

Vacuum induction fine grain furnace



Application:

The fine grain casting is to improve the low-cycle fatigue of the casting. Adopting the high temperature of the casting and Through the stirring device to break the casting grain to get the axial fine grain, which brings the casting high purity. The casting is mainly used to be a key component of aerospace engine.

Features:

1. The furnace is vertical structure. It comprises melting chamber, casting chamber, tripper valve, casting heater, melting coil, shaft tilting furnace device, sight glass, argon inflating apparatus, metal liquid thermometer, water-cooling crystallizer and rotary device, vacuum system, hydraulic system, water cooling system, pneumatic system, working platform and its base, melting power supply, casting heater power supply and electrical control cabinet. furnace body installed on the working platform. Casting lifting device is put into the pit, vacuum system is placed on the ground.
2. The furnace body of melting chamber is U-type double-layer configuration with the built-in water cooling jacket. Inner layer and flange are stainless steel, outer layer is high quality carbon steel with rust-resistant treatment. Inner layer and flange are polished finely, which is easy to clear the volatile substance during the melting.
3. Sight glass and double color temperature gauging apparatus are fixed on the top of the furnace. Medium frequency inductive melting coil, radial water-cooling directional crystallizer and casting stirred fine grain casting apparatus are installed inside melting chamber. There is a illuminating lamp inside melting chamber.
4. Casting chamber with the water-cooling jacket lies on the top of melting chamber. Inner layer and flange are stainless steel, outer layer is high quality carbon steel with rust-resistant treatment. Inner layer and flange are polished finely, which is easy to clear the volatile substance during the melting. The top has a sight glass. Three electricity-in electrodes are installed on the side of furnace. a 12-piece thermocouple wire holder on the side of furnace is used to measure the preheating temperature of mold cover. A tripper valve is installed between melting chamber and casting chamber to separate them. Casting chamber can be pumped into vacuum solely. A graphite electrode heater is installed inside the casting chamber.

Main technical parameters:

No.	Model	Melting Power	Melting Temp.	Holding Temperature	Leak Rate	Ultimate Vacuum	Crucible Capacity	Control Mode
1	ZGX-25	100KW	1700℃	1500℃	≤3Pa/h	10 ⁻² Pa	25kg	PLC plus Touching Screen
2	ZGX-50	160KW	1700℃	1500℃	≤3Pa/h	10 ⁻² Pa	50kg	PLC plus Touching Screen
3	ZGX-60L	160KW	1700℃	1500℃	≤3Pa/h	10 ⁻² Pa	60kg	PLC plus Touching Screen
4	ZGX-100L	200KW	1700℃	1500℃	≤3Pa/h	10 ⁻² Pa	100kg	PLC plus Touching Screen