

# Contents

**I Preface**

**II Theory of the structure**

**III Main parts of the machine**

**IV Main parameters**

**V Installation and adjustment**

**VI Maintenance and eliminating troubles**

**VII Lubrication**

**VIII Cautions**

**IX Damageable parts**

**X User should to know**

## **I Preface**

Our factory is the professional factory to produce all kinds of high-pressure ball-pressing machines. We have rich technical force and have the scientific research, empoldering and producing centralized. We have created good achievements and setted favorable credit standing. The newest ball-pressing machines have applied two national patents. This machine has the capability of the cool-pressure machine improved to a new level. Our products have achieved the science and technology medals for years.

Our factory can design and produce the machinery and plant which can used to produce lower than 100000 ton coal and carbon for industrial use.

The specs and the types include honeycomb type, egg-ball type, elliptical type, circinal type, quadrate type, columniform type ect. Meanwhile we can design all types according to the mind of the users. We welcome the users to come to visit our factory and we will thanks for experts and engineers who have helped us !

## **II Theory of the structure**

The request to the material:

- 1.The granularity of the material should be controlled at smaller than 1mm,whose proportion should be 30-40%,1mm-2mm should be 30-40%;the biggest grain should be 10% or so.
- 2.The humidity should be controlled between 8-10%.( The humidity have the largest influence to the forming ball, which should be guaranteed absolutely evenly)
- 3.The material should not include iron and the other high rigidity material. The user should install the equipment that can clean away the iron.
- 4,The user who use the bonding characteristic or other additives should progress technical collocation according to the type of the coal and the using condition.

## **III Main parts of the machine**

### **1.feeding material part**

This machine uses the materials mainly include coal powder, mineral powder, oxidizing sheet iron, clay ect. The materials have certain dispersive proportion. Longer the diameter of the moulding roller, bigger the biting angle, bigger the pressure. So it is important to feed quantificational material. There are three ways:①Belt feeding machine feeds the material. It is very economic.②Aclinic

helix feeding machine feeds the material. ③Advanced pressure helix feeding machine feeds the material. The intent of feeding quantificational material is to let the mainframe run placidly and the charge is stabile. When the amount of the material is over the amount of the products, it can make the charge unstable, even make the machine stopped. If the material is too small, the effect of forming ball is bad. So it is very important to master the amount of the material. The merit of the third way is to achieve the needed pressure through adjusting the rotational speed of the helix.

## 2、 transmission part

The system of the main transmission includes electromotor、 V-type belt、 retarder、 open gear、 rollers.

## IV Main parameters

Capacity:1000KG/Hour

Power:5.5kw

Diameters of briquettes:20mm to 60mm

Diameter of roller:290mm

Pressure of machine:20-30T

Endurable pressure of briquettes:60kg

Material of roller:65 Mn

Weight of machine:580KG

## V Installation and adjustment

### 1、 installation and running the machine

The machine should have a balanced base. You should put it placidly. The machine with the conveyer should be put down according to the highness and the level of the conveyer. After installation, you should check all parts of the machine is firm or not, and if there have something put on the machine. You should add enough lubricant to the retarder and the gear box. If all parts are normal you can run the machine. After running the machine you should see if the machine run in the reversed direction. If the direction is right, you should let the machine run for 30 minutes without any material. During this period you should observe all part of the machine is heated or the sound of the machine is loud or not, when you find some problems you should solve in time. When the machine is normal, you can add 300kg dry material to the machine, after milling for five times you can let the machine work normally. You should notice that the humidity of the material has very important influence to the pressure of the forming ball. At best you should add dry material at first then you can add wet material. And running the machine with material is strictly forbidden. At first someone should stand by the machine to see if the screw of the machine is

loose or not, the machine should be stopped rightly when you find it is abnormal. The lubricant added to the retarder and the gear box should be changed after using for 30 days.

## 2、 adjustment

### (1)adjust the roller-mold in malposition

#### ① the direction of the circle in malposition

There is an adjusting plate in the end of the passive gear. You can loose the circle screws at first, tighten the screw according to the direction and the degree of the malposition,then tighten the circle screws, and insert the test board to see the malposition is right or not.

#### ②adjust the direction of the axletree in malposition

Loose the cover of the axletree which need to be adjusted, then increase or reduce the cushion at the two ends of the axletree, tighten the screws in the end.. But this instance seldom occurs.

### (2)adjust the part of the entering material

You can ensure proper amount of the material according to the forming ball. Here mainly explain the adjustment of the advanced pressure helix feeding machine. The amount of the material is concerned with the speed of the helix and the distance of the helix. Meanwhile it is also concerned with the component、 character、 granularity 、 humidity、 proportion of the material. The distance of the helix need not change generally.

## 3、 attempt to run the machine

### (1)run the machine without loading

Before running the machine without loading, you should check:

① Check the screws in the machine are tight or not.

② Check the lubricant is enough or not.

③ Check the degree of tightness of the triangle belt .

⑤ Rotate the triangle belt .wheel and the hopper, then check if there are something in the machine or the machine is normal or not.

You should strictly comply with the sequence of running the machine: oil pump、 mainframe、 furnishes machine. When you stopped the machine the sequence is contrary.

### Cautions:

① Check the sound of al parts of the machine is normal or not. Check the temperature of all rotating parts.

② Check the direction of the electricmotor. The direction of adding material and the direction of the rotating is same.

③ Check the rotation of the triangle belt.

### (2)running with loading

When it is normal after running without loading, you can attempt to run the

machine with loading. You should check if there are something in the cleft of the rollers. Running the machine with loading is strictly forbidden. You should strictly comply with the sequence of running the machine: oil pump, mainframe, furnishes machine.

Cautions:

- ① Check the sound is normal or not, the screws are tight or not, the temperature is normal or not, ect.
- ② Check the electric current of all the electric motors
- ③ There should not be metal and other hardy material among the adding material.

## **VI Maintenance and eliminating troubles**

It is very necessary for you to maintain and check the machine. You should check the screws is tight or not, the amount of the oil , the electric current of the electricmotors, the temperature of the axtetree, the oil pressure, the rotation of the triangle belt, ect. When you check the pressure of the oil cylinder, you should stop the machine. If the pressure is not normal you can add some oil or adjust the pressure. When the machine is running, you find the oil is dripping, you should stop the machine at once.

It is inevitable that there some abrasion, so it is necessary for you to check the machine termly. If it is possible you can check the machine after using three months or half a year.

- ① Clean the dust on the machine. You should prevent the dust from entering the removal parts when you dismantle the machine.
- ② Open the machine to clean it, then check the a abrasion of the axletree、 the gear, ec
- ③ Take off the cover of the axletree to check the abrasion of the axletree.
- ④ Check the screws are tight or not.
- ⑤ Check the abrasion of the gear.

## **VII Lubricate**

- 1、 The oil in the gear box should immerge the axletree over 60mm.
- 2、 Every three months you should open the cover of gear to change the butter.
- 3、 Add gear oil to the retarder, the oil should immerge over the gear 60mm.

## **VIII Cautions**

- 1、 Do not let the iron, stone and other hardy material enter the machine.
- 2、 The granularity of the material lower than 3mm.
- 3、 Running the machine with loading is strictly forbidden. Non-technical person can not dismantle an adjust the machine.

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4、 maintain the machine termly.

**IX Damageable parts**

- 1、 rotating axletree.
- 2、 Roller
- 3、 feeding nozzle
- 4、 triangle belt

**X User should to know**

- 1、 This equipment only provide basal picture. We can manufacture somen parts of the machine. The user can buy them in advance.
- 2、 We hope the user feed back the using instance which can help us improve our technology.

