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EQUIPMENT & SERVICE PROVIDER FOR FERROALLOY

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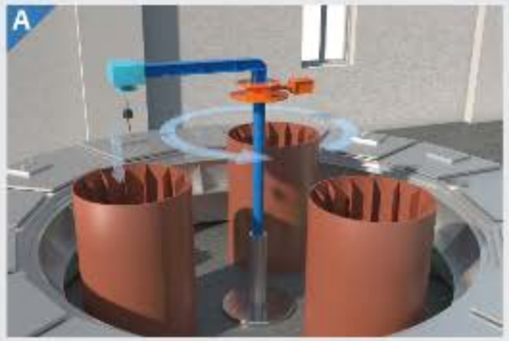
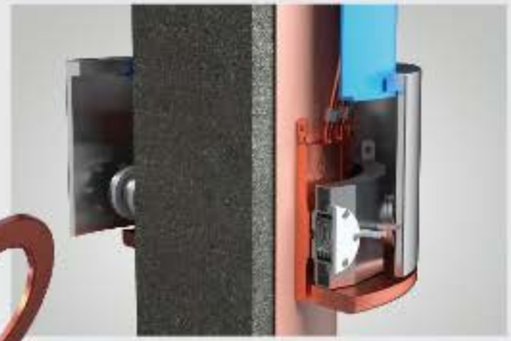
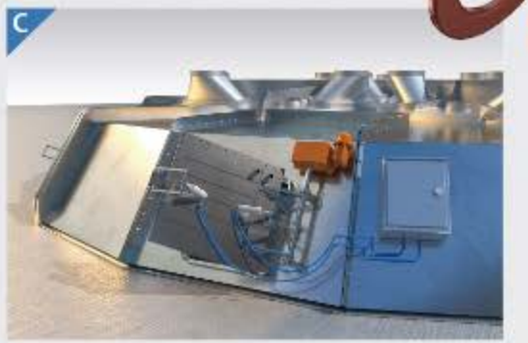
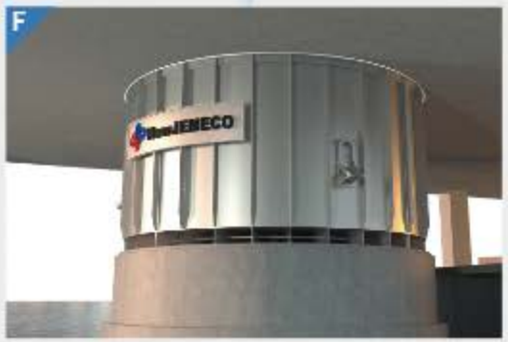
NewJEMECO

