COLO-3000-S Powder Sieving Machine Operation Manual

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Content

I.Description

With special imported vibration motor, this powder sieving machine, made from SS, has the features of fast start, smooth and reliable operation, continuous production, rapid sieving, low noise, convenient maintenance and overhaul, etc.

This sieving machine mainly consists of sifting box, screen, drive unit, frame, and powder tanks, etc. Drive unit is installed in the rear of the sieving machine, rotated by the motor through V-belt, so that the screen box reciprocates. Through specific reciprocating rotary movement and slight tilt of the screen, the powder goes through the screen quickly, to achieve high sieving efficiency and high output.

II. Application

In the automatic spraying process, the excess powder coating is pumped to the sealed sieving machine. Sieved powder is mixed with the new powder in the powder tank to supply circulation powder for the spray guns.

III. Technical Specifications

Input frequency: 50HZ / 60HZ

Input voltage: 220 ~ 230V

Output Current: 0.4 to 0.6

Working environment: -5 ℃ ~ 35 ℃

Machine size: L850 * W570 * H1470

IV. Installation Instruction

Temperature: Up to + 35 ℃, minimum -5 ℃

Altitude: <1500m

Impact: Avoid suffering from violent impact.

Vibration: Do not install the sieving machine where frequently vibrates.

Air pollution: Do not install sieving machine in the environment where has air pollution, like dust and corrosive gases. Powder should be prevented to enter into the control cabinet.

Moist: Be careful not to install sieving machine in potential wet environment.

Level: Be located horizontally.

V. Machine Features

1. Continuous production and rapid sifting.

2. Open charging structure, easy to supervise powder.

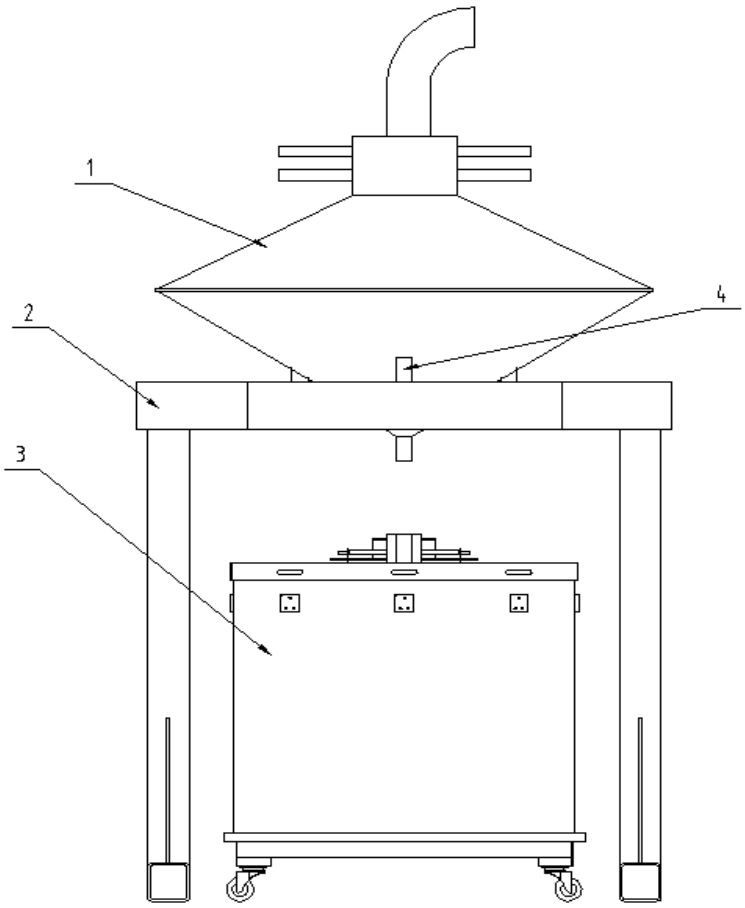
3. Start fast, stop stably, low noise.

4. Compact size, simple installation, easy operation and maintenance.

5. Screen mesh utilization is high, not easy to block, simple and fast to replace the screen.

V. Structural Features

The overall composition of the device is shown. (Figure I)



1—震荡塞　　2--筛粉机框架
3—粉桶　　4--弹簧钢

Structure (Figure I)

