Here to provide complete solution for

- Induction Melting Furnace Spares
- Induction Heating Furnace Spares
- Induction Hardening Furnace Spares
- Continuous Casting Machine (CCM) Spares
- Rolling Mill Spares
- Industrial Refractories and Consumables
- Industrial Penels
- Project Management
- Printed Circuit Board (PCB)

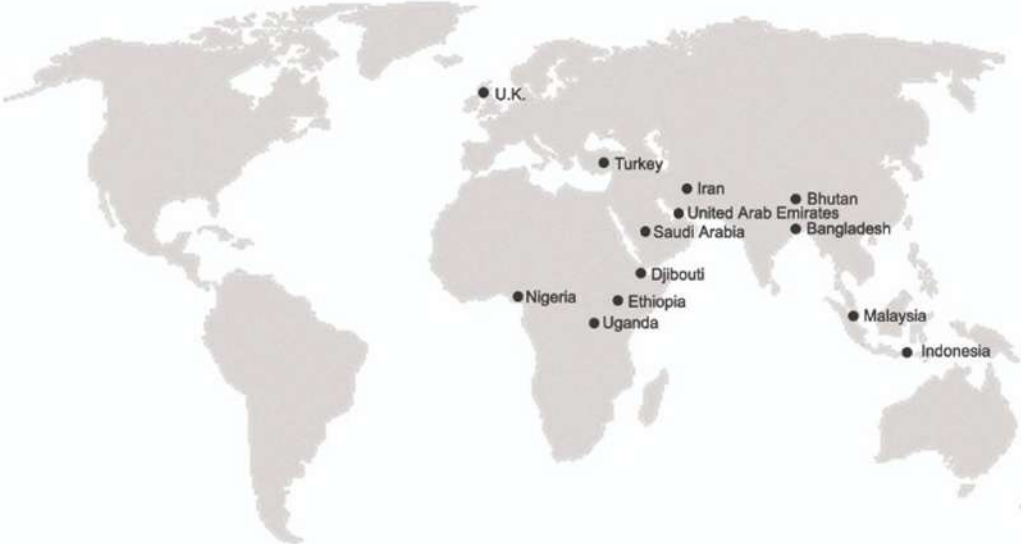
amakan

ultimate induction

DOMESTIC SUPPLY

- Andra Pradesh
- Assam
- Bihar
- Chhattisgarh
- Gujarat
- Himachal Pradesh
- Jharkhand
- Karnataka
- Kerala
- Madhya Pradesh
- Maharastra
- Meghalaya
- Manipur
- Odisha
- Punjab
- Tamilnadu
- Telengana
- Daman and Diu
- Delhi
- West Bengal

INTERNATIONAL SUPPLY



- Bangladesh
- Bhutan
- Djibouti
- Ethiopia
- Indonesia
- Iran
- Malaysia
- Nigeria
- Saudi Arabia
- Turkey
- Uganda
- U.K.
- United Arab Emirates

INDUCTION FURNACE SPARES

INVERTER THYRISTOR

FREE WHEEL DIODE

RECTIFIER THYRISTORS

SNUBBER CAPACATORS

HYDRAULIC CYLINDER

SEMICONDUCTOR FUSE

WATER COOLED CABLE

INSULATION ITEMS

TOP COOLING RING

CONTACTOR AND RELAY

PCB

START SCR

LINE CT

INDUCTION COIL

FREE WHEEL DIODE

HPP UNIT

DM UNIT

LAMINATION PACKETS

FESTO TUBE

CF HOSE PIPES

SNUBBER RESISTORS

PRIMING RESISTORS

DUMMY SS COIL

DCCT

START CHOKE

CASTING BLOCKS

TRANSFORMERS

MF CAPACITORS

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CONTINUOUS CASTING MACHINE SPARES

