

Reasons and treatment of the sound in the rotary kiln support roller bearing

Rotary kiln (rotary calcining kiln) belongs to building materials equipment. Rotary kiln can be divided into cement kiln, metallurgical chemical kiln and lime kiln according to different processed materials. Its technical performance and operation determine the quality, output and cost of the company's products to a large extent. When the rotary kiln is running for a period of time, the noise generated by the support roller bearing is one of the common faults. In order to ensure normal production, it is necessary to promptly find out the reasons for finding a solution.



Failure analysis

1. The radial force of the support roller is too large, which causes the friction between the shaft and the bearing bush to increase and the oil film to break.
2. The axial force of the support roller is too large, so that the thrust plate and the bearing end ring are pressed too tightly, resulting in strong friction.
3. Improper oil selection, oil viscosity is not enough.
4. The local high-temperature of the kiln body makes the viscosity of the lubricating oil low and the oil film thin.
5. The cooling water in the bearing is interrupted for a long time, causing the temperature to rise and destroying the viscosity of the oil.
6. When the temperature is low in winter, the viscosity of the lubricating oil in the bearing is high, and the fluidity is poor, showing an oil-deficient state.
7. The slow rotation time of the kiln is too long, so that the oil spoon has too little oil and cannot meet the lubrication requirements between the shaft and the bearing.
8. The lubricating device inside the bearing is faulty or the oil groove is blocked so that the

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oil level is too low.

9. The sealing degree of contact points between the shaft and the bearing bush does not meet the quality standard for maintenance.

Troubleshooting

1. Adjust the force of the support roller, replace the lubricating oil in the bearing, increase the cooling water volume of the bearing and adopt other cooling measures.
2. Adjust the support roller to reduce the pressure and keep the thrust force of the support roller even.
3. Replace the lubricant with higher viscosity and increase the insulation measures.
4. Temporarily exchange oil with higher viscosity and increase insulation measures.
5. Restore cooling water, keep it open, and replace with new lubricant.
6. Replace with the winter lubricating oil in time and remove the heat insulation board on the bearing.
7. Add oil manually, increase the speed of the kiln.
8. Repair, cleanse and replenish new oil in time.
9. Change into new oil, re-scratch and align the bearing bush.

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