

产品使用说明书

Instruction Manual

LNIST-45A Pulverization & Classification System

绵阳流能粉体设备有限公司

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Operation specification of LNIST-45A Pulverization & Classification System

1. Summary of LNIST-45A Pulverization & Classification System

1.1 System Introduction

LNIST-45A pulverization & classification system is an ultrafine powder production line integrating pulverization, classification and collection. It is also suitable for the production of ultra-fine powder and spherification of battery cathode materials such as artificial graphite, natural graphite, petroleum coke, etc. which has the features of low energy consumption and high yield.

1.2 System Constitution

LNIST-45A pulverization & classification system consists of feeding system, impact mill, turbine air classifier, cyclone collector, high-efficiency cartridge filter, blower, discharge system, temperature control system, safe filter and electrical control system with touchscreen etc.

a. Feeding System

The feeding system consists of raw material bin and screw feeder which realize continuous feeding of the system. The feeding amount is controlled by adjusting the motor frequency of the screw feeder.

b. Impact Mill

The impact mill is mainly composed of grinding wheel, hammer head, grinding track and barrel body. When working, the material between hammer head and grinding track received strong impact, friction and shear, so as to be crushed.

c. Turbine Air Classifier

The classifier is made up of motor, classification wheel, classification tank. Which works through adjusting both revolving speed of classification wheel and resize secondary air. Turbine air classifier achieves precise classification under a reasonable

solid-gas flow, centrifugal force interacts against air drag accurately classifies raw material. And revolving speed is controlled by a frequency converter.

d. Cyclone Collector

The cyclone separator is a kind of equipment used for separating gas solid system. The working principle is the rotary motion caused by the tangential direction of air flow, so that solid particles or droplets with larger inertial centrifugal force can be thrown away from the wall. The main features of cyclone separator are simple structure, large operation flexibility, high efficiency, convenient management and maintenance.

e. High-efficient Cartridge Collector

High Efficient Cartridge Collector is made up of housing, filter, electro-magnetic pulse valve, reducing valve, pulse control meter etc. Filter surface covered with polyester filtering material makes a high precise filtration, large filtering areas and less pressure loss. It is mainly used for collecting final product and purifying air.

f. Blower

Blower is the power source of the whole system, which will keep negative pressure during the operation of the system, so as to realize the flowing of materials and air flow in the system.

g. Discharge System

The discharge system consists of double pneumatic butterfly valve and product collect silo.

h. Temperature Control System

The heat exchanger is used to cool the air output from the blower. And the temperature sensor is used to monitor the air temperature of the system in real-time. The temperature of the air flow in the system is controlled in a certain range by using PLC and the cooling system to ensure the safety of the system.

i. Safe Filter

The function of the safe filter is to prevent impurity into mill and to avoid the

powder stuck, which is equipped with differential pressure display and alarm.

j. Electrical Control System with Touch Screen

Touch screen electronic control system is mainly composed of an electric control system, touch screen, PLC and other components which could control the equipment by using a button to automatically start and stop operation, and automatic filling argon, automatic balancing of the system pressure in the operation process, display the running state of the equipment online and other functions.

1.3 Main Power Configuration

Name	Power	Qty/unit	Note
Screw Feeder	0.37kw	1 set	480V/60Hz
Impact Mill	7.5kw	1 set	480V/60Hz
Classifier	1.5kw	1 set	480V/60Hz
Blower	7.5w	1 set	480V/60Hz

1.4 Main Specifications and Characters

This pulverization & classification system has following advantages :

☆ The finer size of the finished product is smaller than the ordinary mechanical mill, and the high efficiency turbine classifier is configured to remove the qualified products after crushing so as to avoid smashing.

☆ The wearing parts are wear resistant spray treatment to improve the service life of the wearing parts.

☆ Less vulnerable parts of the system and simple maintenance.

☆ Reasonable and uniform flow control can effectively avoid over crushing.

☆ The system can produce products with narrow particle size distribution, and the granularity is easy to adjust.