HYDRAULIC CYLINDER

LADLE & BAIL ARM

TUNDISH CAR

HOT BILLET SHEARING MACHINE

HOT BILLET SHEARING MACHINE

HYDRAULIC POWER PACK FOR CCM

WITHDRAWAL AND STRAIGHTENER UNIT

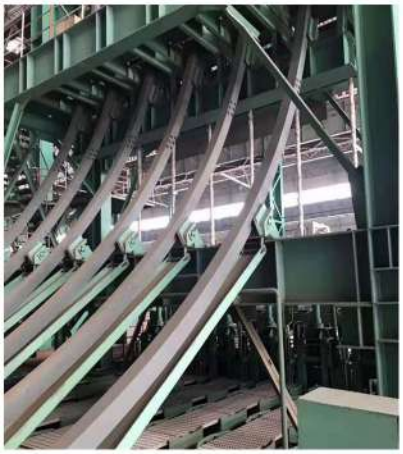
HOSE PIPES

MOULD TUBE

CAM UNIT

MOULD JACKET

FLEXIBLE DUMMY BAR



RIGID DUMMY BAR

DUMMY BAR BOLT

SLIDE GATE SYSTEM

CARDAN SHAFT AND ROLLER

STRAND GUIDE ROLLER ASSEMBLY

TUNDISH

DUMMY BAR RECEIVER AND PUSHER ASSEMBLY

ROLLER TABLE

PLUMBER BLOCK

SPRAY NOZZLE

COUPLING

COOLING SPRAY SYSTEM

DRIVE PANEL

AIR BELLOW

DUMMY BAR PIN

SEALKIT

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ROLLING MILL SPARES

PINION GEARBOX

ROLLING MILL STAND

WARM GEARBOX

TMT BOX

ROLL GUIDE BOX

COOLING BED

GEAR COUPLING

TMT BAR BUNDLE MACHINE

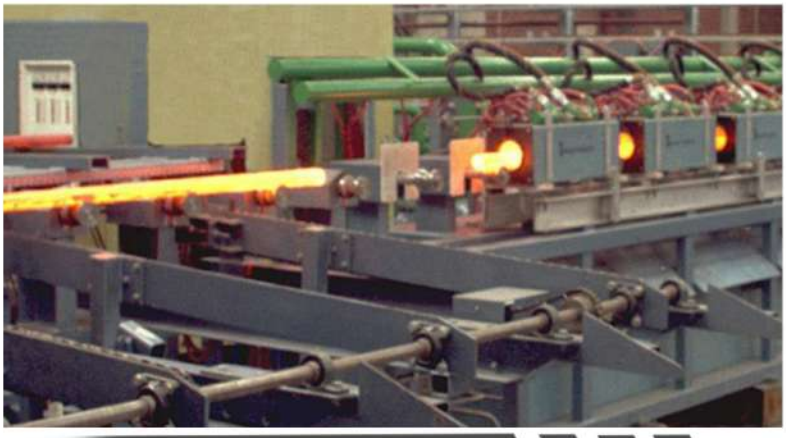
LOOPER

CNC LATHE MACHINE

STEEL BAR STRAIGHTENING MACHINE

ROLLS

TAIL BREAKER PINCH ROLL



RE-HEATING FURNACE

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SINTERING PRE - HEATER

AMAKAN manufactures state-of-the art Pre-Heaters for Furnace and the Ladle and supplies its systems across India and abroad. Our pre-heaters are custom designed as per the need of the consumer.

Sintering Pre-heater for Furnace

- Pre-heating the furnace reduces its energy requirement for melting and thus increases the efficiency of the melting process in sintering heat cycle.
- AMAKAN's customized sintering pre-heaters for furnace can be used for a capacity of 6-30 Ton, heating the furnace up to 500 degree Celsius within 180 minutes.
- The Nichrome Strip used as the heating element can sustain high temperature effortlessly.
- Provides safer work environment during melting process. Enhances longevity of the furnace.
- The initial set up cost is significantly low compared to any other pre-heating systems available in the market.
- The process minimises carbon emission and thus helps reducing pollution.
- Pre – heating the furnace improves the melting rate by maximum 15%.
- Helps increasing Productivity significantly.
- Temperature measurement and Control is automated and the pre-heater is fitted with a digital temperature indicator.
- AMAKAN's furnace pre-heating systems are flexible and removable. A single pre-heater can be used for different furnaces of similar capacity at the same shop floor.

