Contents

Instructions Of YA /YK Series Vibrating Screen

1. Application.

YA series vibrating screen is use to grade and screen materials in the following fields: minerals, quarry, building materials, water conservancy and hydropower, transportation, chemical industry, smelting and so on.

2. Work principles and structure features.

1、 Work principles

It adjusts the amplitude by tube-shaped eccentric shaft and eccentric blocks of vibrating screen. The body moves like a circle, in order to make the materials screened.

2、Structure features

YA series vibrating screen is composed by screen case, support device, vibration and driver device.

（1）Vibration consists of eccentric shaft, casing, bearings, counterweight wheels and other components, fixed by bolts on the two side panels in the screen case.

（2）Screen case is composed by side panels, beams, screens, strengthened steels. In order to ensure solid and reliable, make side plate with a whole piece of steel, in addition to beams welded the connection of

steel pipe and flange, and the other parts are connected with high-strength torsional shear bolts. Screen mesh is tensioned with special pull plates.

（3）Support device has rubber springs to isolate the vibration of the screen case.

（4）Driver device, the motor is connected with the exciter through the V-belt to realize the transmission's motion.

3. Equipment's installation and commissioning

1、Equipment before delivery has been four hours of no-load test. After received, the user should check and inspect carefully according to the packing list to exclude the possible problems in the transport process.

2、 Foundation base can be steel structure or concrete structure. Check the basic location size is correct before installation; with a level to keep the heights of the rubber spring on the same side (feeding end and discharge end); check the compression height of the rubber spring, the rubber spring stiffness on both sides of the same end should be consistent, and the height difference is within 3mm, in order to keep the screen surface material evenly.

3、 The springs are placed in the support plate, and then lift screen case and set down smoothly so that the upper and lower positioning tubes on the rubber spring hole and the rubber springs shall not have skewed phenomenon.

4、 Assemble the motor and motor base. The center of the motor should be

2 to 3 mm higher than the center of the screen exciter shaft, and the motor base should be installed with front and rear alignment.

5、 Test run

（1）Before the test, it is necessary to check whether the vibrating screen is installed correctly and whether the tightening bolts are tightened.

（2）Check and keep the motor wiring, steering correct, and the motor should rotate in the direction of material rotation.

（3）Check all lubricating parts added with the lubricating grease.

（4）Check vibration with a flexible rotation, not stuck.

（5） Check fixed facilities around the moving parts of the screen, such as feeding, discharging chutes and hopper under the screen machine whether there is a possible collision. The minimum safety distance between screen case and surrounding fixtures shall not be less than 80mm.

（6）Start the device. Screen machine should be running smoothly, no significant horizontal swing, no abnormal sound. Once find abnormal situation, Stop the screen immediately, identify the reasons and exclude the problems, then it can be restarted.

（7） After start normal operation, keep continuous operation at least not less than 4 hours of no-load test to observe whether the screen machine has been operating normally, and check the bearing temperature. Bearing temperature does not exceed 45 ℃ and the maximum temperature does not exceed 80 ℃.

（8）After the test, please re-check the equipment, make up the lubricating grease and tighten the loose bolts. Screen plate bolts are preferably all

re-tightened again.

4. Equipment's operation and maintenance

1、 The operator shall abide by the safe operating procedures formulated by the user.

2、 Operator should be familiar with screen's performance, master the operation methods. When abnormal circumstances, take timely and appropriate measures to deal with.

3、Should first start the empty vibrating screen. When it operates smoothly, then start feeding.

4、 After the start of the vibrating screen, the feeding should be evenly distributed to the screen surface, so that the material flow evenly and steadily jump through the mesh surface to prevent empty vibration or material layer is too thick. To reduce the impact of the material on the screen surface, the gap that the material should fall on the screen surface is less than 200mm.

5、Quit the machine after stop feeding, to be finished screening material on the mesh before the shutdown. It is strictly forbidden to stop the machine with material or keep feeding after stop.

6、 Once find abnormal situation, Stop the screen immediately, identify the reasons and exclude the problems, then it can be restarted.

7、 It is strictly forbidden to install or weld other objects in the vibrating

part of the screen machine and make any modification to it.

8、 Establish shift system. Should do the following work when shift:

（1）Check and exclude the stones or other debris around the screening machine and the surrounding fixed facilities which affects the work.

（2）Check whether the bearing temperature is within the specified range.

（3）Check whether all fastening bolts are loose or not; screen plate is with or without damage and belt elasticity is appropriate or not.

（4）Check the tire coupler is safe and reliable, without tear or damage.

（5）Check whether there is an oil leakage phenomenon or not, and remove blockage on the screen surface.

（6）After a comprehensive inspection and troubleshooting, then start the work.

9、 Often observe the use of rubber springs. Such as fatigue, excessive compression should be replaced, keep same compression volume consistent of the springs at the four corners to ensure the stability of the vibration screen machine as far as possible.

10、 Vibrator bearing at least once every class is filled lubricants to ensure the screen machine bearing work in the case of sufficient lubrication; but the oil injection should not be too much, generally bearing space 1/3 ~ 2/3; to avoid bearing heat.

11、 Vibrator should be removed for cleaning, oil change and maintenance every half-year. If bearing a chip-like corrosion point, discoloration, roller deformation, cage loose, etc. should be given replacement.

5. Possible breakdowns and solutions

Breakdown phenomenon	Main reasons	Solutions
Screen case torsional vibration, large swing, large amplitude difference among the four corners	1, eccentric blocks on both sides are inconsistent. 2, support spring stiffness at four corner are difference	1, adjust the eccentric blocks on both sides to make it completely symmetrical. 2, matching spring support to keep stiffness consistency.
Screen case with uneven vibration, and material on the screen layer is too thick.	1, mesh plug. 2, feeding unevenly, material is too big. 3, support spring damage. 4, dip angle of screen surface is too small.	1, exclude material blockage. 2, adjust the feeding and particle size, feeding evenly. 3. Replace the support spring. 4, adjust the screen surface inclination.
Bearing heat	1, bearing too much oil or little. 2, bearing damage. 3, bearing clearance is too small or failed to install.	1, adjust the bearing oil. 2, the replacement of bearings. 3, use a large clearance bearing or re-installation.

Screen surface fracture or wear too fast	1, rubber pad under the screen damage. 2, the screen mesh did not pressure uniformly and compactly. 3, the feeding along the screen surface width is uneven, and too much large pieces of material.	1, replace the pad. 2, re-pressure, press the screen mesh. 3, adjust the feeding mode and location, and reduce the feeding size.
Abnormal sounds in the machine	1, bearing damage. 2, bolts on screen case are loose.	1, replace bearings. 2, tighten loose bolts.