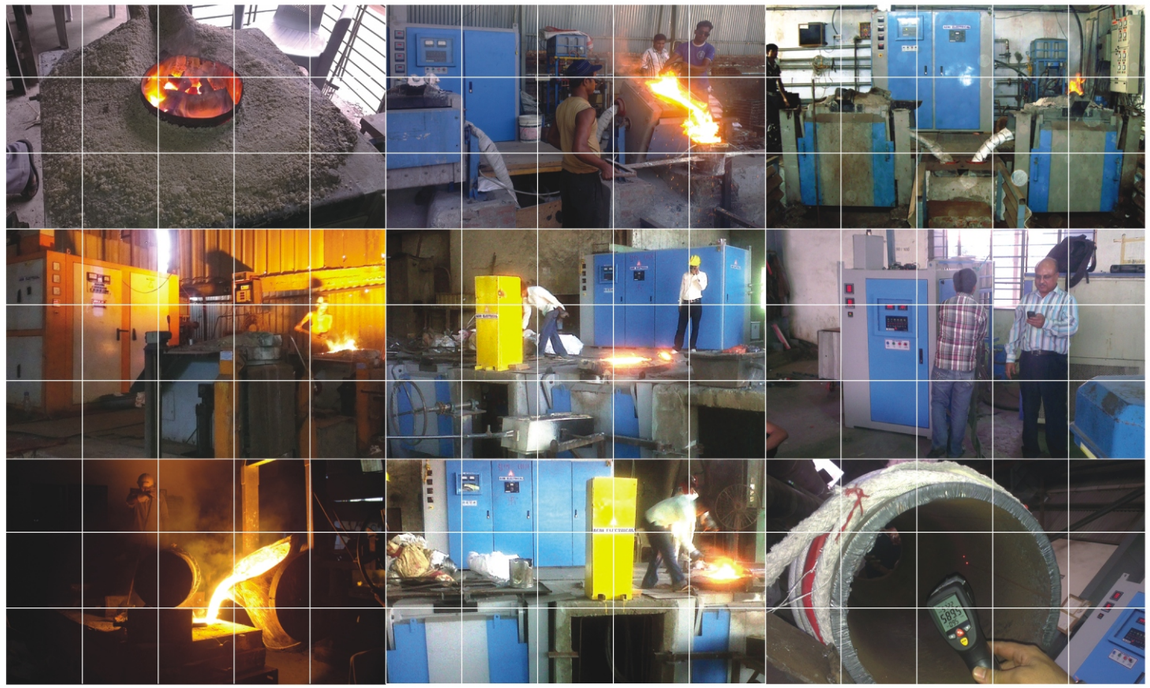

* Actual running site photos.

AGNI ELECTRICAL

Mfg. of : Induction Melting Furnaces & Heating Equipments

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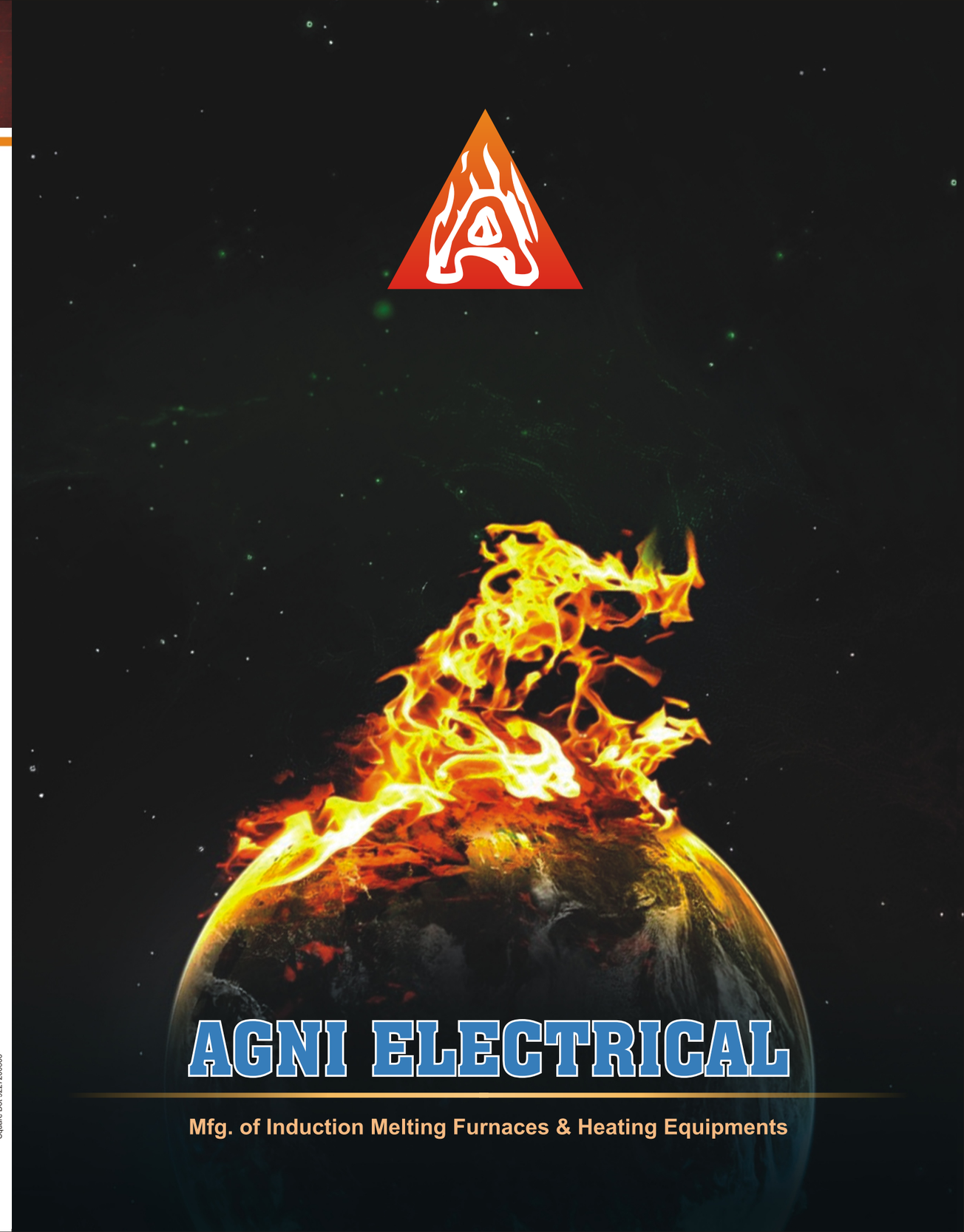
Website : www.inductionfurnaceindia.com