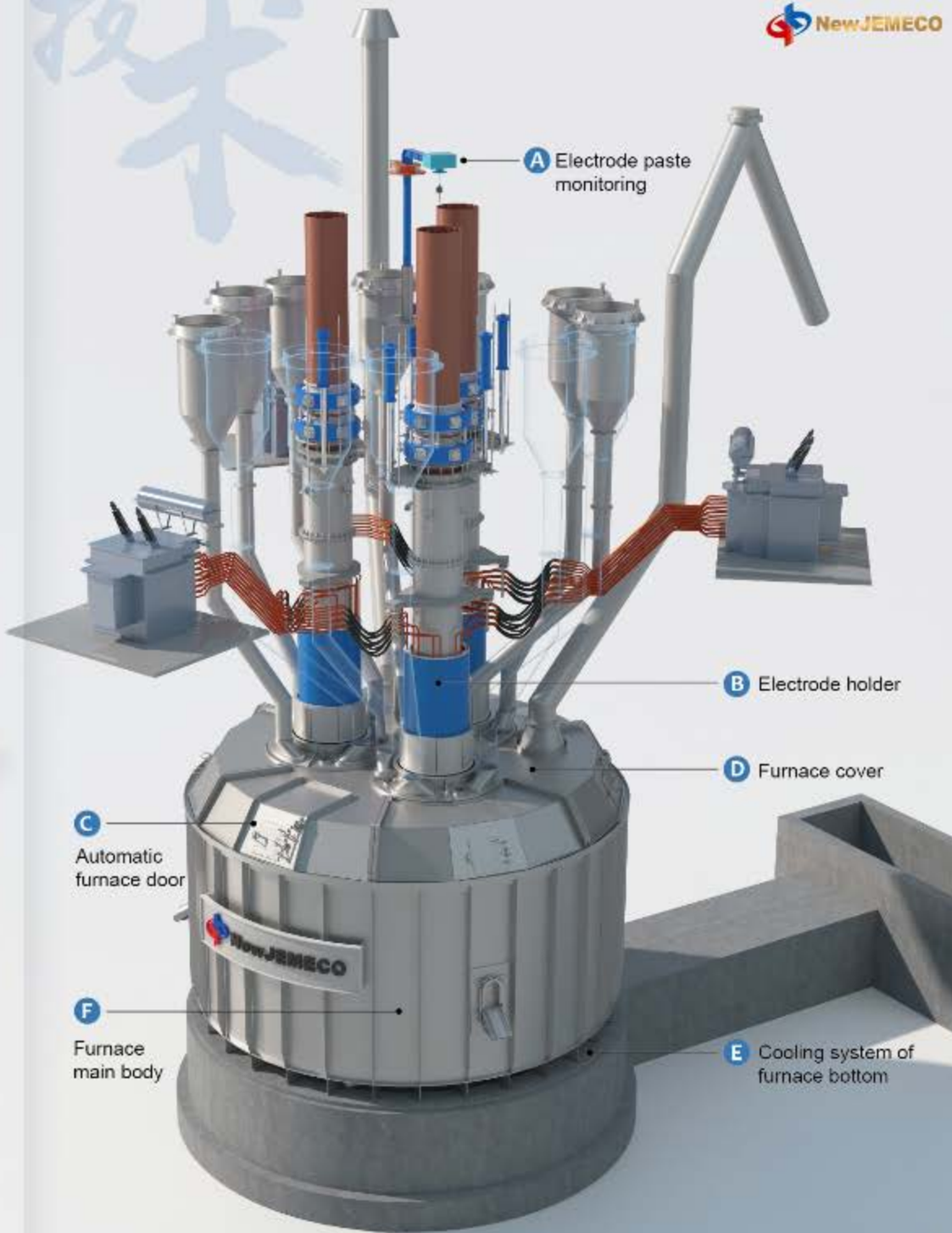


In the aspect of technology, NewJEMECO inherits the advantages of provincial high-tech enterprise and technology research and development center of Sinosteel Jemeco, which has 1 invention patent and 21 utility model patents, and has mastered core technologies such as electrode holder, furnace cooling, tap-hole cooling, slag granulation treatment, smelting raw material and hot charging into the furnace, furnace power factor longitudinal compensation, low voltage compensation, and flue gas waste heat utilization system of large submerged arc furnace.





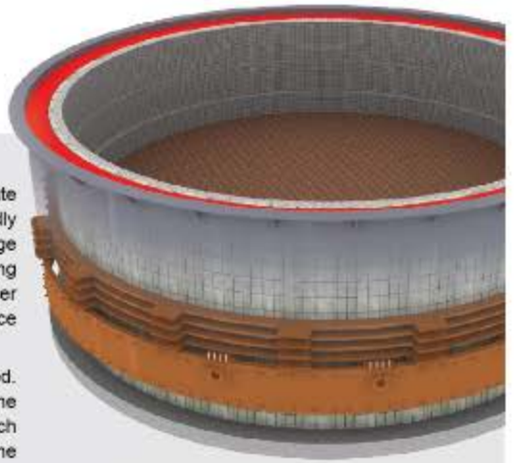




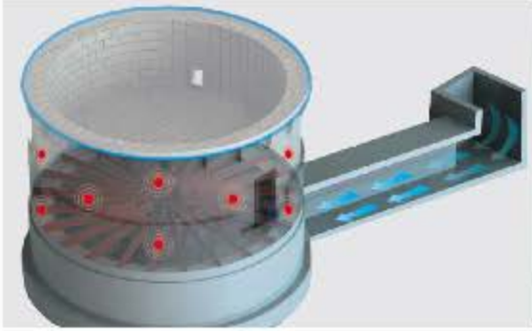
Large electric furnace body cooling technology

In order to ensure the service life of the furnace shell plate and the furnace lining, the furnace body needs to be forcedly cooled due to the large diameter and high height of the large electric furnace body. According to different smelting varieties, it is an effective means to choose the proper cooling way of furnace body to ensure the life of furnace body.

The furnace bottom cooling technology is adopted. Reasonable cooling air ducts are made at the bottom of the furnace, and forced ventilation is used for cooling, which effectively guarantees the safe operation of the bottom of the furnace.