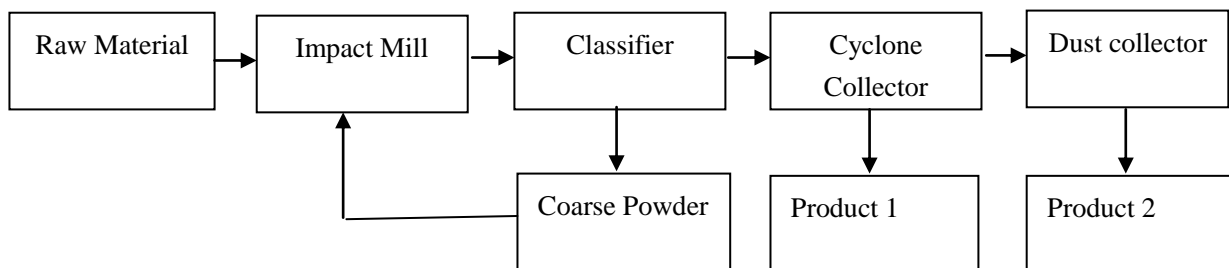
☆ Fully sealed operation , no environment pollution.

2. Main technical parameters and technological process

2.1 Main Technical Parameters

LNIST-45A	Input Size	2-8mm
	Output Size	D50=10 μ m, D100=40 μ m
	Capacity	10kg/h
	Power Supply	480V,60Hz

2.2 Technological Process



3. Installation and Commissioning &SOP

3.1 Installation and Commissioning

3.1.1 Installation

- a. The unit fixing position is generally based on process flowchart and installation sketch;
- b. The elbow should be reduced as far as possible. The specifications and materials of pipes and valves should meet the requirements of air pressure parameters.;
- c. Equipment should be installed horizontally. Connectors between seal case and pipeline fitting should be very fasten to prevent leakage;
- d. Open head cover of collector when installing it and make sure bag layering is compressed to avoid leakage;
- e. Make sure the electrical connecting bolts are tight enough then connect to the electricity supply with all electrical appliances installed on reliable ground.

3.1.2 Commissioning

- a. Electrical control cabinet debugging, power up to check whether the power supply is missing, the controllers and buttons are normal, the frequency converter parameters are set, and whether the thermal relay setting of each motor is in the safe range;
- b. Classifier debugging, the frequency of the classifier is gradually increased from 5Hz to 50Hz, to check whether the rotation direction of the classifier is correct, whether the classifier current is normal, whether the classifier has abnormal sound, and whether the bearing temperature of the classifier is normal;
- c. When the classifier is opened, the blower is started to check whether the running direction of the blower is correct (Here marks classifier rotating direction on the belt cover), whether the current is normal, whether the blower has the abnormal noise and the bearing temperature of the blower is normal;
- d. In the case of the opening of the classifier and the blower, the impact mill is started to check whether the rotating direction of the smashing host is correct (The rotation direction of the host is opposite to the classifier), the current is normal (The

no-load current is about 1/3 of the rated current), whether the bearing has abnormal noise and the temperature is too high;

e. Control the jet pressure to 0.5 ~ 0.7Mpa. Adjust the dust collector pulse controller, set a suitable time interval and bandwidth.

3.2 Standard Operating Procedure

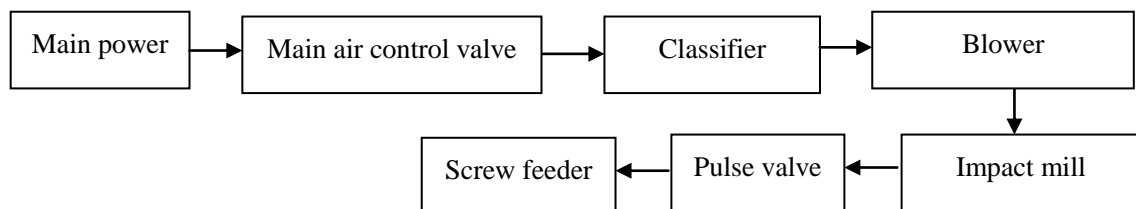
3.2.1 Preparation Before Starting Up

a. Check whether the impact mill, classifier, pipe and valve are in good condition;

b. Sufficient materials, packaging and testing equipment needed for the experiment;

c. Close the power main gate, connect the power supply, check whether the voltage output is normal, and whether the three-phase is average.

