Pinnacletech Pte Ltd

QUALITY IS OUR VISION, YOUR SATISFACTION IS OUR MISSION

ADVANCED METALLURGICAL MICROSCOPE

8752 / 8753
MZ3 Series Microscope

User Guide

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1. Getting Started

This reference guide is written base on the whole series, it covers some capable optional attachments and functions, and you may refer the similar operation for your requirement.

2. Components Description

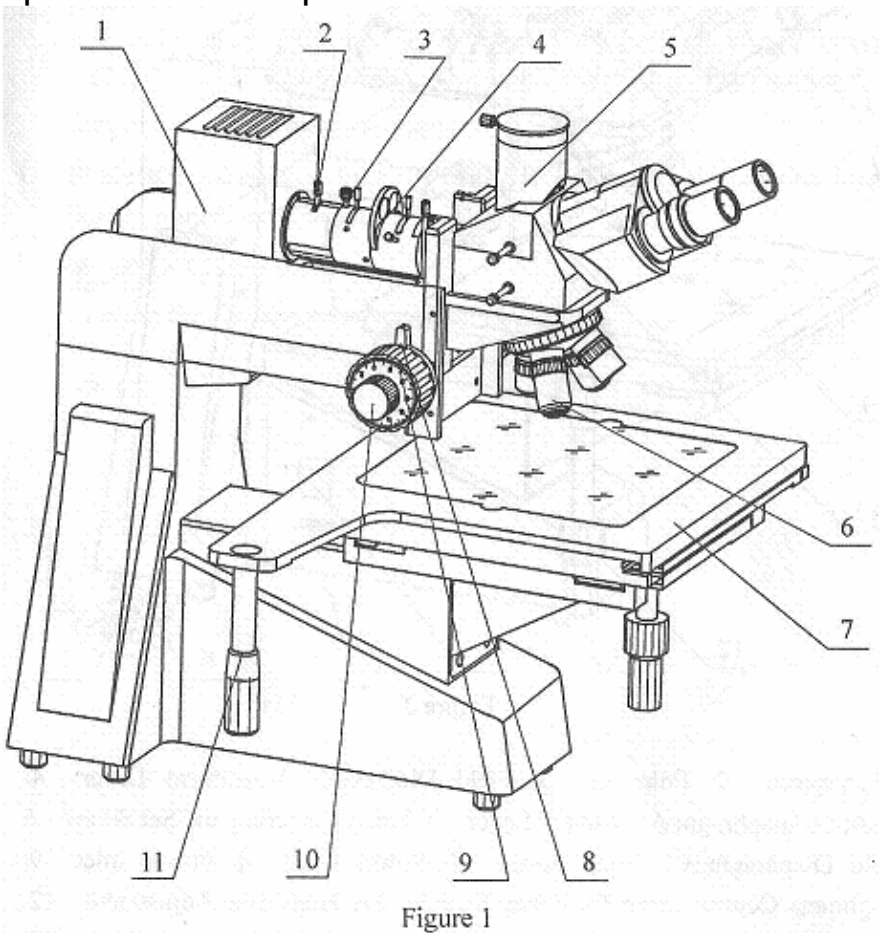

Figure 1

Figure 1 Components

1. LAMP HOUSE
2. FOCUSING LENS ADJUSTMENT LEVER
3. LAMP HOUSE SET SCREW
4. FILTER WHEEL
5. TRINOCULAR BODY
6. OBJECTIVE LENS
7. STAGE
8. DOWN STOP LEVER
9. COARSE FOCUS CONTROL KNOB
10. FUNE FOCUS CONTROL KNOB
11. QUICK ADJUSTMENT LEVER

