Cement rotary kiln spare parts supporting roller and bearing

As a supporting device for a rotary kiln, the structure of the supporting roller and the bearing is crucial. The supporting roller assembly bears the weight of the whole rotating part (mainly the rotary kiln cylinder, lining bricks, heat exchange device in the kiln, material, kiln tyre and girth gear), and enables the rotary kiln cylinder and tyre to rotate smoothly on the support roller. The support roller assembly can be divided into sliding-bearing support roller set, rolling- bearing support roller set, and sliding-rolling bearing support roller set (radial sliding bearing, axial rolling bearing) according to the bearing types. The rolling-bearing support roller sets can be divided into two types according to shaft rotation and non-rotation. They have the advantages of simple structure, easy maintenance, low frictional resistance, reduced power consumption and simple manufacturing process, but due to the load of the supporting roller can reach hundreds of tons, the required rolling bearing size is large, which is subject to availability conditions. However, with the improvement of industrial technology level, the use of rolling bearings in support roller will increase.



CHAENG specializes in the production of kiln equipment for many years. The support roller assemblies produced by CHENG adopt rolling bearings. Force characteristics are: radial force is great; axial force is also very large compared with radial force. Left and right bearing seats are separately set, radial bearings and thrust bearings need to adopt self-aligning spherical bearings. In order to ensure the flexible rotation of the two bearings, the spherical center of the two bearings must coincide at O point. For this reason, an axial distance ring is provided between the two bearings to facilitate adjustment. However, when the left and right bearing seats are integrated, the self-aligning thrust bearings can be replaced by ordinary thrust bearings. At the same time, double-row spherical roller bearings are used to withstand radial forces. When the load is small, a tapered roller bearing can be used to bear both radial and axial forces.

CHAENG support roller specifications:

Item	Introduction
Material	Carbon alloy, low alloy steel
Process	Molding-pouring-cooling-shaking out-heat treatment
Test	Chemical composition, mechanical property, UT/MT and so on.
Machine	Rough machined, semi-finished machined, finished machined
Certificate	ISO9001:2015
Heat treatment	Normalized, Normalized and Tempered, Quench and Tempered.

Advantages of CHAENG kiln support roller assembly:

CHAENG support roller has the following remarkable advantages:

1. Use high-quality steel material, can carry a large load

CHAENG kiln support roller adopts ZG55, ZG42CrMo steel materials with high tensile strength and good impact toughness, which greatly ensures the quality of support roller. So that CHAENG kiln support roller has the advantages of large load carrying capacity and good continuous operation performance.

2. Simple structure, low maintenance cost

CHAENG support roller is rolling bearing-roller set. The rolling bearing manufacturing precision is high, compared with sliding bearing, it can make rotary kiln rotating more stably, and reduce maintenance cost.

3. Unique process technology to guaranteed the hardness

CHAENG uses normalizing and tempering process to greatly ensure the quality of kiln support roller. The outer surface hardness of the support roller is higher than 200HB, and the roller has good temperature resistance, small friction resistance.

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