3.2.2 Starting Procedure



a. Open the main power supply;

b. Open the total control valve of nitrogen and the total valve of pneumatic valve;

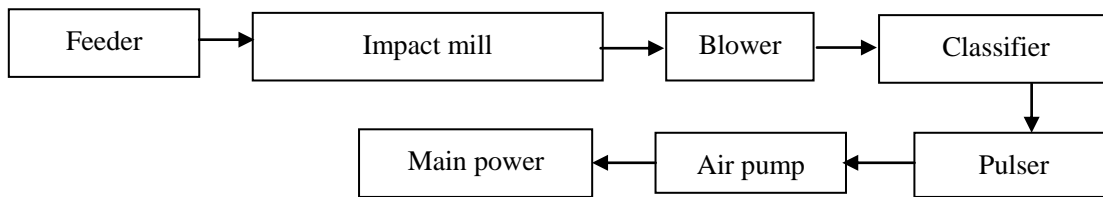
c. Adjust the frequency of the classifier to the required frequency and check the rotating direction of the classifier to start the classifier. Then start the blower after stable operation of classifier;

d. Open the impact mill after normal operation of classifier and blower;

e. Open the pulse meter, and the pulse cleaning pressure is adjusted to 0.5Mpa to 0.7Mpa, and the interval of ash clearing is adjusted to 1-2min;

f. Turn on the screw feeder and start feeding.

3.2.3 Shutdown Procedure



- a. Shutoff the screw feeder;
- b. After stopping feeding, run the crushing machine 5-20min, and turn off the main engine when the main current is around 10-15A;
- c. Close the blower after closing the mill 1-2min;
- d. Close the classifier while the air volume is very small;
- e. The pulse valve is closed after one cycle, and close the pulse injection control system;
- f. Turn off the discharge valve, and the main power supply.

Note: Shut down the classifier when the negative pressure of the system is very small.

3.2.4 Announcements During Equipment Operating

1. The procedure of opening and closing the machine is strictly carried out; The whole machine is in a state of negative pressure. If the program is not strictly executed, the powder is easy to brought into the bearing, and it is destructive to the equipment and even cannot be repaired;
2. Strictly prohibit any hard impurities such as iron nails in the raw material to enter the crushing machine, otherwise the hammer head and the crushing track will be damaged. If a similar impurity is detected, the system should be shut down immediately, and the internal cavity of the crushing chamber must be cleaned up before it can be restarted;
3. Observe the current change of the mill and classifier frequency converter. It is strictly forbidden that the classifier current exceeds the rated current of the motor. If the current is found to be high, it is necessary to stop feeding or stopping immediately,

and remove the excess material in the classification cavity before starting operation again;

4. Observe the negative pressure in the classification cavity, and the negative pressure is necessary for the system normal running. If the negative pressure is low, it means that the amount of material in the classification chamber is too large, so the amount of the feeder should be reduced;

5. The classifier current should not exceed 10A of the rated current of the motor, and the blower cannot exceed 25A;

6. The dust in the dust collector cannot be accumulated too much and the ash cleaning pressure is 0.5Mpa-0.6Mpa;

7. The higher the frequency of the classifier, the lower the negative pressure (high material level, more material), and the finer grain size we can get. On the contrary, the lower the frequency of the classifier, the higher the negative pressure (low material position, less material), and the coarsely processed grain size;

8. Observe the change of the current of the blower, if abnormal, check immediately;

9. Check lubrication status of rotating parts regularly, such as impact mill, classifier and blower;

10. Clean the dust in the switchgear regularly, keep the cabinet clean and dry;

11. Keep the working environment temperature of air compressor under 40°C to maintain the service life of it.

4. Influences on Pulverization & Classification Efficiency

4.1 Material Property

Normally impact grinding most complies to all kinds of brittle materials when final grinding result differs a lot due to various material properties which include different hardness, intensity, density, plasticity and toughness, morphology, viscosity, electric performance etc. Intensity is the most relevant factor. Some materials with a high moisture content or supplied air contains water, oil will also affect and make the material properties different (e.g. toughness, viscosity, and brittle etc.) which will result in product pollution and finally influence the product quality.

Classifying precision in single classifier system influenced much by material adhesion, electrostatic reunion and moisture. It would be better to reduce those material properties when classifying.

4.2 Moisture Content

Water content on grinding of raw materials production has a very big influence. Generally speaking, the material moisture content is smaller, the greater the yield, but the water content of raw materials in large quantities cannot be zero, so as long as the moisture content of raw material in grow at below 6% is also possible, but when the water content is greater than 6%, even 10% above, has a great effect on yield is crushed. Therefore, in the process of crushing, you should try to control the moisture content of raw material, keep dry.

