Regenerative Combustion System Technology

MIRDC

Introduction

- **Technology R&D:** Implementing the subsystem technology research on advanced combustion technology, innovative architectural distributed control system, e-supervision and energy-saving optimization technology, modular system design & simulation technology, and optimal furnace type as well as establishing demonstration field to continue deepening technology and core energy.
- **Reconfigurable technical integration:** Implementing reconfigurable subsystem design on standardized burner, heat regenerator, controlling system, international standard safety valve station portfolio, and the optimal furnace type based on the different field of use with an innovative thinking style of making it easy.
- **Modular rapid design:** Different from the old heat generation industrial furnace manufacturing equipment design and the development process, the modular rapid design can be based on the demand of manufacturing process from the customers and combined with new technology implementation and specification portfolio to establish an instant evaluation and analysis technology and further shorten the development cycle.
- **Professional customization:** Large furnace with customized heat generation equipment is usually very expensive, and users will not be able to obtain real-time technology support. In the end, the schedule of implementation is usually too long and hugely affecting the production capacity.

Awards/ Patents

- Awarded the 6th National Industrial Innovation Award
- Awarded 2019 Excellent Performance "Value-Added Contribution Award" by Bureau of Energy
- 2020 Energy Award, Gold Award, by Bureau of Energy

13 patents in R.O.C. and its related to key equipment and manufacturing process portfolio.

Industrial Applications/ Case Studies

◆It has been applied to steel industry, metal product industry, casting industry, chemical industry, and fire-resistant material industry.

- It has implemented technical authorization and transfer or industrial service (such as the development of heat generation stainless steel think sheet solid solution furnace/ heat generation zinc oxide manufacturing equipment and so on)

Metal continuous heat treatment furnace

Steel ingot continuous heating furnace

Powder metallurgy continuous sintering furnace