About Us

Introduction :

AGNI ELECTRICAL, established in 2003, manufactures a wide range of INDUCTION MELTING FURNACES and HEATING EQUIPMENTS using the most advanced and latest manufacturing Techniques. Company has a very strong customer base, having supplied more than 300 complete installations INDUCTION FURNACE in all parts of India and Global Market. To attend to customer's needs immediately, company has sales / service station spread all over India and Global Market and also company has lots of repeated customers.

Engineering Future :

Before 1986, Mr.Rasikbhai Patel had worked in M/s. Inductotherm India Ltd. for Six Years. After in1986, He started his own business company and Agni Electrical is a passionate company by having interest primarily in engineering and beyond. With innovation in product line, timely implementation and able leadership of technocrats Mr. Rasikbhai Patel and others the company is today amongst the foremost steel and engineering companies of the South east Asia. Agni Electrical has its installations in India and also in Bangladesh, Pakistan, Egypt, UAE, Canada, USA and UK.

Mr. Rasikbhai Patel is into this field since last 33 years. They have bought lot of revolution and regular technical and mechanical upgradiation into this field with the continuous R&D. They are the only entrepreneurs taken training in induction heating equipment from maid in Japan.

Excelling in Engineering :

Agni full-fledged state-of-the-art manufacturing and testing facilities are spread over an expansive area at Kathawada GIDC at Ahmedabad. Its plant is well-equipped with assembly shops boasting the latest machines and a host of special-purpose machines for better precision and better quality of the products. What's more, Agni can offer turnkey services for setting up medium-sized steel plants.

History of Performance :

Before Agni was a company, it was a dream. This dream came true in 1987 with passion, persistence and performance of promoters. The mission was simple: to serve Indian iron and Steel Industry by providing cutting-edge technology and pass on the benefits to the customers.

The Company ventured into manufacturing of equipments for melting metals at a time when capability of multinationals was accepted as a norm in India. Soon, Agni envisioned the gap in technology and took upon them the task of indigenous development of Medium Frequency Induction Melting Furnace at a time when these furnaces were imported into India at exorbitant prices. But after Agni inception, multinationals were compelled to open local assembly shops and offer reasonable terms and better services. The result was more convenience for the customers.

Soon, Agni envisioned the gap in technology and took upon them the task of indigenous development of Medium Frequency Induction Melting Furnace at a time when these furnaces were imported into India at exorbitant prices. Agni also took upon servicing induction furnaces in far-flung areas of the country.

Research & Development :

Exploring New Frontiers :
Agni is continuously making efforts to explore, learn and absorb emerging technologies for developing cost effective, reliable and efficient product line for Indian and overseas customers.

The company is actively investing in tools and equipments to facilitate research. We are also providing training to our employees for development of new products that are appropriate for the business of the company.

We undertake continuous research and development to enhance the functions of various products currently manufactured and sold by the company. The development and upgradation of equipments is also carried out with a view to meet the raising needs of the existing customers. Proactive research is done to impart new features into the existing products keeping the future needs of the customers in mind. Currently, our major focus in engineering research and development is on line isolated furnaces and Induction heating equipments.

Manufacturing Products

Medium Frequency Solid State Induction Melting Unit

High Efficient Solid State Series Inverter Induction Melting Unit

Product Range : 50 kW to 1500 kW

Core-less Melting Furnaces

Melting Crucible

Product Range : 25 Kg to 10 Ton

Medium Frequency Solid State Induction Melting Unit
Technical Specification and Advantages

Get Full Power From Start to Finish at Pouring Time :

- Agni electrical provide you solid state melting unit which melts metal scrap at full power or optimum power as per panel capacity from starting to finishing at pouring time. (Condition : with hot lining)
- In this design you will get full power from start and get more metal for melting in short time from other designed.