4.3 Loading Weight

Final particle fineness of same material differs due to different feeding capacity. Ceteris paribus, feeding more leads to a wider final particle size distribution; less collision between particles when feeding less will ultimately influence the final fineness. Changing feeding capacity aims to reach the best grinding gas-solid ratio. High requirements on unbreakable material has a larger gas-solid ratio.

Feeding capacity and uniformity effect classifying efficiency much in single

classifying system. Not enough feeding makes a small gas-solid produces concentration coarser particle finally results in a lower classifying efficiency; Too much feeding leads to a high gas-solid concentration, low produce capacity and efficiency.

4.4 Input Particle Size

Grind material with different particle size, the final size distribution various. Smaller input particle size, smaller output size. Larger input size, larger size reduction ration and vice versa. Larger hardness while finer output size requires a small input particle size.

4.5 Input Particle Size Distribution

Particle size distribution also measures the product quality which has much to do with input particle size distribution. Generally, a uniform input particle size distribution leads to a good final particle fineness and distribution. Processing material with a wider size distribution indicates differentiating fineness, coarse powder impacts with finer powder during grinding has a nonuniform results. To solve this problem, just separately grind coarser and finer powder sieved before by sieving machine.

In classifying system, origin particle size and its distribution have great impact on classifying efficiency and precision. 5—45 μm is an easy classifying rage. Other size distribution such as over 45 μm or less than 5 μm has lower final precision. Classifying either material at least 30% reaches its highest efficiency and precision. If there is a smaller content in one of the both materials, the classifying precision will drop along with the reduced gas-solid concentration.

4.6 Raw Material Compositions

Individual or mixture make a huge difference on grinding efficiency. Components in mixture with different properties make various results. Grinding individual material performance better.

5. Equipment Maintenance & Repair

Do regularly maintain classifier, blower, dust collector to make sure a product quality stability and longer service life.

5.1 Maintenance & Repair

5.1.1 Auxiliaries

- (1) Operate blower with regulations;
- (2) Air-pulse gauge, frequency converter, electric cabinet, please see their instructions. Clean dust in cabinet regularly.

5.1.2 Air classifier

- (1) Adjust belt fasten in classifier after running one week;
- (2) Check wear patterns of classifier wheel regularly;
- (3) Bearings in classifier are imported and fully sealed. Greasing every 300h running, change it once found loose;
- (4) In order to not affect the efficiency of classification, clean the powder that are adhesive on the classification chamber and classification wheel every 300h.

5.1.3 Dust Collector

- (1) The system negative pressure should be a certain range as pulse jet control device is normally working. Clean or change the filter when it changes too much;
- (2) Regularly check the outlet of blower, there should be no powder. Carefully inspect the cartridge filter for damage and breakage and solve without delay.

5.1.4 Electronic Control System

- (1) Do close electronic control system doors during working to prevent powder entering; Regularly check dust to avoid short circuit caused by conductive material;
- (2) Water-proof, damp-proof, keep dry.

5.1.5 Others

Lubrication: check all lubricating points in main and auxiliary equipment, charge in need;

- (2) Inspect equipment air-tightness, check temperature of all motors and cables, solve promptly if abnormal;
- (3) Doing whole system overhauled and maintained after 600h;
- (4) Regularly check the wear pattern of each the connection pipe and bent, if there is any wear, please process or replace in time.

5.2 How to Replace Classifier Bearings

Do install bearings as below. Never knock bearings and shafts with steel hammer. Installation steps are as follows:

(Step 1). Clean new bearing with petrol or diesel, airing it. No powder remain between bearing balls and its jacket;

(Step 2). Remove broken bearing;

Get out belt pulley with tool, take down upper bearing cover, knock on upper bearing toward lower bearing with hammer to make the main bearing and classifier wheel out of bearing box, clean and airing bearing;

Take down lower bearing cover, knock inner ring in upper bearing cover with special tool, knock broken bearing out of box;

Inspect the bearing box, if there are some sundries, clean up before installing new bearing.

Notice: In step1 mustn't knock main bearing directly with hammer, put copper bar between.

(Step3). Charge lubrication grease after bearings cleaned and dried;

Notice: Grease should be better at 1/3 ~1/2 top of bearing.

Clean up used lubrication in both upper and lower bearing cover groove then charge better until 2/3 of the groove top.

Notice: Lubrication grease is a special kind bearing 200 °C.