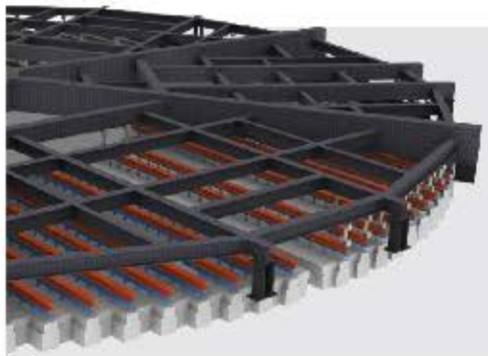


Water cooling system of copper cooling wall



Spray water cooling system

Furnace shell coil water cooling system



Large electric furnace refractory brick combined furnace cover

It conforms to the development direction of large-scale, high-efficiency, energy-saving and environmentally friendly electric furnaces. The cover of large electric furnace is composed of combined refractory bricks, without water-cooled parts, which is safe, energy-saving, environmentally friendly, and convenient and quick to maintain.

Large electric furnace body rotation technology

Due to the large diameter of the furnace shell and the large size of the hearth of the large ferrosilicon and industrial silicon electric furnaces, the rotary furnace body technology could improve the permeability of the charge effectively, avoid the charge sintering and forming into a hard shell, expand the hearth, improve the smelting conditions and the smelting quality.

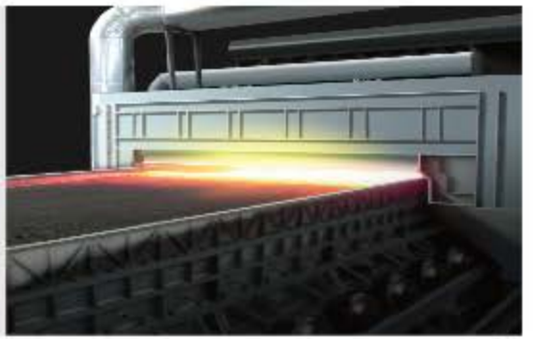
Smelting raw material hot charging technology

It uses the self-produced gas to heat the smelting raw materials, and the hot charging is fed into the furnace to achieve the purpose of reducing the power consumption of smelting.

Sintering technology of fine ore

After sintering, the fine ore can not only increase the permeability of the charge, but also stabilize the furnace condition, improve the economic and technical index and reduce the production cost.

The use of fine ore agglomeration is conducive to the closed operation of large electric furnaces, and could recover gas and waste heat fully for energy utilization, which promotes the development of circular economy.



Computer control technology for submerged arc furnace operation

- Electrode automatic slipping function - according to the process requirements, the electrode could be accurately and automatically pressed and released, which greatly improves the stability of electric furnace production.
- Electrode lifting function - according to the process requirements, the electrode could be automatically controlled and lifted.
- Proportioning automatic control function - according to the process requirements, the computer controls the proportioning, and automatically feed the quantitative materials to the furnace at regular intervals, so as to stabilize the furnace condition and obtain good economic and technical indicators.

Longitudinal compensation of electric furnace power factor

The longitudinal capacitance compensation device could greatly improve the operating power factor of the submerged arc furnace, increase the voltage and power into the furnace, and lay the foundation of increasing the output.

- Stable and reliable operation. The compensation capacity is automatically and steplessly adjusted with the load, which fundamentally solves the problem of over-compensation or under-compensation.
- High efficiency. It could greatly increase the voltage into the furnace, improve the operating power factor of the submerged arc furnace, and increase the output under the same smelting condition.
- Low loss. The compensation device is at the medium voltage (10000V), so the compensation current is much smaller than the low voltage compensation (nearly 50 times), and the line loss is low, which reduces the operation cost.
- Directly displayed electrode current. The control system could directly display the electrode current.
- Convenient operation and maintenance. The use of computer control and monitoring could basically achieve maintenance-free, and the service life of the equipment is more than 10 years.

Dedusting / Purification system

Wet gas purification system

The wet gas purification system is composed of washing tower, venturi tower, dehydrating tower, inlet and outlet water seals, multi-stage water seals, roots blower and piping system. The equipment runs smoothly; the recycled gas could be reused; the dedusting efficiency is high; and PLC automatic control of the system could be realized.

Dry gas purification system

The dry gas purification system is composed of cyclone deduster, cooler, bag filter, dust storage bin, high temperature gas fan and piping system. The system is efficient and reliable. The recycled gas could be used by the user. PLC automatic control of the system could be realized.

Flue gas dedusting system

Flue gas waste heat utilization system

When the system is running, the dusty gas the dusty gas enters the flue through the low hood of the electric furnace. The pipeline insulation and heat pipe exchanger are used to carry out waste heat recovery technology, which is another important measure for energy conservation and emission reduction of submerged arc furnaces.