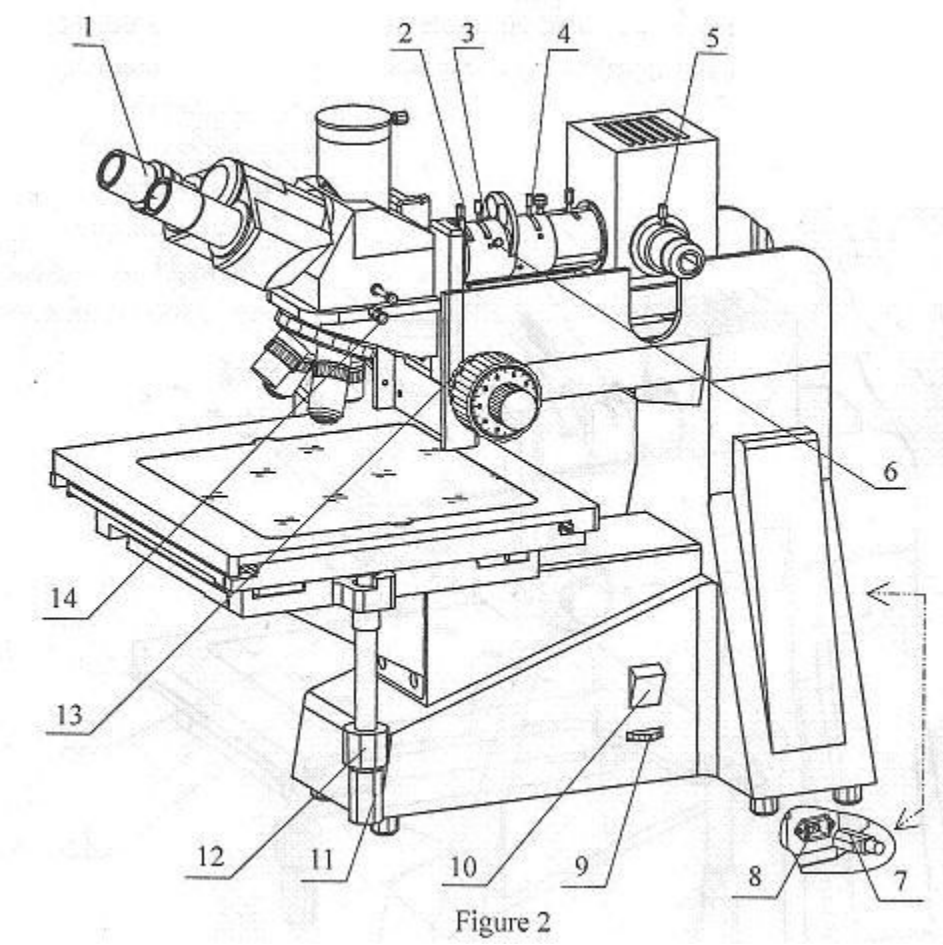

Figure 2

Figure 2 Components

1. EYEPIECE
2. POLARIZER
3. FIELD DIAPHRAGM ADJUSTMENT LEVER
4. APERTURE DIAPHRAGM ADJUSTMENT LEVER
5. LAMP CENTERING AND SET SCREW
6. FIELD DIAPHRGM CENTERING SCREW
7. POWER CORD
8. POWER INLET
9. BRIGHTNESS CONTROL KNOB
10. POWER SWITCH
11. TRANSVERSE ADJUSTMENT
12. LONGITUADINAL ADJUSTMENT KNOB
13. FOCUS TENSIONAL ADJUSTMENT KNOB
14. OPTICAL BODY SET SCREW

3. Setup Instructions

a. Remove all parts from the packing material and retain the packaging box in the event you may require transporting the microscope

b. Loosen the set screw (14) and install the optical body with vertical illumination Tube to the frame.

c. Secure the optical body with the screw.

CAUTION

DO NOT RELEASE THE OPTICAL BODY FROM YOUR GRASP UNTIL IT IS FIRMLY SECURED TO THE FRAME

d. Install the objective lens into the noise piece

e. Remove the dust caps from the eye tubes in the optical body and insert both eye pieces into it.

f. Install the lamp house

g. Connect the power cord to the microscope

4. Basic Operation

a. Illumination Control

i. The power switch to the illuminator and the brightness control is located at the right side of the base. The electrical system is fuse protected and the fuse holder located on the power inlet.

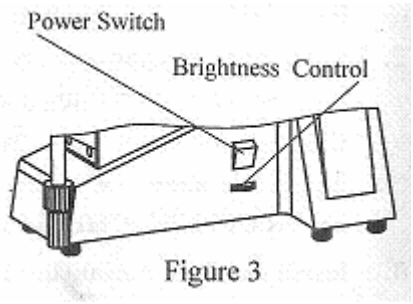

Figure 3

ii. Turn on the light with the power switch as shown in Figure 3. If the light does not appear to be 'ON', check the brightness control to see if it is on the low setting.

