other through the exit end they are replaced by the cold billets that head for the coil box in turn. Additional systems like hot billet descaler and inert gas purging systems are available on special request.





Induction Bar End Heater

Megatherm believes in keeping its products abreast with the latest technology. The continuous Induction Bar End Heater is a package of static power supply, modular handling mechanism and peripherals, designed specifically for heating of only selective portions of a round or square bar.

These induction heaters are suitably configured to through-heat the Bar Ends to a forging temperature of $1200 + 50^{\circ}\text{C}$ (1250°C max).

The production rate, bar dia and heating count determine the power and frequency rating of the Static Frequency Converter. The coil is also devised accordingly.

The Bar-End heaters are offered in the following designs -

✱ **Horizontal design with bar indexing and coil to-and-fro movement**

As per this design the bar is placed onto the indexing conveyor at a certain point while the heated end is kept suspended. These hanging ends are heated by the induction coil (pigeon hole type) in a to and fro movement. The salient features of the design being-
The heated bars are conveniently detrained at a singular point.
The design is suited to incorporate non-contact infra red pyrometer and accept-reject mechanism.



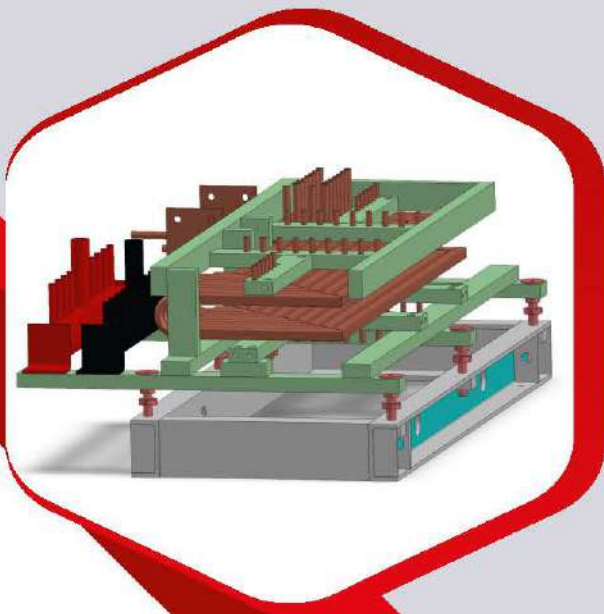
Horizontal design with bar movement through the induction coil

This mechanism requires the bars to be hauled manually or automatically onto fixed V-guides. As the name suggests, the bars are then hustled forward by the pneumatic cylinders through the multi pigeon-hole induction coil. This operation follows a sequence as per set cycle time. Once the cycle is completed, the pneumatic cylinders shove the bars out of the induction coil only to be followed by fresh loading.



Inclined design

The inclined bar end heater are meant for those heated lengths which are very high compared to the total length of a bar. These heaters come with the feature of sequential heating in multi pigeon-hole coil driven through a PLC equipped operator console.



C-Channel coil design

The mechanism of C-Channel coil offers uninterrupted movement of the bars in regular sequence, without rotation for end heating. This device works best for smaller bars with high rate of production. Here, the roller conveyor fitted with AC Geared motor with drive carry the unheated length of bars. The bars once heated are dislodged from a particular point to facilitate hot handling and temperature monitoring.

Induction Wire / Wire Rope / TMT Bar Heater

This category of induction heater formulated to execute uniform heating of wire/wire ropes/TMT bars in the required degree for applications like

- a) Annealing
- b) Coating
- c) Stress relieving etc.

The wire bar is heated to the requisite temperature at its rated throughput. And the largest diameter of the job determines of which rate of power the Static Frequency converter would work. The system offered for continuous in-line heating. The wire/wire rope bar is passed through an elongated & cloud coil box with FRP liner, provisionally designed with adjustable speed. The infrared pyrometer of the exit point registers the temperature of the wire and subsequently sends out feedback in form of current signal. The report is fed back into the PLC controller for the necessary closed loop control.

Induction Long Bar Heater

If your requirement is heating of continuous long bars, of round or square cross sections of various dimensions, then the option for you is Megatherm's Induction Long Bar heating equipments—they help the round / square metal bars to attain a uniform forging temperature. These heating equipments are suitably designed for fully/semi automated operation and are compatible with various categories of forging/hot shear machines.

The installation is complete with automatic bar feeding systems and the induction coils used in the heater also come in varied specifications. Therefore the bars used in the heater section also vary characteristically in diameter and length, depending on the specifications. And the variance is controlled through a temperature monitoring system and bar reverse and discard systems.

