

5.2m Rotary Kiln Support Roller Casting Process

Cast steel support roller is one of the key components of the 5.2-meter rotary kiln. It mainly plays a supporting role and is widely used in cement, metallurgical and mining rotary kilns. Because the supporting roller needs to withstand high temperature, high pressure, high fatigue and high impact stress under working conditions, it has higher requirements on its internal quality and mechanical properties. Therefore, it is necessary to strictly control the casting process of the rotary kiln supporting roller.

Great Wall Casting (CHAENG) is one of the largest casting steel factories in China. It has many years of experience in casting rotary kiln supporting rollers. In order to ensure the internal quality and mechanical properties of rotary kiln supporting rollers, CHAENG has made many technological improvements, especially in the casting process. Generally speaking, the casting temperature and the casting sequence have a decisive influence on the comprehensive quality performance of the rotary kiln supporting roller.





Setting of casting position:

The casting position refers to the position of the castings in the mold during casting process. The correct casting position should be easy to obtain qualified castings, so that the entire casting process is as simple as possible and easy to control. The following basic principles should be followed for the correct selection of the casting location:

1. The principle that important planes and large planes are not upwards, this is because various casting defects are prone to appear on the top of the casting position, such as pores, hole inspection, sand holes, sand inclusions and other defects.
2. The principle that the thick part is upward, try to make the thick part on the top to achieve sequential solidification, and it is easy to feed the riser. This is especially true for alloys with large shrinkage.
3. The principle that the thin-walled part is not upwards prevents insufficient pouring and cold isolation
4. The casting position should also be conducive to reducing the number of sand cores, making the sand cores easy to fix and easy to exhaust.

Control of casting temperature:

Pouring temperature is too high:

1. Conducive to the forming of castings
2. It is easy to cause defects such as shrinkage, shrinkage, sand sticking on the surface and bulging in the casting.
3. The pouring temperature is high, the cooling after pouring is slow, and the castings are prone to defects such as surface pits and decarburization of the surface layer.

4. It may cause coarse grains of castings, resulting in decreased mechanical properties

The pouring temperature is too low: the casting is difficult to form, it is easy to produce cold insulation, insufficient pouring, the internal shrinkage of the casting, and the increase of inclusions.

Control of pouring speed:

Too fast is conducive to the forming of castings; it is easy to be involved in air bubbles and inclusions; if the impact force is too large during pouring, the molten steel will splash and cold beans will be easily produced

Too slow is not conducive to the forming of castings, and castings are prone to defects such as cold insulation and insufficient pouring.

It can be seen that the casting process has a crucial influence on the quality of the rotary kiln supporting roller. In the casting process of the rotary kiln supporting roller, we must not take it lightly. However, the usual practice of Great Wall Casting Steel is to use digital simulation technology to simulate the entire casting process before casting, so as to optimize the casting process and reduce the impact on the quality of the rotary kiln roller during the casting process.

Xinxiang Great Wall Casting (CHAENG)

www.partscasting.com

Email: casting@chaeng.co

Tel.:86-371-55019878

skype:GreatWall1958

WhatsApp/Wechat: +8618737831240

Office Add: Mengzhuang Town, Huixian City, Henan Province, China