(Step4). Put upper, lower bearings with lubrication grease into bearing box, install both covers;

Notice: (1) Mustn't exchange order of upper bearing with lower bearing;

(2) Do not install lower bearing in a wrong direction, wide side of lower bearings downward (toward classifier);

(3) Never knock bearing outer ring at will when installing bearing, should use special tool to make the bearing inner ring in place.

(Step 5). Knock the main bearing and classifier into bearing box from above, and pay more attention to following items:

Don't knock the bottom of classifier wheel by hammer, should place soft materials such as copper bar, sticks on the classifier wheel before;

Once main bearing in place, knock downward it slightly, the space between upper classifier wheel and support plate should be less than 1mm.

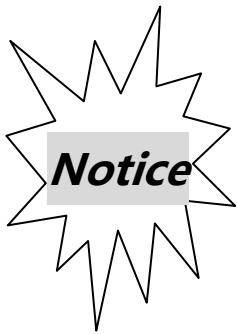
(Step 6). Alignment of the hole between main bearing and its jacket, fix them;

(Step 7). Gently rotate classifier wheel, make sure it can rotate freely;

(Step 8). Finish bearing installation, reinstall belt pulley.

6. Familiar Malfunction & Exclusion Methods

Malfunction	Cause	Method
Insufficient system negative pressure	<ol style="list-style-type: none"> 1.The cleaning strength of dust collector is not enough 2.The cartridge filter is damp 3. Not discharge in time 	<ol style="list-style-type: none"> 1.Increase pulse frequency or pulse width 2.Remove moisture in system promptly 3.Discharge in time (every 5-10 minutes)
Over size product	<ol style="list-style-type: none"> 1. Nonuniform feeding 2.Too little material stock in the classifier 3.Low rotating speed of air classifier 4.There is air leakage in system joint 	<ol style="list-style-type: none"> 1.Set a vibrator feeding frequency, make sure a uniform feeding 2.Add more material in feeder to increase the gas-solid concentration 3.Adjust a high rotary speed 4.Inspect the airtightness of system
High temperature in classifier wheel bearings	<ol style="list-style-type: none"> 1.Insufficient lubrication 2.Powder get into bearings 3.Failure of dynamic balance in classifier wheel 	<ol style="list-style-type: none"> 1. Charge lubrication grease as maintenance requirement 2. Make sure the air seal valve does work; Clean up powder in classifier wheel and do regular maintenance 3.Make a new classifier wheel dynamic balance
Too much dust in the outlet of blower	<ol style="list-style-type: none"> 1.Breakage in cartridge filter 2.Leakage in connector between filter and flower board 	<ol style="list-style-type: none"> 1.Inspect and replace broken cartridge filter 2.Seal the joint



Do carefully read operating instruction and announcements!

Please do maintaining in accordance with the operating instruction !

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May 2018

Enclosure 1 Control Cabinet Operation Instructions

1 . Overview

The cabinet applies to the rated voltage 380V, 50Hz, rated current 10A power system.

2 . Constitution

This control cabinet is a single open power distribution device, its basic structure is made of steel plate bending and angle steel welding, the front right side can be installed switch operation handle, the cabinet door can be installed operation button, led, display instrument. All the electrical parts inside is easy to overhaul and maintenance. The control cabinet is equipped with air circuit breaker, fuse, as the circuit breaker protection device. Which also equipped with contactor and thermal relay. The casing body is welded with ground bolts to ensure that the cabinet body is connected with the ground reliably.

3 . Normal Working and Installation Conditions

3.1 Environment temperature 5-40°C, and within 24 hours the average temperature does not exceed 35 °C;

3.2 Altitude: not more than 2000m;

3.3 Humidity: 40°C, the humidity does not exceed 50%; 20 °C, the humidity not more than 90%;

3.4 Installation vertical slope should be not more than 5 °, the equipment should be installed in the place no violent vibration and impact-free, corrosion-free.

4 . Acceptance, Installation, Commissioning

After the arrival of goods, check the package first to make sure there is no breakage. Troubleshoots problems promptly before installation. Then debug as follows:

- 4.1 Inspect the cabinet finish coat to see if there is any falling off and whether it's dry and clean inner the cabinet;
- 4.2 Binding post should be fastened;
- 4.3 Main electrical appliances and auxiliary contacts should be reliable and accurate;
- 4.4 Selecting of major components, connection principle is strict in accordance with electrical diagram;
- 4.5 The insulation resistance should be no less than 1M, release the connection of some low voltage electrical components while testing with 500V megohm.