b. Focusing Controls

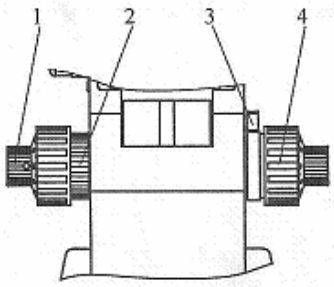

Figure 4

1.Fine Focus 2.Focus Tension
3.Down Stop 4.Coarse Focus

i. Focusing adjustment is accomplished by using the large coarse adjustment knobs located comfortably on both side of the frame. Fine adjustment is accomplished using the smaller knobs located on the same focus shaft. This coaxial arrangement allows for easy, precise adjustment without drift or discomfort.

ii. Focus Control Turning either side of the coarse focus control knobs will raise or lower the optical body. The smallest graduation on the fine adjust knob index scale is 0.8 um of vertical.

iii. Focus Tension Adjustment. The tension of the coarse focus is adjustable and preset at the factory for easy of

use. If you wish to adjust the coarse focus tension, first locate the tension adjustment ring. It is located between the frame and the right coarse adjustment knob.
Turning the ring toward the rear of the microscope increase the tension and forward the front will loosen it.

Loosen the tension of the focus knob if you experience physical discomfort.

iv. Prefocusing or Focus Stop Control.
Use of this feature will ensure that the shorter working distance objective len shall not in contact of the stage or specimen surface when using the microscope.

After focusing on the specimen with the coarse adjustment by low magnification eyepiece, rotation of the lever toward the front of the microscope will set and lower limit on the coarse adjustment movement.

After changing specimens or objectives, focusing can be easily accomplished by rotating the coarse adjustments knob to reach the pre-focused position, then using fine focusing knob to adjust further.

Focusing movement with the fine movement will not affected by using the pre-focusing lever.

c. Diopter and Interpupillary Adjustments

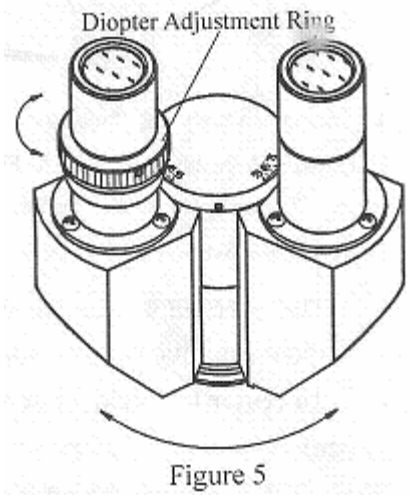

Figure 5

i. Diopter Adjustment.
Proper correction for individual vision is accomplished via the diopter adjustment located at the left eyepiece, refer to Figure 5.
-Using the 50x magnification objective len
-Bring an image into focus with your right eye only
-Once the image is well focused, observe with your left eye, make fine adjustments with the diopter adjustments with the Diopter Adjustment Ring to correct your vision

ii. Proper Interpupillary Distance, or the distance between the eyepieces, is crucial to the comfort of the user. Adjusting the interpupillary distance is accomplished through a 'Folding' action of the optical head shown at Figure 5. It allows fast and easy adjustment to suit your requirement.

