AMC Polishing Line and Dust Removal Equipment for Flattening Machine Roll Manual



XI'AN AMCTECH CO.,LTD

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Xi'an (AMC) Polishing Line and Dust Removal Equipment for Flattening Machine Roll Manual

Chapter One Online Polishing Principle

1 AMCPolisherII System Overview

With a larger stainless steel demand, customers have higher requirements for strip surface (smoothness, no scratches, and other important indicators).

We know that the strip is more or less stained during the flattening process. This causes two consequences: roll stain, strip surface stain. This greatly reduces the production efficiency and yield. Given this, the polishing line and Dust Removal equipment for flattening machine roll is to solve the above problems.



Figure 1 upper and lower polishing device for flattening machine roll

2 Polishing Principle

Hydraulic cylinder drives the polishing head to make a linear reciprocating motion, the air cylinder presses the sandpaper and the roll surface to produce the friction, which vertically effects on the roll. This will achieve the purpose of polishing.

3 Polishing System

The system consists of upper and lower polishing device (polishing head, dust bin, cylinder pressing device, traversing device, air moving lifting device) and polishing control box. Polishing control box contains: PLC, Power supply, switches etc. Control panel consists of switches, buttons and indicator lights.

4 Polishing System Operation

Charge the system with electricity in the first place.

The system consists of upper and lower roll polishing device, the upper and lower can work individually. There are two working modes: manual/automatic mode for each device.

4.1 Manual Mode

Manual mode is mainly used for tuning and maintenance, such as changing the polishing gauze or system overhaul. When using manual control system, turn the switches on operation box to "manual mode". Manual mode has the following operations:

1. gauze clamping (air cylinder device): Turn on "gauze clamping" switch to clamp the gauze.

2. gauze loosing (air cylinder device): Turn on "gauze loosing" switch to loose the gauze.

3. press (pneumatic device): Turn on "press" switch and the polishing head part will press on roll.

4. lift (pneumatic device): Turn on "lift" switch and the polishing head part will retract from the roll.

5. forward (traverse device): Turn on "forward" switch and the traverse device will move forward.

6. backward (traverse device): Turn on "backward" switch and the traverse device will move backward.

4.2 Automatic Mode

Automatic mode is the normal working mode for polishing machine. When using manual control system, turn the switches on operation box to "Automatic mode", then

the system will automatically complete the polishing task, without human intervention.

1, When the "Automatic mode" is turned on, the traverse device will do reciprocating motion, pneumatic device will press the polishing head part on the roll, and the traverse device will reciprocate along the roll.

2, When the machine is stopped, the pneumatic device will lift the polishing head part, and retract it from the roll.

5 Precautions

Before roll polishing, the operator must do the following:

1. After change the roll, do remember to clean the antirust oil on the roll, be ensure to keep roll clean and remove every stain.

2. Before polishing, check whether the polishing sandpaper is tightened.

3. Check the air pressure when polishing gauze is tightened (3.5Kg). Check the air pressure of the polishing head part (2.0Kg).

4. When press the "stop" button to stop the polishing machine, stop the upper roll (automatic / stop / manual) and the lower roll (automatic / stop / manual) at the same time. Otherwise, the alarming light will be flashing, and the roll will be damaged.

6 Consumables

Polishing Sandpaper (Type: AMC-000, no narrower than 180mm).

7 Equipment Maintenance

Regularly add lubricating oil to the moving part of the polishing machine to ensure a smooth and reliable operation.

Chapter Two Dust Removal Equipment

8 System Composition

The system consists of dust removal box, fan and dust removal control box. Dust removal control box contains: 200PLC, 24V5A power supply, circuit breakers, intermediate relays, contactors and terminals. The operation panel of the control box contains: power instructions, fan start, fan stop, dust removal start, and dust removal

stop.

9 System Functions

The system serves to do with the dust recovery and disposal during polishing.

10 System Operating Instructions

Charge the system with electricity first. When the polishing machine is in "working" mode, press the button to start the fan. When the polishing machine is in "stop" mode, press the button to stop the fan. Dust removal equipment can only be used when fan is stopped and air valve is open.

Press the button to start "dust removal", and the 12 pulse valve will be charged with electricity to remove the dust. When dust removal is finished, press the button to stop.

Note: Dust removal equipment can only be used when "fan stop", "air valve open" mode switched on.

11 Consumables

Cartridge (Type AMC / T3566 Specifications: φ 352 × φ 240 × 660).

12 Maintenance

Change cartridge regularly to ensure a reliable operation.

Chapter Three Consulting Method

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