



Carefully crafted to serve the world

LuoYang IDM Metallurgy Trading Co., Ltd.

IDM METALLURGY

LuoYang IDM is committed to the development of industries such as smelting and casting equipment in China, and has its own unique advantages in this field. For many years, the company has always prioritized technological research and development, and has carried out a series of upgrades and improvements to its products, enhancing their competitiveness. Currently, we have maintained friendly cooperative relationships with many countries in Central Asia, the Commonwealth of Independent States, South America, and more.


Heat treatment furnace

Melting furnace

Rolling mill

Foundry equipment

 Tangshan City, Hebei Province, China

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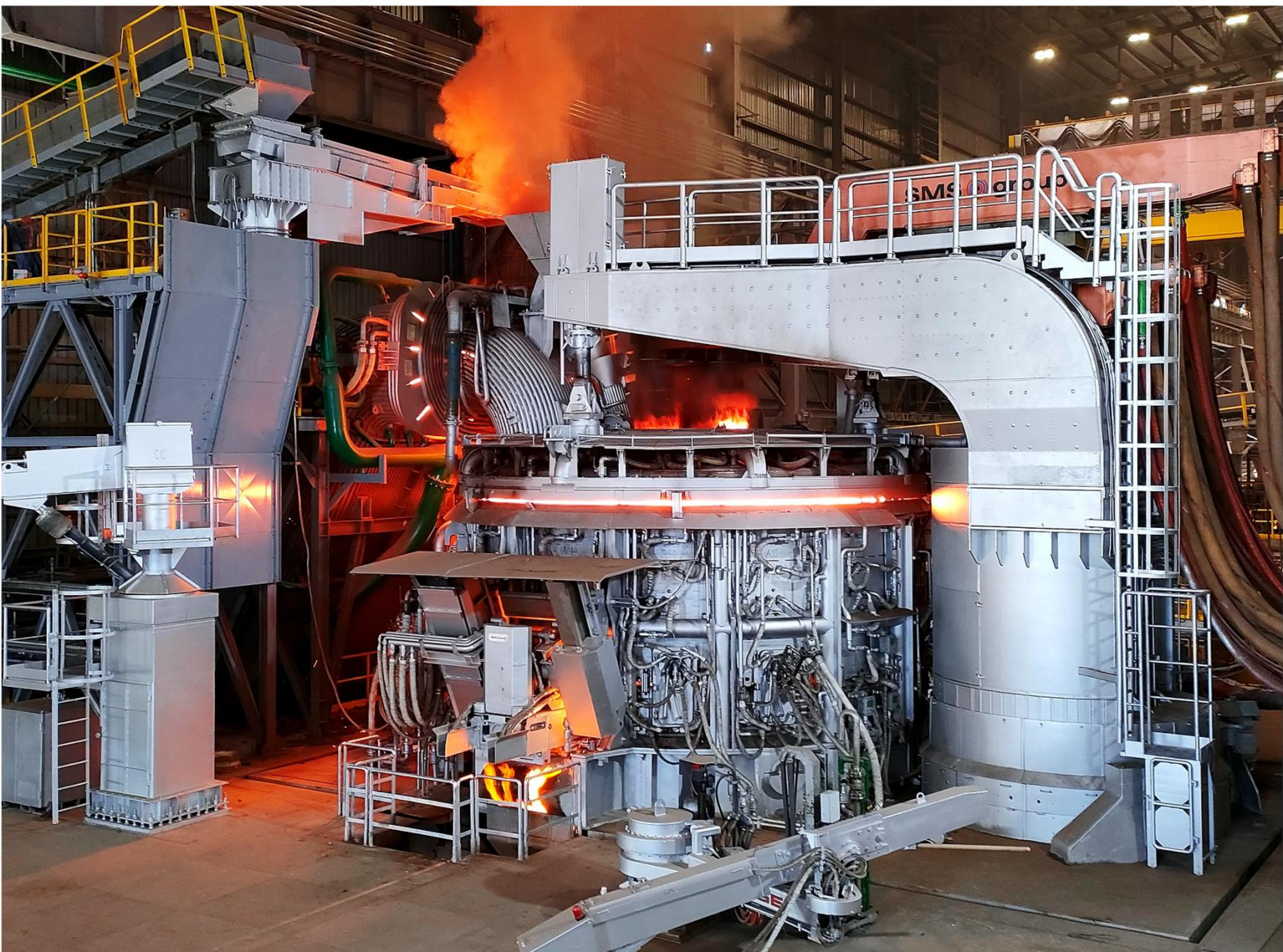
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Electric Arc Furnace

Electric Arc Furnace is an electric furnace that uses high temperatures generated by electrode arcs to smelt ores and metals. When gas discharge forms an arc, the energy is very concentrated, and the temperature in the arc area is above 3000°C. Therefore, compared with other steel-making furnaces electric arc furnaces have greater process flexibility for melting metals, and can effectively remove sulfur, phosphorus and other impurities. The furnace temperature is easy to control, and the equipment occupies a small area, so it is suitable for the melting of high-quality alloy steel.