1. Vibrating sieving machine　2.Frame　3.Tank　4.Spring steel

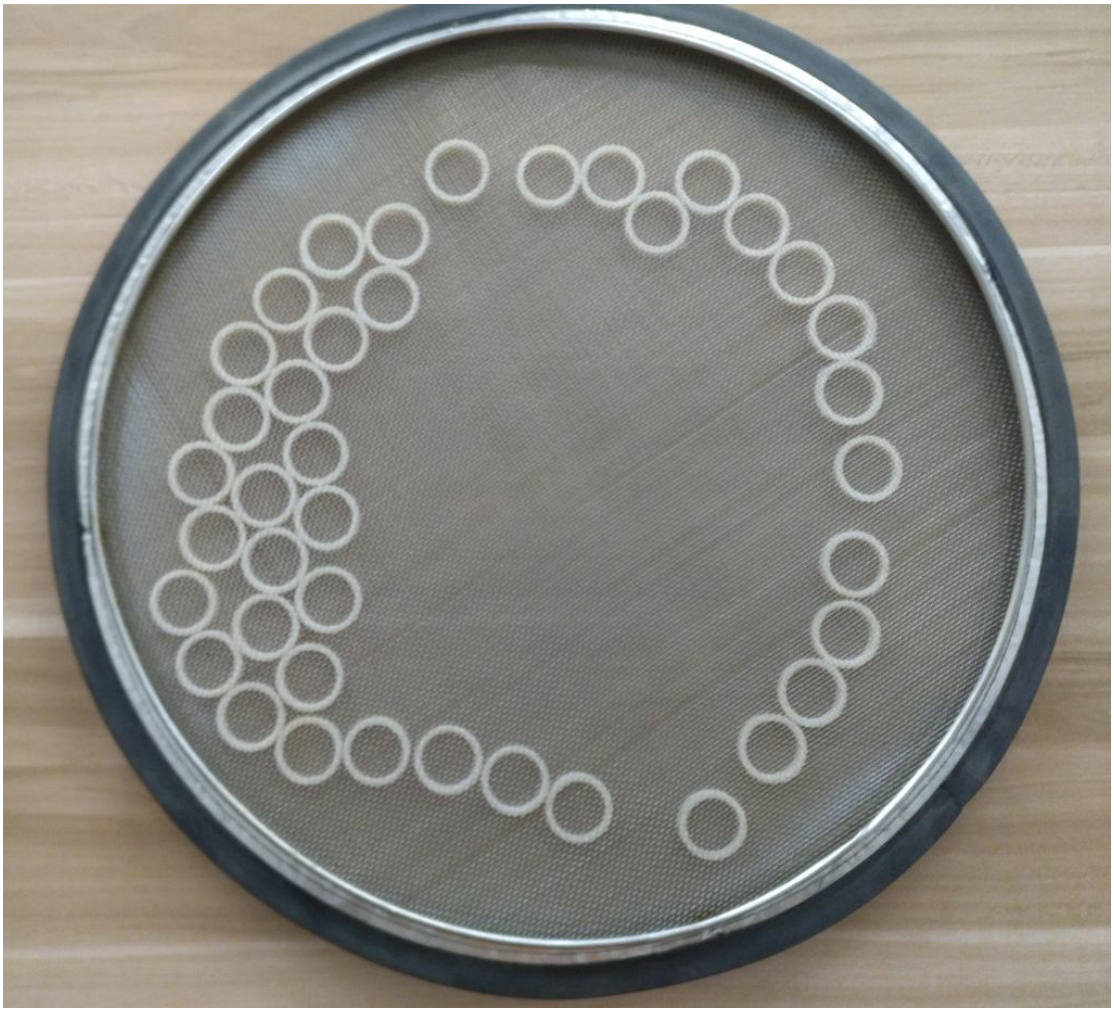
1. Mesh is two-layer structure (a layer of fine mesh, a layer of coarse mesh), compartment in the middle, durable, easy to clean and change color, good sealing. See (Figure II)

2. Sieving machine support plate adopts block steel bending reinforcement, with 6 # square tube and triangular steel for support and reinforcement. Square tube-shaped parts are joint by torsional shear and high strength bolts.

3. Sieving machine board can be stainless steel, spring steel, polyurethane rubber and wear-resistant rubber. They are can be used interchangeably.

4. Supporting vibration isolation uses rubber series and composite spring, low noise, smooth operation. Two springs can be used interchangeably.

5. Sifting clamping uses the T-block anti-rotation structure or pressing plate (block) form. Fender and other parts couples with a high-strength nylon locking nut.



Screen mesh (Figure I)

VII. Install Sieving machine

1. After installing all sieving machine boards, sieving machine surface should be smooth, without uneven or skew phenomenon.

2. All sieving machine fixing bolts must be tightened, without loosening the nut or tilt.

3. After sieving machine installation, the entire screen surface may not have obvious longitudinal or too large gap.

4. Sieving machine machine installed base can be made of steel or concrete structure, with a spirit level or theodolite alignment, so that the same horizontal plane, and the same side (feed side or discharge end) bearing on both sides in the same horizontal plane, so that both sides of the bearing elevation consistent error within 3mm, guaranteeing the screen surface material uniformly forward.

5. The above steps are ready, put the spring on support plate, positioning the tube in the middle inside the spring hole, then lifting the screen box (lift position at the outer supporting beams) on the upper and lower positioning tube in rubber spring hole. Spring can't be skewed after the smooth screen box falling off.

6. After sieving machine equipment leaves factory, if it is placed more than six months, the bear inside the drive unit must be cleaned disassembly before installation and re-inject new oil.

7. After re-injection, rotate the pulley by hand. It may not have too much resistance or stuck phenomenon, or it should be adjusted promptly to find out the reason.

8. After the components of sieving machine equipment meet the installation requirements after inspection, you can make a trial run. Fastener should be checked carefully before starting. Check if obstacles exist around the sieving machine to prevent the sieving machine running.