5 . Control Principle

- 5.1 The particle size can be controlled by adjusting the rotating speed of the classifier, and the speed of the classifier can be adjusted by changing the output frequency of the frequency converter;
- 5.2 The pulse control instrument controls the injection intensity of the pulse injection valve by pre-set pulse cycle and pulse time, so as to achieve the purpose of automatic and uniform dust cleaning of dust collector and ensure the stable running of the collector;
- 5.3 The current overload protection device can effectively guarantee the stable operation of the classifier, blower etc.

6 . Attention Items :

- 6.1 Low-voltage air circuit breaker will produce some carbon goods and lead to local damage in main contact head which increases contact resistance after many times switching. So periodic repair and maintenance is necessary;
- 6.2 The control system alarm and manual emergency shutdown for unusual conditions;
- 6.3 In case of emergency stop, the inlet valve should be closed in time to ensure the product quality.

Enclosure 2 Bearing Instructions

- 1、 Do not knock directly at the bearing , and ensure that the bearing capacity of the shaft is uniform;
- 2、 Bearings with nylon cage insure a constant and stable working under - 40°C~120°C, when temperature is 150°C, work no more than 4hours and the short peak temperature can be reached at 180°C;
- 3、 The place bearings stored should be clean and dry, no other chemical products and relative humidity should be no more than 65%. Mustn't store bearings directly on the ground;
- 4、 Clean stored bearings once a year, packed with rust proof.

Enclosure 3 User Manual of Blower

1. Installation

1.1 Conduct a preliminary inspection of the blower to see if any sundries fall into the fan duct, and then rotate the main shaft of the blower by hand to see if there is flexible rotation and no friction;

2. Running

2.1 Before running, check whether the installation of blower and pipe meets the requirements and correct;

2.2 The inlet must be closed before driving, and gradually opened after driving until it is adjusted to the required working condition, but it must not exceed the motor load;

2.3 The vent should be checked for unimpeded ventilation.

3. Familiar Malfunction & Exclusion Methods

Malfunction	Reason	Treatment Measure
Excessive vibration	<ol style="list-style-type: none"> 1. Rotor unbalance 2. Weak foundation 3. Air outlet valve closed too small 	<ol style="list-style-type: none"> 1. Replace or repair the lost parts and restore the dynamic and static balance 2. Tighten the anchor bolts 3. Adjust outlet opening
The air pressure is insufficient	<ol style="list-style-type: none"> 1. Low voltage and low rotating speed 2. Excessive pipeline pressure loss 3. The leakage loss in the blower is too large 	<ol style="list-style-type: none"> 1. Adjust the voltage and tighten the belt 2. Retrofit the pipe and plug the leakage 3. Replace seals
Excessive bearing temperature rise	<ol style="list-style-type: none"> 1. The lubricating oil temperature rises too high 2. The grease contains impurities 3. Rotor imbalance increases bearing load 	<ol style="list-style-type: none"> 1. Increase lubricating oil and reduce oil temperature 2. Replace the grease after cleaning the bearing oil tank 3. Replace or repair the lost parts and

		restore the dynamic and static balance
Motor overload	1. Low voltage 2. Large air volume, high power loss 3. Spindle reversal	1. Wait until the voltage is normal 2. Check the pipe seal and close the air door when starting 3. Correct spindle steering
The pulley is hot	The axial position of belt groove is too large	Adjust the relative position of the axial direction of the two belt wheels and make the belt wheels loose properly

4. Operation and Maintenance

4.1 It is necessary to check the right amount of lubricant before each drive. The new blower should be replaced after 100 hours of use and checked every 6 months;

4.2 When checking, pay more attention to whether the impeller rivet is loose, whether there are cracks in the weld;

4.3 While running, must pay attention to the blower and motor internal presence of abnormal sound, whether there is too much vibration or bearing temperature rise too high, the motor current is too large, anchor bolt looseness and other abnormal situation, and stop in time;

4.4 Cover the inlet and outlet of blower well during it stop to prevent sundries from falling in.

Enclosure 4 User Manual of High Efficiency Dust Collector

1. Installation

1.1 When installing, the relative position and size of each part need to meet the technical requirements, the rubber pad should be set at the connection of the dust collector, which should be bolted;

1.2 The installation of dust precipitator should keep the axis vertical and stable. The connection to the pipe must be tight and airtight;

1.3 After proper installation, start the fan and conduct air tightness test on the dust removal device and other pipelines. If there is air leakage, it should be eliminated immediately.

