

सुगम धातुः द्रविणम्

AGNI
INDUCTION
MELTECH

Manufacturer of **INDUCTION MELTING FURNACES**

PROMPT

PROFESSIONAL

PERFECTION

About us

AGNI INDUCTION MELTECH, Now it is new name of **Agni electrical**. **AGNI INDUCTION MELTECH is firm new name and organization still same**. **AGNI INDUCTION MELTECH** is a part of **Agni Electrical** only we changed the name from **AGNI ELECTRICAL TO AGNI INDUCTION MELTECH**.

AGNI INDUCTION MELTECH (Previous name Agni electrical), established in 2003, manufactures a wide range of INDUCTION MELTING FURNACES and INDUCTION HEATING EQUIPMENTS using the most advanced and latest manufacturing Techniques. Company has a very strong customer base, having supplied more than 1000+ complete installations INDUCTION FURNACE in all parts of India and Global Market. To attend to customer's needs immediately, company has sales & services 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 1986, He started his own business / company and Agni Electrical now **Agni Induction Meltech** 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 Induction melting furnace manufacturing unit of the South east Asia. Agni Induction Meltech has installations in India and also in Bangladesh, Pakistan, Nepal, Egypt, UAE, Canada, USA, South Africa, Myanmar, Mauritius and UK.

Mr. Rasikbhai Patel was into this field since last 40+ years. They had brought lot of revolution and regular technical and mechanical up gradation into this field with the continuous R&D. He was the only entrepreneurs taken training in induction heating equipment from Japan. Now **Mr. Ankit Patel** have work experience about 10+ years in this field.

Excelling in Engineering

Agni Induction Meltech full-fledged state-of-the-art manufacturing and testing facilities are spread over an expansive area at **Kathawada GIDC, Ahmedabad** and **another unit on Ahmedabad-Dholka Highway in Jagganath Industrial Park, 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 Induction Meltech can offer turnkey services for setting up medium-sized ferrous and non ferrous foundries. Now we are also in precious metal melting field.

History of Performance

Before Agni Induction Meltech 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 ferrous, non ferrous and precious metal 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 Induction Meltech 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 Induction Meltech's inception, multinationals were compelled to open local assembly shops and offer reasonable terms and better services. The result is more convenience for the customers.

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

Research & Development

Exploring New Frontiers

Agni Induction Meltech 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 up gradation 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.

We already developed **SCR and IGBT** based Induction Melting Furnaces with having **Medium and Higher Frequency design** for ferrous metals and non ferrous metals foundries and Precious metals refineries.

ACHIEVEMENTS

1st INDIAN Manufacturer **LIFT-SWING FURNACE**

- 1st Indian manufacture who introduced Lift swing induction melting furnace for non ferrous foundries. (Small – Medium capacity Foundries)
- 1st 300kg Capacity Lift swing furnace Indian manufacturer in India.



1st INDIAN Manufacturer **DROP COIL FURNACE**

- 1st Indian Manufacturer of Drop coil Melting furnace. (Small cap Foundries, Refineries and testing units)



1st INDIAN Manufacturer **I-SMART 50.10**

- 1st Indian Manufacturer who made 50kw 10khz Induction melting unit Line Isolation for Precious metal melting. (Refineries)

INDUCTION POWER SUPPLY UNIT

SCR BASED INDUCTION POWER SUPPLY UNIT
RANGE : 250KW-1500KW



**HIGH &
MEDIUM
FREQUENCY
SOLID STATE
INDUCTION
POWER
SUPPLY
UNIT
FEATURES
INCLUDE**

Series Inverter Induction melting
technology

Line – isolation power supply unit :
increase panel efficiency

High efficient with proper power

factor: 0.98 and above at any load

Get full power from start to end with

all protection and automatically

controlled : Maximum production at low cost

Separate all section in panel cabinet:

power circuit , control circuit and

water circulate system

Easy system diagnostic system with

smoothly power controlled: low skill

man can operate easily

Power optimizer with MD controlling

facility (optional)

Low maintenance and accessible

design and also easy to upgrade design

Heavy duty EC grade copper bus

bars (air/water cooled) and rated

copper components are used inside

the panel: low loss and get optimum

power to furnace and get maximum

outputs from the product.