VIII. Running Test

1. Each part must be checked before the operation. Check whether all fastening bolts are tightened.

2. Check if the motor wiring is correct and moving direction is correct.

3. Check if all lubrication parts are covered with lubricating grease.

4. Check if vibrator rotates flexibly, stuck or freeze or not , and whether there is debris in the protective cover.

5.Check fixed facilities around moving parts of the sieving machine, such as, if possible collision among the feed, the discharge chute, funnel and the sieving machine, keep distance not less than 80mm.

6. When commissioning, if there is abnormal sound or abnormal beating spring, resulting in the sieving machine not operate normally, it should be immediately stopped, identify the reasons and exclude obstacles before operating.

7. Smooth and quick start, no significant lateral motion.

8. Commissioning generally requires for 4 to 6 hours. During commissioning, observe the sieving machine operation. If find failure of vibration, abnormal sound, high temperature of bearings and other issues, the machine should be down to check the reason. Remove barriers before running again.

9. After running for 4 to 6 hours, check the following items:

1）Bearing temperature of drive unit: require bearing temperature not exceeding 75 ℃, temperature increase does not exceed 40 ℃.

2）Check the fastening of all fasteners, lock in time if loose.

3）After passing heavy-duty operation, sieving machine can be put into production. Within two weeks when put into trial production, check the bearing temperature rise of various parts every day, and each fastener locking situation.

IX. Lubrication

1.The exciter of feed end and the drive plate bearing lubricants using No. 2 lithium grease. Grease once a week.

Procedures: Screw out the refuel bolts outside exciter and bolts on upper of drive plate shaft. Refuel sufficient amount of grease in its pores, then screw the bolt to the end portion, to press all lubricating oil into the bearing. Refuel with special grease gun by random distribution, refuel and make a record. Exciter bearing lubrication can not be mixed with other varieties. Original oil should be cleaned when replace with new grease (3-6 months to replace new oil).

2. Refuel once every four to eight hours. (About 0.15-0.5kg)

3. Bearing grease to the bearing space of 1 / 3-2 / 3, not too much, in order to avoid

bearing fever. Refuel oil with HV oil gun through the three joint.

4. After the drive for six months, should be checked in the case of oil, grease if found dry, lumps, or fuel poor, should be immediately cleaned, replaced with new oil, bearing requires cleaning every six months to check again.

5. All lubrication points and seals can not have leakage.

6. Clean the bearings after disassembling once a year.

X. Operation and Maintenance

1. The operator should be familiar with the screening machine performance, master methods of operation.
2. Start the sieving machine should follow the sequence of processing system to ensure empty screen start.
3. Running stop should also follow the sequence of the processing system. Prohibit parking with stuff or continue feeding.
4. Check bearing temperature in the middle of shift or termination.
5. Always check whether each fastening bolts loose, and if belt tension is appropriate.
6. Always check if the flexible coupling and the flexible disk is tearing damage, if damage, it should be replaced.
7. The annual inspection carries out a major overhaul for the vibrator. Disassemble the vibrator to clean and change oil. If bearings have pitting, discoloration, deformation of the roller, etc. it should be replaced.
8. Wearing parts

   Rolling bearing

   Rubber or spring steel spring

   Sieving machine board (mesh) (steel mesh, steel mesh or rubber sifting board)

XI. Common troubles and Solutions

1. When the amount of processing is less than requirement, material should be detected by inspection sieving machine to check if it meets the screening requirements.

2. When a sudden increase in the amount of processing, finished products should be taken for testing and analysis. If the end product is unqualified, check the if screen mesh is intact.

3. During work mode, when material is not discharged, check the fan if it is normal. If the fan flow is reduced, fan should be repaired. Check whether the discharge packing auger does not rotate and can not discharge.

XII. Attentions

1. The operator should make proper use of air flow sieving machine, according to the requirement of product specification. Make routine maintenance, like cleaning, lubrication, tightening and anti-corrosion, etc. Keep the equipment clean inside and outside, good performance, in safe and reliable state.

2. At the end of the day, make work record of equipment each day. Label the parts where needs to do maintenance, easy for maintenance technicians to overhaul.

3. After the sieving machine is completely shut down, and then replace the screen mesh.

4. Control unit wind wheel steering is counterclockwise rotation. Steering error must be avoided. Fan rotary direction follows the arrow mark. Discharge auger turning direction indicated by the arrow. After all direction is right, first start the induced draft fan. After about a few seconds, start the air flow sieving machine. Check the joints if any leakage or special sound around the machine. During maintenance, pls note: Before air flow sieving machine stops, forbit to open the inspection door.

5. After normal operation, wrap the auger outlet with a cloth bag. Adding a little material to the feeding port by hand, generally 20-50 kg is appropriate. Feeding time lasts in 1-2 minutes. Feeding should be uniform and continuous. After feeding material, shut down to observe. Open the inspection door after air flow sieving machine stops. Observe material over the net, whether stick the mesh, powder quantity in the slag. If everything is satisfactory, shut the observation door, start the system.

6. Forbid stopping the equipment when it has powder, shut down after sifting all powders to avoid overloading when the equipment starts.