OPERATION MANUAL

BULUPOL-2C

METALLOGRAPHIC SPECIMEN GRINDING & POLISHING MACHINE

BMS Bulut Makina Sanayi ve Ticaret Ltd. Şti.

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1 CAUTIONS & SAFETY NOTE

Following instructions shall be followed to prevent from fire hazard, electric shock and injury:

Read carefully all the operation instructions.

Keep in mind the elementary knowledge of electrical appliances.

Abide by all the warnings and instructions either marked on the product or mentioned in the documents delivered with the machine.

Should any discrepancy be found between the instructions and safety note, the safety note shall prevail. For more detail, please refer to the sales agency or aftermarket service.

Remove the power plug prior to clean the surface. Detergent or kerosene is forbidden. Wet rug is all right

Don’t place the machine onto unstable table. Otherwise, serious injury may happen when falling down in case.

Nothing is allowed to put on the machine.

Don’t overload the power socket in case of fire hazard or electric shock.

Don’t try to dismantle the machine so as to avoid electric shock. Only qualified maintenance technicians are allowed to repair the machine. You will be exposed to dangerous voltage or other danger once the cover is opened or removed. Improper reassembling may result in future electric shock.

Remove the plug and call qualified technician in following cases:

The cable or plug is damaged or worn out.

The machine can’t run in normal operation.

The machine falls down or the shell is damaged.

Sudden and obvious changes on the capability of the machine.

Only the parts mentioned in this manual are allowed to adjust.

Keep the manual well.

2 Applications and Features

This grinding and polishing machine is of double discs. It is suitable for pre-grinding, grinding and polishing metallographic specimens. Since the machine is speed-adjusted by a transducer, it can run between 50 and 1000rpm, which favors the machine with wide applications. The machine is equipped with cooling system which can cool down the specimen during primary grinding so as to prevent overheating and damage the metallographic structure. Featuring easy operation and reliable performance, it is an indispensable device for the factories, research institutions and college labs to prepare metallographic specimen.

2.1 Main Technical Parameters

1. Working voltage: 220V, 50HZ
2. Diameter of grinding disc: φ200mm / Φ 250mm

Rotating speed: 50-1000rpm

3. Diameter of polishing disc: φ200mm/ Φ 250mm

   Rotating speed: 50-1000rpm
4. Diameter of sand paper: φ200mm
5. Motor: YSS7124, 550W
6. Overall dimensions: 700×670×280mm
7. Weight: 43kg

3 How to operate the control panel

A: Display screen: Turn power on, the displayer indicates default rotation speed “500”, when running, it indicates the present rotation speed.

B: RUN key: press RUN key, the motor starts to run.

C: STOP/RESET key: During normal running, press STOP/RESET key, the motor will stop running.

D: ▲ (UP) and ▼ (DOWN) key: Press UP or DOWN key to get required revolution. Press UP key, the rotation speed will rise. Press DOWN key, the rotation speed will slow down.

4 Installation

Open the wooden package of the machine.

Place the machine on a stable platform free of other objects, remove the shock pad at the bottom of the machine, make sure the machine is placed stably and in horizontal position

Connect the water inlet and outlet pipe at the rear side of the machine.

Connect the grounding cable.

Knock the seating shoes of the polishing disc with a rubber hammer along the axial direction until the grinding disc and polishing disc are unable to move.

Plug the power cable onto a socket with a voltage of 220V, turn on power switch and start up the machine as per the above steps. Check whether the machine runs normally.

After the above check, the machine is ready for operation.

5 Description of Structure

This polisher is composed of the base and control panel. It is covered with nice and utilitarian glass fiber crust and stainless-steel current pieces, appearance beautiful, corrosion prevention and restless forever

The motor is fixed on the base. The shaft is driven by a v-belt, the discs are fitted through the shaft and can rotate by key –drive. The switch is fitted on the machine body. Waterproof abrasive paper is adhered on the discs. The knob on the control panel can control the flow of water pipe that is movable; the wastewater can be discharged through outlet pipe.

Note: Since it is of conical joint between the discs and transmission shaft, during the installation, knock the seating shoes of the polishing disc with a rubber hammer along axial direction until they fit tightly. Otherwise, they will affect the performance of the machine.

6 Method 1: Grinding

Adhere or clamp the waterproof abrasive paper on the discs.

Turn on water switch and regulate the water flow.

Turn on the power. The displayer indicates default rotation speed “500”, which means that the machine is power-on and ready for operation.

Press the RUN key on the control panel. The machine will automatically speed up to target rotation 500rpm (how to set target rotation, please refer to the instruction manual of transducer).

Press UP or DOWN key to setup required rotating speed for grinding process between 50rpm and 1000rpm.

Hold tightly the cut specimen and approach to the abrasive paper lightly. Wait until the specimen and abrasive paper have a good contact without jumpiness, press the specimen and start grinding.

The force applied should reach the extent that the metallographic structure of the surface will not be burnt due to overheat by friction (about 2kgf).

At the end of operation, press STOP/RESET key. The motor will stop running, turn power switch leftward to turn off the power.

7 Method 2: Polishing

Place the polishing textile with contact adhesive on the polishing disc.

Press the clamping ring onto the outside diameter of polishing disc so as to fix the polishing textile without contact adhesive.

Paint polishing agent onto the textile

Turn on the power. The displayer indicates default rotation speed “500”, which means that the machine is power –on and ready for operation

Press the RUN key on the control panel. The machine will automatically speed up to target revolution 500rpm (how to set target rotate speed, please refer to eh instruction manual of transducer).

Press UP or DOWN key to setup required rotate speed for polishing process between 50rpm and 1000rpm.

Hold tightly the specimen already grinded and approach to the polishing disc lightly. At first press the specimen against the center of polishing disc then move outwards while polishing.

Should the textile be too adhesive, dilute the polishing agent.

Should the textile be worn, replace it in time to prevent the specimen from damage.

At the end of operation, press STOP/RESET key. The motor will stop running, turn power switch leftward to turn off the power.

When polishing, it is recommended to work under 500-800rpm rotating speed.

8 Cautions

The machine must be well grounded.

Water inlet and outlet pipe are in good condition and free of leakage.

At end of each operation, clean up the machine.

Should abnormal sound be heard, stop running and check it at once.