Advantages : Increase foundry productivities and profitability.

Separate Piping Section :

- In Panel we create separate piping section in this section manifold of input and output of panel sets at back side of power circuit and components.
- Power components saved incase water leakages create in panel.

Advantages : Easy to operate every path of cooling, Save power components, make your unit cleans.

Easy Monitoring Module :

- Agni electrical gives you solid state monitor (no relay) for monitoring the panel easily. This is fitted on front door of the panel with S S Plate.
- Monitor module indicates unit problem and limits with the help of Bright LED Bar to alert the operator.

Advantages : Easy to read problems or limits for Unit Operator.

Section of Panel Protection :

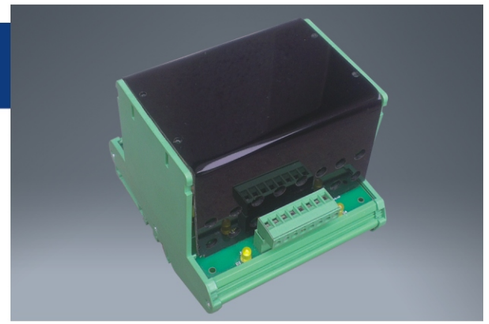
- We are using fast acting MCCB and ACB with microprocessor base tripping system. It will help for fast tripping and save power components.
- We provide Current Limiting Reactor (CLR) with low DC resistance for protecting while creates any problem from malfunctioning by component.
- With low dc resistance it consumes low power and increase panel efficiency and helps to decrease power consumption in some percentages during panel working condition.

Advantages : Fast tripping saves your costly components with low power losses design.

Protection Circuits (New Design) :

- In electronic circuits we are using PS (Potential Sensor) for protecting power components and also electronic circuits.
- If panel DC supply short then our new design circuit will not turn on inverter/converter and save your valuable SCRs or other costly power components and also find out which SCR is short with LED indicate in short time.(New Invention)

Advantages : Fast tripping and save power components, easily troubleshooting in short time at Inverter side.



Separately Electronics Cards / Modules Section :

- In panel we provide separate cards and modules section from the power circuit and cooling piping.
- Which are totally isolated from high voltage area, this area makes panel decent and clean.

Advantages : For long life of cards/modules, Totally safety (like in safe zone)

Safety Isolation :

- Line Isolation must require in this design.
- Line isolation decrease power consumption and increase efficiency of melting unit.

Advantages : Fast melt rates and low power consumption and panel safety.

Core-less Melting Furnaces
Technical Specification / Advantages and Efficiency Rates

Core-less Melting Furnaces

(1) High strength, rain forced refractory top and bottom connecting with aluminum castable wall for coil support available in desk and flush type **Advantages : Crucible gets long life with sturdy design**

(2) Proper matching coil fitted in crucible for getting optimum power continuously of your unit with wooden support with proper utilization of panel power and its efficiency. **Advantages : Proper coil matching with your Induction panel to get optimum power and panel runs at full power continuously.**

(3) Easy, all-around access and free breather coil simplified designed **Advantages : Easy maintenance and fast trouble shooting**

(4) Rear or Side exit Lead facility available.

(5) Hoist tilt is staider; Steering tilting system (in small crucibles) and Hydraulic tilting system are available.

KW Capacity	Input KVA	Melt rate (Kg/Hr) for Steel @ 1650ºC	Melt rate (Kg/Hr) for Iron @ 1480º
50	65	65	75
75	85	112	125
100	115	150	170
125	140	195	216
150	168	234	260
175	195	290	322
250	280	445	490
350	390	650	700
450	500	850	910
550	610	1025	1125
650	765	1170	1330
750	865	1400	1540
1000	1150	1860	2060
1250	1440	2330	2570
1500	1720	2800	3090

Efficiency Rates

- Metal is based on a nominal furnace size for second heat when lining is hot; charge is clean and dense scrap.
- Input KVA is the power requirement for furnace alone.
- Voltage should be steady within a range.
- Isolated input power supply 3 Phase, 415 or 550 Volt (optional), 50 Hz
- Power factor line always more than 0.98
- Please note that slag consumes nearly double power.
- For other Metals, multiply metal rate of steel by the below numbers :
  Aluminum 1.0, Copper 1.6, Bronze 1.8, Silver 2.85, Gold 5.0

Melting Furnaces Parts

CT


CLR


THYRISTER


DIODE


ALLU. SIDEWALL

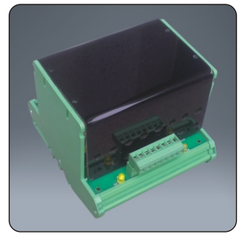

TEMP. SWITCH


SNUBER DIODE


INVERTER ASS.


FLOW SWITCH


FREEWHEELING DIODE


ELECTRONIC MODULES


CIRCUIT BREAKER

SEMI CONDUCTOR FUSE


ELECTRONIC MAIN CARD