All heater functions are controlled through suitably designed PLC equipped operator consoles.



The basic composition of the equipment includes:

- a) Manual feed/semi automate feed bar loader and feeder
- b) Heater section with pinch roll drive to drag the bar at a constant speed through the heater coils
- c) Control desk with temperature indication through IR Pyrometric
- d) Solid State Induction Power supply.
- e) A set of water cooled coils with protection skirts. The coils are a refractory coat for long life.



Induction Pipe Heater

Induction Pipe Heaters are commissioned for the following Jobs-

- a) Pipe End Heaters for hot spinning for gas cylinder manufacturing lines.
- b) Pre Surface heaters for coining line
- c) Pipe heaters for pipe bending applications

It has heaters on a complete package of mechanical handling systems, Numpant monitoring system and cooled coils

Induction Power Supply Unit

When it comes to Induction Mass Heating Power Sources, Megatherm has a commendable series to offer. These power units are fitted with the much trusted "Parallel resonant current Technology that ensures efficient & reliable heating. The capacity of these units range between 15 kW and 20 MW matched by similar gradation in operating frequency between 250 Hz to 25 KHz. The Power Semiconductor devices in the circuits are customized either with Fast Thyristors or IGBTs, depending on the power and frequency.

With the purpose of controlling the frequent downward regulation of power, D.C Choppers are utilized to maintain constant mains power factor under all operating conditions. Multi-Pulse and Multi-Rectifiers options are often deployed to limit Harmonic levels when the rating is above 1000 kW.



INDUCTION BILLET HEATER

Frequency	Models	Average Production Kg/Hr	Billet size
Frequency 30Khz	75 MTIBH/30	190	10mm-30mm
	150 MTIBH/30	375	10mm-30mm
Frequency 10Khz	100 MTIBH/10	270	16-40
	150 MTIBH/10	405	16-40
	250 MTIBH/10	675	16-40
Frequency 6 KHz	150 MTIBH/6	425	20-50
	250 MTIBH/6	700	20-50
	400 MTIBH/6	1150	20-50
Frequency 3 KHz	150 MTIBH/3	450	40-75
	350 MTIBH/3	1050	40-75
	500 MTIBH/3	1500	40-75
	750 MTIBH/3	2250	40-75
Frequency 1 KHz	350 MTIBH/1	1050	60-100
	550 MTIBH/1	1650	60-125
	800 MTIBH/1	2400	60-125
	1250 MTIBH/1	3750	60-125
	2000 MTIBH/1	6000	60-125
Frequency 500 HZ	1000 MTIBH/0.5	3000	125-160
	1500 MTIBH/0.5	4500	125-160
	2000 MTIBH/0.5	6000	125-160

GLOBAL PRESENCE

MORE THAN 3000 INSTALLATIONS
IN 44 COUNTRIES



- ♥ Argentina
- ♥ Algeria
- ♥ Angola
- ♥ Afghanistan
- ♥ Azerbaijan
- ♥ Bolivia
- ♥ Botswana
- ♥ Bhutan
- ♥ Bangladesh
- ♥ Brazil
- ♥ Cuba
- ♥ Chile
- ♥ Ethiopia
- ♥ Egypt
- ♥ Ecuador
- ♥ Fiji
- ♥ France
- ♥ Ghana
- ♥ Georgia
- ♥ Iraq
- ♥ Iran
- ♥ Ivory Coast
- ♥ Indonesia
- ♥ Jordan
- ♥ Kazakhstan
- ♥ Kenya
- ♥ Kuwait
- ♥ Malaysia
- ♥ Mauritania
- ♥ Mexico
- ♥ Nigeria
- ♥ Pakistan
- ♥ Poland
- ♥ Peru
- ♥ Saudi Arabia
- ♥ South Africa
- ♥ Sudan
- ♥ Tanzania
- ♥ Tunisia
- ♥ U.A.E
- ♥ Uganda
- ♥ Uzbekistan
- ♥ Venezuela
- ♥ Yemen

Corporate Office :

Megatherm Induction Limited

Megatherm Tower

Plot L1, Block GP, Sector V,
Electronics Complex, Salt Lake City,
Kolkata - 700 091 India,

Works :

Megatherm Induction Limited

Plot No. H1/H2, Vidyasagar
Industrial Park, Vill: Rupnarayanpur
PO: Jakpur,
Dist: Paschim Mednapur,
Kharagpur - 721 301, India

✉ sales@megatherm.com 🌐 www.megatherm.com ☎ +91 33 4088 6200