What is Electric Arc Furnace

Electric Arc Furnace is an important steel smelting equipment. It mainly uses the current heating effect of the arc to convert electrical energy into thermal energy. It is used to smelt various steel copper, aluminum, zinc and other non-ferrous metals, and perform deoxidation, desulfurization reduction and other processes, finally get high-quality steel. At present, Electric Arc Furnaces are mainly used in the steel industry. They can process different types of scrap steel materials, such as boiler waste, scrap vehicles and steel structures obtained after demolishing various buildings. They can also be used to produce special alloys, alumina and other chemical raw materials.



Introduction to Steel Shell Furnace

Electric Arc Furnace uses electric energy as its main energy source. The electric energy discharges and draws the arc through the graphite electrode and the furnace charge, generating high temperatures as high as 2000°C to 6000°C. The scrap steel raw materials are melted by arc radiation, temperature convection and heat conduction.

During most of the time when the furnace charge is melted, the high-temperature heat source is surrounded by the furnace charge. The heat loss caused by the high-temperature exhaust gas is relatively small, so the thermal efficiency is higher than that of other steelmaking equipment such as Converters.

Electric heating is easy to control the furnace temperature accurately, and the heating operation can be performed under conditions such as oxidizing atmosphere or reducing atmosphere, normal pressure or vacuum according to process requirements.

Electric Arc Furnace has strong adaptability to the furnace charge. It uses scrap steel as the main raw material, but it can also use solid and liquid iron-containing raw materials such as molten iron, sponge iron, and pig iron blocks.

The atmosphere in the Electric Arc Furnace is controllable, and the operation of adjusting or replacing the slag is relatively simple, and it can finish the complex process of melting, decarburization, dephosphorization, degassing, inclusion removal, temperature control, composition adjustment and others in the same operating system.

High Quality

The ability to melt solid furnace charge is very strong and the molten iron is superheated and the chemical composition is adjusted under the condition of being covered with molten slag, so It can avoid the absorption of liquid iron and the oxidation of elements to a certain extent.



Good Performance

The Electric Arc Furnace has high melting temperature high production efficiency and short production cycle. At the same time, the metal materials used in electric arc furnaces can be recycled, reducing the consumption of natural resources. In addition, while reducing charge loss, electric arc furnaces can effectively reduce carbon emissions and promote low-carbon production.



Product Features

The arc discharge in Electric Arc Furnace directly acts on the smelted materials, so the conversion efficiency is high and the energy utilization rate is high. Electric Arc Furnace can also better meet environmental protection requirements during the production process, are more energy-saving and efficient, and have more stable cost control.



Customized Design

Customized design according to the actual needs of customers.

Working Principle

After an electric arc is generated between two electrodes in the electric arc furnace by an arc ignition device, the material in the furnace begins to heat up. When the arc combustion is stable, metal materials can be added in the furnace. As the arc continues to exist, the materials in the furnace will gradually melt, and the melted material is called a molten pool. In the molten pool, various impurities can separate from the metal melt. With proper operations, these impurities can be removed from the metal melt, thereby improving the purity of the metal. The slag collected in the molten pool will usually float on the surface of the melt and can be removed through appropriate operations. When the metal reaches the required furnace time and purity requirements, disconnect the power supply and pour out the molten pool smoothly to complete the entire smelting process.

Furnace model	Rated CY	Inner DIA of furnace shell	Electrode DIA	Cooling water consumption
	T	mm	mm	t/h
HX-5	5	Φ3220	Φ300	80
HX-8	8	Φ3400	Φ300	100
HX-10	10	Φ3500	Φ350	120
HX-15	15	Φ3800	Φ350	150
HX-20	20	Φ4200	Φ400	180

Heat treatment furnace factory

Factory Introduction

In order to continuously improve the quality of thermal treatment furnace, we have carried out unremitting research in the four aspects of safety, stability, efficiency, and energy saving for many years, and conducted experiments and explorations around the two major topics of reducing power consumption and reducing heat loss. Today, IDM's thermal processing furnace has an excellent performance in terms of product performance, and has established trust with customers from all over the world to meet their needs for high quality products.



Melting furnace factory

Factory Introduction

The development, production and technical upgrade of the intermediate frequency induction furnace and the sensing heating control system is one of the operating projects of IDM Metallurgy Group. The R & D Center is located in Cangzhou City and Factory of Hebei Province, China, and is located in Tangshan City Hebei Province, China. It covers an area of more than 15,000 square meters. It has a complete sales and after-sales service system. The products are sold to more than 70 countries and have been well received by customers.



Rolling mill factory

Factory Introduction

The IDM Metallurgy Group's rolling machine is located in the industrial park of Tangshan City, Hebei Province, China. It covers an area of more than 20,000 square meters. It integrates production, research and development, and sales. The comprehensive strength is among the top domestic industry. In 2016 technical cooperation with many universities in China, in -depth research in the safety and stability of the rolling machine, continuously improved product quality, and won the recognition of customers at home and abroad.



Foundry equipment factory

Factory Introduction

As the core product of the IDM Industrial Group, the casting equipment has a large proportion in the annual export share. Resin Sand Casting Line, Static Pressure Automatic Molding Line, Iron Mold Sand Coated Casting Plant and other equipment were exported to South America Eastern Europe, Africa, and West Asia, and were widely used in automotive, ships, steel, and aerospace and other fields. Mature production technology and thoughtful after sales service are important guarantees for overseas customers to establish a cooperative relationship with IDM.