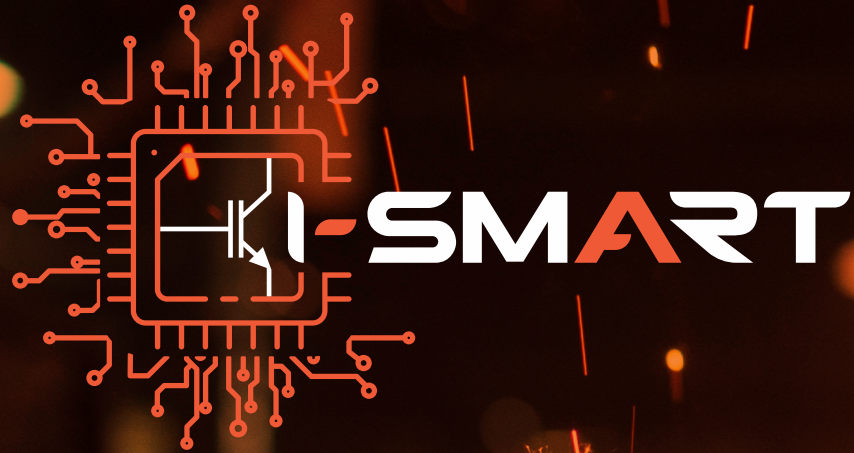
Customized touch display with high

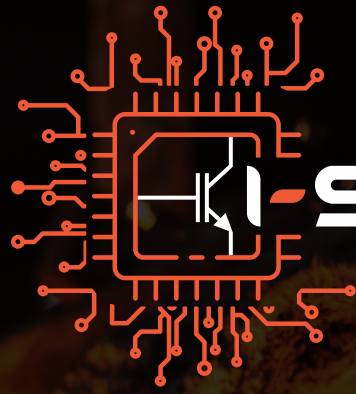
tech features (optional)

INDUCTION POWER SUPPLY UNIT

IGBT BASED INDUCTION POWER SUPPLY UNIT

RANGE : 5KW-175KW





I-SMART 5.1.1 & 5.3.1



SPECIFICATIONS:

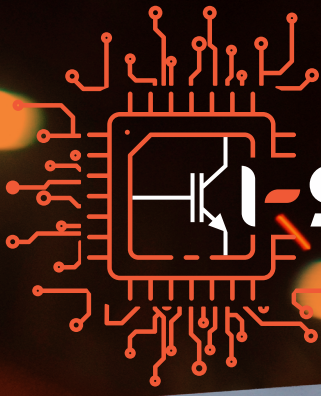
- 5 kW Melting unit with 1/1.5 Kg metal melting capacity (Depends on metals)
- <10 KHZ as per design requirement (High frequency melting unit)
- Input Power Supply: Single phase and 415V \pm 5% , 3 Phase, 50/60 Hz
- Most advance IGBT based inverter with microcontroller and LCD display for machine interface with having auto resonance design sensing and getting full power from start the machine (No power pot required only ON and OFF Push Buttons)
- Chiller required at optional base depends on Usage.

FEATURES:

- Total Digital and most advance technology for micro-controlling circuits with all converter SCRs/Diodes and Inverter IGBTs Safety and tripping circuits which have water Pressure / flow tripping and Temperature tripping sensors : Easy Diagnostic and Fast Trouble Shooting with quick response Control system
- 0.98 and above Power factor
- Operate with time reference / Operate with temp reference (Temperature sensor doesn't give accurate temp. rating this only for reference)
- Easy to operate and Low maintenance design
- Clean and Silent operation unit with Minimum metal loss
- Secondary-isolation series tank power circuit protection
- Integral crucibles Pull out furnace system (Push out furnace system on optional bases)
- Very compact monobloc unit design
- Silicon Carbide, Silicon Graphite, Clay Graphite and Pure Graphite crucibles: any one can be use

APPLICATION:

- In Refineries of Precious Metals: Melting likes Gold, Silver, Platinum etc....
- Ferrous and Non Ferrous Metals Alloys making for R&D or Small Lab Testing Furnace for taking result of alloy metals likes Coppers, Cast Iron and Steel Alloys or ETC...
- Specially for Metal Powder and low dense materials (Smelting)



I-SMART 15/30



SPECIFICATIONS:

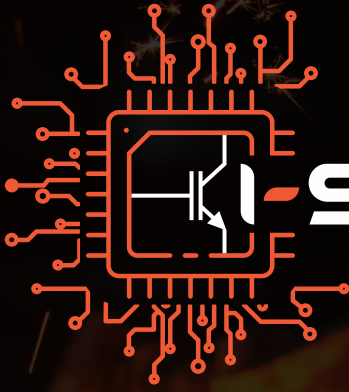
- 15 / 30 kW Melting unit with 5–20 Kg metal melting capacity (Depends on metals)
- $\leq 9-10$ KHZ as per design requirement (High frequency melting unit)
- Input Power Supply: $415V \pm 5\%$, 3 Phase, 50/60 Hz
- Most advance IGBT based inverter with microcontroller and LCD display for machine interface with machine ON, OFF push button and power control Power Pot.
- Chiller / Cooling Tower required at optional base depend on Usage.