SR NO	FURNACE CAPACITY (TON)	REQUIRED POWER (KW)	PREHEATING TIME (MINUTE)	PREHEATING TEMP (DEG C)
1	6	100	180-200	500-550
2	8	100	180-200	500-550
3	10	110	180-200	500-550
4	12	125	180-200	500-550
5	15	135	180-200	500-550
6	20	150	180-200	500-550
7	25	180	180-200	500-550
8	30	200	180-200	500-550

DIFFERENT TYPE OF HEATERS

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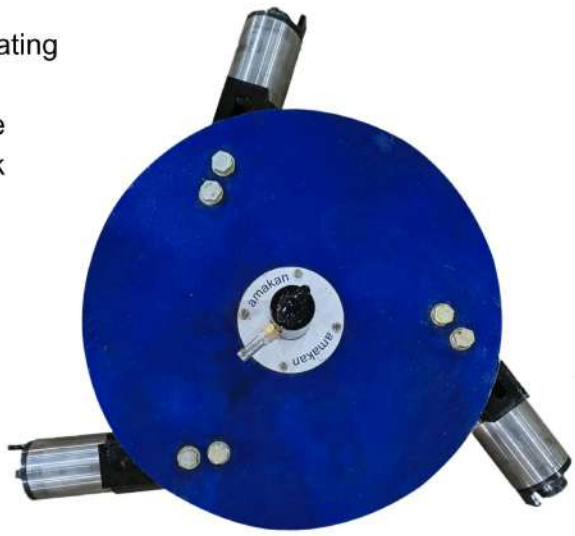
FURNACE LINING VIBRATOR

Basic Introduction

In induction furnaces working face of the main crucible is lined with a suitable ramming mass. Furnace performance is directly related to the lining performance. Well-stabilized lining results in smooth working of furnace, optimum output and better metallurgical control. The lining practice best suited toparticular foundry will depend upon the furnace capacity and design, metal being melted and outputetc. this compact yet powerful device is perfect for applications requiring optimal flow and uniform distribution of materials. It works by vibrating materials in containers of pipes, ensuring smooth transitions and eliminating blockages or settling.

Requirement of proper lining

• Thermal characteristics: it should withstand the stresses developed by the thermal cycle in operation.
• It should be chemically insert to the metal being metal being melted. Chemical inertness to molten metal can be achieved by using acid lining for acid slag & basic lining for basic slag.
• It should have enough structural strength to withstand operating conditions.
• The thickness of refractory lining must be such as to ensure good electrical efficiency and thick enough to counter the risk of unexpected failure and major damage to the coil.
• It should have high erosion resistance.
• It should have low thermal & electrical conductivity.
• It should have proper hardening characteristic.
• It should have easy installation procedure.
• It should be easily repairable, economical & possess ease of knocking / removal.



Basic Lining Procedure

Side Wall Lining

• Make sure that furnace bottom is leveled.
• Lower the former into furnace making sure it sits flat and level on bottom refractory. Check the surface of former makes contact with earth leakage antenna.
• Set the former in place and position so that resulting wall thickness will be consistent and concentric with coil.
• After aligning former, introduce ramming mass in the space between former and coil. Now compact it with 3 Arm lining vibrator till it becomes hard.
• Keep on adding ramming mass during 3 Arm lining vibrator movement from down to up.
• After reaching to top layer make the top collar and spout with ramming mass is with sodium silicate.

Bottom Lining

• Pour the ramming mass in the bottom to the extent and level the ramming mass.
• Start the ramming with bottom lining vibrator. Continue ramming till layer becomes hard. Keep on introducing layers of proper thickness and repeat the process till required level is attained.
• Care has to be exercised not to allow antenna rod to bend during bottom lining installation.

