



武汉建恒工业技术有限公司

Wuhan Jianheng Industrial Technology Co.,Ltd.

The differences and adaption of cold core and hot core

	Hot-box core	Cold-box core
1	Hot core is shooting the coated sand into the heated core box, the sand solidfy into mold after heated(The heating mode is mainly coal gas, natural gas or electricity heating).	Put dried original sand and a certain proportion of special resin together , mix throughly and shoot them into cold box, then add into triethylamine. Triethylamine is heated by the generator ,blowed into cold box by compressed air, to make it solidfied quickly.
2	Sand has good fluidity, the requirment for exhaust is low.	Cold core sand has poor fluidity and higher requirements for mold exhaust.
3	Has long hardening time, it's not easy to produce large casting, and the production efficiency is low.	Has short hardening time, it's suitable for all kinds of products, and the production efficiency is high.
4	The high temperature of pattern and core may cause scald.	pattern and sand core are room temperature.
5	The pattern is heated unevenly, the product shape is limited, and the surface strength of each part is different after the sand core is hard.	triethylamine gas is blowed into cold core, after sand core molding the strength of all parts are consistent.
6	After the core harden, the hardness layer is thin and the product is easy to be deformed.	The hardness of core is consistent from outside to inside after molding, and it's hardly deformed during casting.
7	During production, there is smoke and smell.	No smoke in the process of production, but there is triethylamine gas (need tail gas tower).
8	Electric heating consumes a lot of electricity	For the same output, electricity consumption is lower than the hot core, the proportion depends on the product.
9	Coated sand price is high, the use cost is high in the future.	The production cost of original sand and resin is less than hot core coated sand.
10	Early equipment input is low.	Early equipment input is high.

11	The mixing of sand after casting in molding line will affect the properties of molding sand, need change sand frequently.	The sand after casting has no effect on the molding line and can be added as new sand.
12	Don't need clear the shot first class after work, it's simple.	The equipment must be cleaned every day, such as sand shot, shot first class, auxiliary time is long.
13	In the case of shell casting, sand recycling is quite complicated, and sand needs to be transported to professional manufacturers for treatment before it can be used.	In the case of shell casting, the sand can be recycled through simple sand treatment equipment, saving cost.
14	Generally speaking, it is more suitable to choose cold core for large and high-output products, and the core production cost is lower in the later stage. For less output of products, generally choose hot core, early equipment investment is relatively low.	

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