FEATURES:

- Total digital and most advance technology for micro-controlling circuits with all converter SCRs/Diodes and Inverter IGBTs Safety and tripping circuits which have water Pressure / flow tripping and Temperature tripping sensors : Easy Diagnostic and Fast Trouble Shooting with quick response Control system
- 0.98 and above Power factor
- Operate with time reference / Operate with temp reference (Temperature sensor doesn't give accurate temp. rating this only for reference)
- Easy to operate and Low maintenance design
- Clean and Silent operation unit with Minimum metal loss
- Secondary-isolation series tank power circuit protection
- Integral crucibles Pull out or Push out furnace system [Tilting furnace system on optional bases{Manual, Hydraulic and Electrical remote}]
- Silicon Carbide, Silicon Graphite, Clay Graphite and Pure Graphite crucibles: any one can use
- Very compact modular unit design
- Alloy and Metal capacity flexibility
- Touch Screen interface available at optional bases

APPLICATION:

- In Refineries of Precious Metals: Melting likes Gold, Silver, Platinum etc....
- Ferrous and Non Ferrous Metals Alloys making for R&D or Small Lab Testing Furnace for taking result of alloy metals likes Coppers and copper based alloys, Cast Iron and Steel Alloys or ETC...
- Specially design for Metal Powder and low dense materials (Smelting)
- Heating and Forging Machine



SMART 50/75-100/125-175



SPECIFICATIONS:

- 50/75/100/125/150/175 kW Melting unit with 25–300 Kg or more metal melting capacity (Depends on metals)
- 1–3 KHZ or above as per design requirement (Medium / High frequency melting unit)
- Input Power Supply: 415V \pm 5%, 3 Phase, 50/60 Hz
- Most advance IGBT based Inverter with microcontroller , Touch Screen HMI and LCD display (Both) for machine interface with machine ON, OFF push button and power control Power Pot.

FEATURES:

- Total digital and most advance technology for micro-controlling circuits with all converter SCRs/Diodes and Inverter IGBTs Safety and tripping circuits which have water Pressure / flow tripping and Temperature tripping sensors : Easy Diagnostic and Fast Trouble Shooting with quick response Control system
- 0.98 and above Power factor at any load
- Extra Protection Relay for Line over voltage, under voltage, phase failure and phase sequence etc... & Line meter with having display of Line voltage, Amp. , power, power factor, unit consumption, kW etc....
- Ground and Leak detector for components and molten metal leakage sensing : GLD
- Get Full Power Start to End with all protection and automatically controlled: Maximum Production at low cost.
- Separate all sections in panel cabinet : Power circuit, Control Circuit and Water circuit : Easy to operate and Low maintenance design also easy to upgrade kW capacity
- Line-isolation Power supply unit design (Solid State Series Inverter Design) available: Increase panel efficiency and Secondary-isolation series tank power circuit protection design is also available as per requirement or purpose of use.
- Heavy Duty EC grade copper bus bars (air/water cooled) and rated components (no more bulky and power losses components) are used inside the panel: Low loss and get optimum power to furnace and gets maximum output from the product.
- Can attach Lift-swing furnaces, Tilting furnaces and Push/Pull out furnaces
- Very compact modular unit design
- Power Optimizer MD Controlling, auto sintering lining facilities and Production Data sheet fill up facilities are at optional base.

APPLICATION:

- In Refineries of Precious Metals: Melting likes Gold and Silver etc...
- In Foundries: Ferrous and Non ferrous metal casting units likes MS/SS/CI/SG/Copper & Copper alloys (Special design for Gunmetal), even also in metal powder making technologies etc...
- Specially for Metal Powder and low dense materials: Smelting
- Heating and Forging

INDUCTION FURNACES



TILTING FURNACE

- High strength rain forced refractory top and bottom (castable design) connecting with Aluminum Alloy castable wall structure for firm coil support
- Proper matching EC grade copper tube coil fitted in crucible and get free magnetic path within furnace for getting maximum efficiency
- Simplified design to access all side of furnace easily: maintenances free design/ easy to access
- Rear or side exit leads facility available
- Hoist tilt/Gear/Hydraulic tilting types of mechanism systems are availables all are optional
- offers high efficiencies with having lots of range capacities choice

INDUCTION FURNACES



LIFT-SWING FURNACE

- Mostly provide in ferrous (cast iron and iron alloys) and non ferrous metal foundries
- Easy erection or installation process: No pit needed, installs right on the foundry floor (not too much civil work required)
- High productive and efficient crucible melting system: you can melt brass, copper, gunmetal, Cast iron or iron alloys sequentially in same furnace only you need to change crucibles, you don't need different lining materials for taking different metals heats.
- Easy movable induction coil assembly around and across the spills or crucible
- No needed to keep turn on coil water circulation pump for too much time after finishing day work.
- Low cost maintenance design
- Manual / Hydraulic lifting system available (optional)
- A rugged aluminum shell protects the refractory and coil from the spills or crucible.