2. Operating Maintenance

2.1 Running

Check the following items before starting:

- (1) Lubrication and cooling of the blower, motor and other rotating parts;
- (2) Whether the air tightness of the dust collector, pipe and other connecting parts is good;
- (3) The material under the discharge valve needs to be reset freely, the sealing surface is cleaned and the air tightness is good.

2.2 Maintenance Management

2.2.1 Host maintenance management

(1) External maintenance

Check paint, rain proof, bolts and surrounding seals. If the dust collector is placed in the open air, full attention should be paid to the prevention of rain.

(2) Internal maintenance

The welding part between the steel plate, the edge of the flower plate with the filter tube, etc., are easy to be corroded, so coatings should be applied to corrosion

prone areas in time;

(3) Crack maintenance

Replace aging and damaged sealing gasket timely to avoid air leakage.

2.2.2 Valve maintenance management

(1) Maintenance items in operation

a. Action status: Flexible and accurate of valve opening and closing;

b. The actuating condition of the drive device and the actuating condition of the air source parts;

c. Sealing of valve;

d. Water leakage, drainage temperature, pay attention to water freezing in winter.

(2) Maintenance items during downtime

a. Deformation and damage;

b. Sealing and flexible condition of valve.

2.2.3 Dust hopper maintenance management

Always check for dust buildup and sealing condition of dust outlet. When the machine is stop, observe the dust accumulation and remove the attached dust in time.

2.2.4 Dust cleaning system maintenance management

(1) Operation and maintenance items

a. Open the check door and see that when the electromagnetic pulse valve is blowing, a corresponding set of filter cartridge will shake each other, indicating that the dust removal system works normally;

b. Check for abnormal vibration sound, find out the reason and adjust to normal;

c. Check whether the compressed air pressure meets the requirements. Too low pressure will result in poor cleaning;

d. Check the action condition of solenoid valve, the action abnormality of solenoid valve is often the direct cause of bad ash removal.

(2) Maintenance items during downtime

a. Check the wear condition of the movable parts of the dust cleaning system and replace them if necessary;

b. Check whether the nozzle and pulse jet system of compressed air are blocked.

c. Replace failed valves.