Comparison Manual Lining v/s Lining Using Vibrator

S.No	Manual Lining	Lining Using Lining Vibrator
1.	Erratic and shorter lining life	Consistent and enhanced lining life
2.	Unpredictable production	Predictable and increased total output tonnage
3.	Destiny of Lining is not uniform	Destiny of lining is uniform throughout the shell
4.	Lining thickness is not uniform around the former	Lining thickness is absolutely uniform around the former
5.	Refractory material in the tapered section of the former is not completely diaurated leading to non-uniform erosion of lining and problems like elephant foot & leakage	Material in the tapered section of the former is completely dense achieving max. & uniform compaction. Thus erosion is uniform in the tapered section eliminating any possibility of elephant foot &leakage due to weak lining.
6.	Labor Intensive	One skilled and one semi-skilled person can perform the whole lining
7.	Lots of hazardous silica & dust in the air	Pollution free
8.	Takes long hours to line the furnace from start to finish	Whole process of lining is completed in 3-4 hours
9.	Hassles due to human component like attitude, error & fatigue.	Smooth and hassle free operation

No. of Arms v/s Capacity of Furnaces

S. No	No of Arms	Furnace Capacity
1.	2 Arms	Upto 2.5MT
2.	3 Arms	From 3MT to 15MT
3.	4 Arms	From 15MT-18MT
4.	5 Arms	From 18MT-25MT
5.	6-7 Arms	Above 25MT

It automatically rotates inside the former due to the angle of impact. It will take 1-2 hours for the full operation. There is require 6kg/cm2 Air pressure for smooth operation during the lining.

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PLANT MACHINERIES AND EQUIPMENTS

TRANSFORMERS

LIFTING MAGNET

CRANE ITEMS

LADDLE PREHEATER

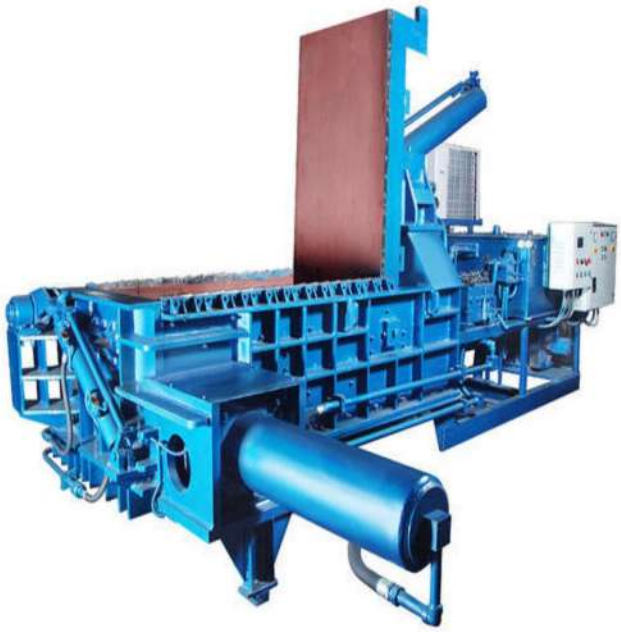
CUSTOMIZED PANELS

PLANT AUTOMATION

OLD FURNACE TRADEING

GRABBER

SCRAP SHREDDER MACHINE



SCRAP BUNDLE MACHINE

DIESEL GENERATOR

SCRAP PUSHER

WEIGH BRIDGE

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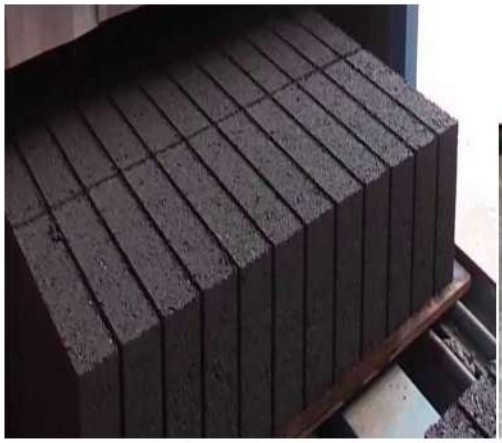
REFRACTORIES AND CONSUMABLES

SILICA BRICKS

HIGH ALUMINA BRICKS

BASIC BRICKS



DOLOMITE BRICKS

SILICA RAMMING MASS

HIGH ALUMINA CASTABLE

BASIC RAMMING MASS

CASTING POWDER

NFC

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