INDUCTION FURNACES



PUSH-OUT FURNACE

- Single/double push-out induction furnaces provide for laboratory testing purpose for ferrous, non ferrous and precious metals foundries
- Manual / Hydraulic push out system available (optional)
- Easy erection or installation process: No pit needed, installs right on the foundry floor (not too much civil work required)
- High productive and efficient crucible melting system: you can melt different types of metals, brass, copper, gunmetal, precious metals or iron alloys sequentially in same furnace only you need to change crucibles, you don't need different lining materials for taking different metals heats.
- No needed to keep turn on coil water circulation pump for too much time after finishing day work.
- Low cost maintenance design
- Easy and smoothly movable crucible or spills system between coil and refractory within aluminum frames furnace structure.

INDUCTION FURNACES



1st INDIAN
Manufacturer

DROP COIL FURNACE

- The Crucible is placed on the top of stand and Induction furnace coil assembly is then raised over it to melt metal in crucible.
- Reciprocate Coil movement is controlled by Hydraulic or pneumatic with control vales which makes your operation easy.
- When the metal is fully molten then induction furnace coil assembly is lowered (Going downward position) and crucible is removed with safety tongs.
- Easy erection or installation process: No pit needed, installs right on the foundry floor for small melting units and Not too much civil work required for big capacity melting units.
- Easy movable coil assembly around and across the spills or crucible: Very safe during reciprocate movement, no risk for spill out molten metal.
- Low cost maintenance design and easy to operate.(better then push-out furnace even maintenance is low then push-out furnace)
- No needed to keep turn on coil water circulation pump for too much time after finishing day work.
- Mostly provide in Small and Medium scale Ferrous (cast iron and iron alloys), Non Ferrous metals and precious metal foundries.

APPLICATIONS AND OUR PRESENCE IN VARIOUS FIELDS



**I-SMART 5.1.1 & 5.3.1
PUSH / PULL-OUT FURNACE**



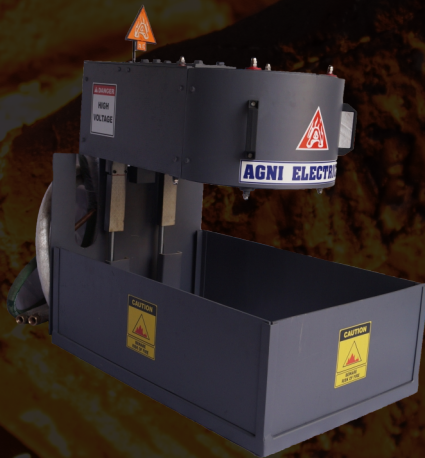
I-SMART UNIT



S.C.R. UNIT



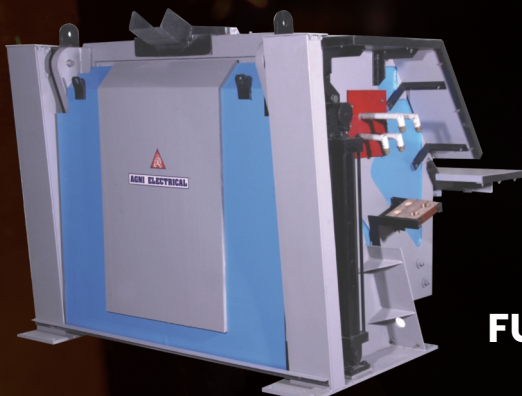
**I-SMART 15/30
PUSH / PULL-OUT /
TILTING FURNACE**



**DROP COIL
FURNACE**

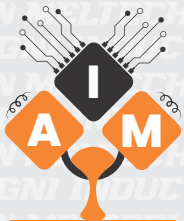


**LIFT-SWING
FURNACE**



**TILTING
FURNACE**

- **Small Laboratories**
- **R & D units**
- **Small – Medium – Big
Precious Metals
Refineries or
Foundries**
- **Small – Medium – Big
Foundries for Ferrous
& Non Ferrous Metals**
- **Smelting Units**
- **Metal powder
making units**



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AGNI
INDUCTION
MELTECH

Manufacturer of **INDUCTION MELTING FURNACES**

Scan



Quick access for Company Profile

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