2.2.5 Filter cartridge and hanging mechanism

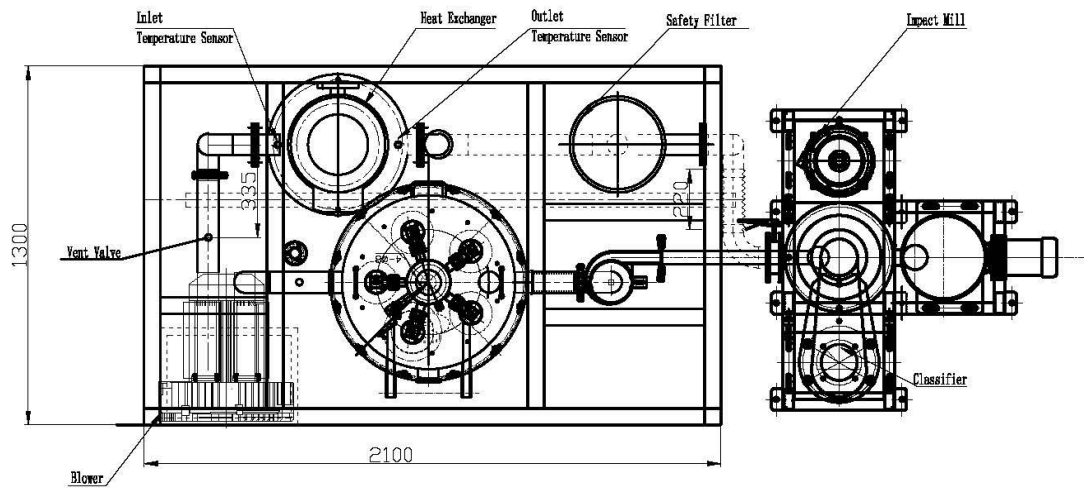
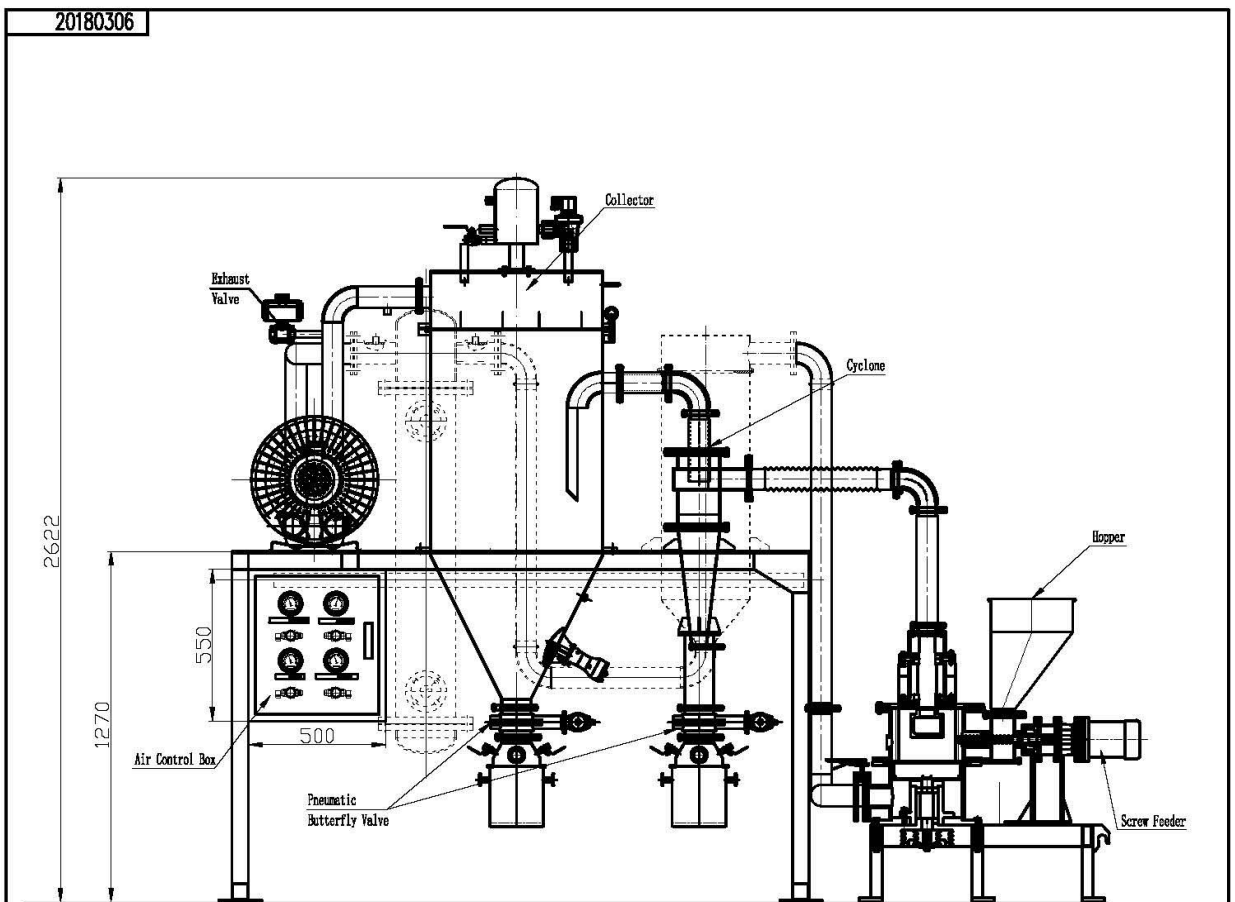
(1) Check the wear degree of the filter cartridge, check whether there is deterioration, damage, aging, perforation, etc. The damaged filter cartridge should be replaced in time;

(2) Adjust the tension of the filter tube and observe the ash accumulation on the non-filter surface of the filter cartridge;

(3) Check whether the filter cartridge has friction and collision;

(4) Check whether the filter tube is wet and there is no adhesion.

Enclosure 5 System Flowchart



待(完)用 件 登 记
图底图总号
底图总号
签 字
日 期
档案员 日期

					Layout		LNPE 凌能
标记	处数	分区	更改文件号	签名	年/月/日	阶段标记	
设计			标准化				
审核							
工艺			批准			共 张 第 张	LNIST-45A