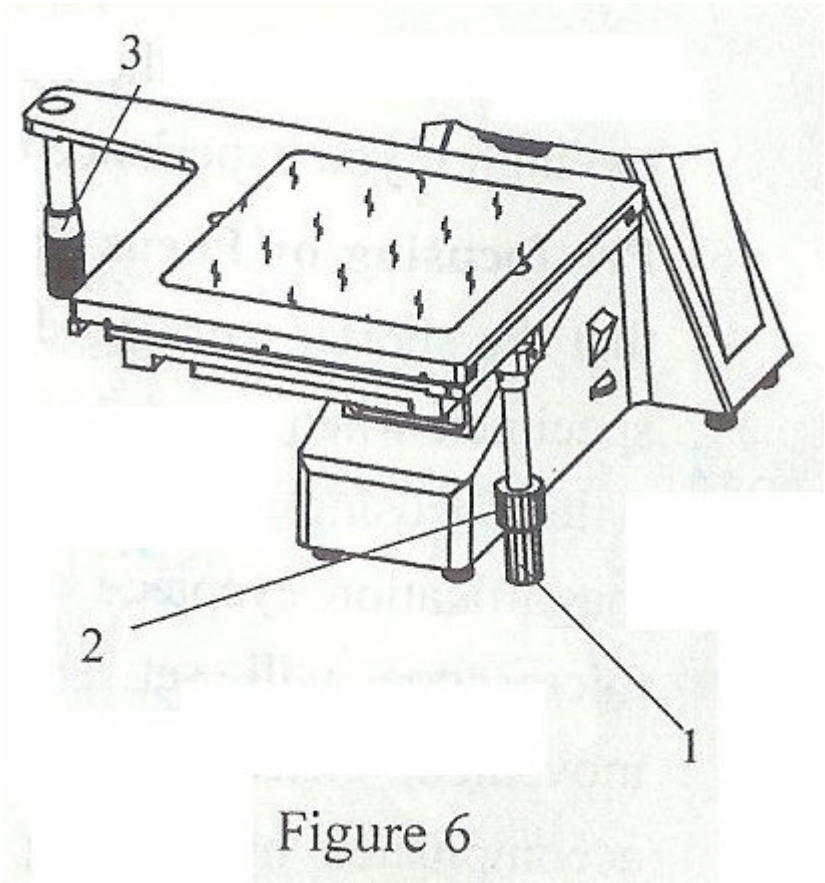

Figure 6

d. Mechanical Stage Control refer to Figure 6 consists of three parts.

i. 1 – For transverse adjustment
ii. 2 – For longitudinal adjustment
iii. 3 – For quick adjustment, push this level for maneuver the require position quickly

5. Light Bulb Replacement

CAUTION

PRIOR TO BULB REPLACMENT, ALLOW SOMETIME FOR THE LAMP TO COOL DOWN BEFORE TOUCH IT

a. Turn off the power supply and unplug the power cord from the microscope.

b. Loosen the lamp centering and set screw (9) as shown and remove the entire lamp socket (10) from the lamp house.

c. The bulb can be removed by grasping the bulb and pulling it firmly from it fixture.

d. Take care not to touch the lamp with bare hand, as the lamp will be 'HOT'

e. Insert the Original Replacement Bulb used for this model of microscope into the same fixture. When installing the new bulb, ensure not to touch the glass surface with your fingers. Used a plastic protective envelope for the installation. Failure to follow the above step will reduce the bulb's intensity and life.

f. Re-insert the lamp socket (10) into the lamp house and retighten the screw (9).

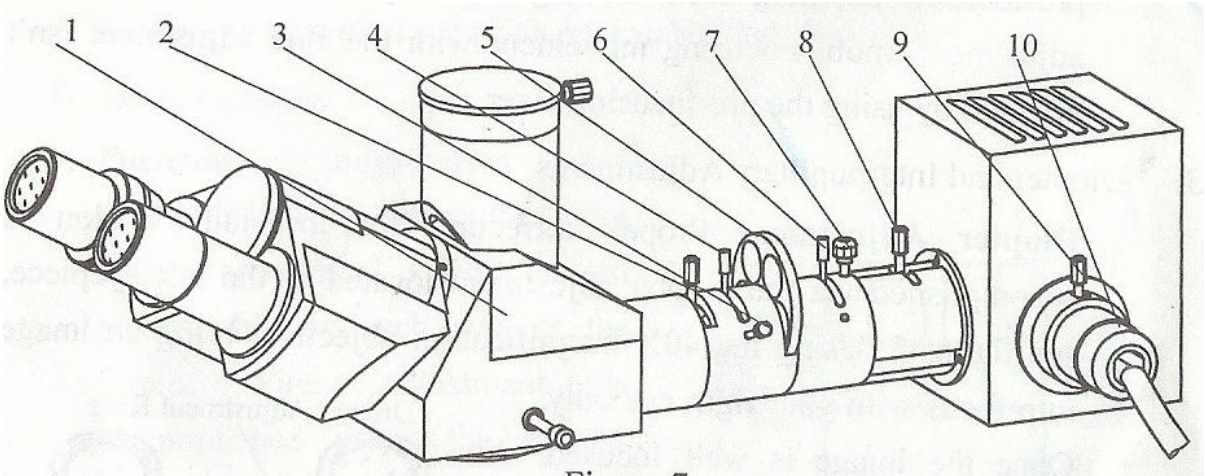

Figure 7

1. Trinocular Body 2. Polarizer 3. Field Diaphragm Centering Screw 4. Field Diaphragm Adjustment Lever 5. Filter Wheel 6. Aperture Diaphragm Adjustment Lever 7. Lamp House Set Screw 8. Focusing Lens Adjustment Lever 9. Lamp Centering and Set Screw 10. Lamp Socket

6. Care and Maintenance

Your Metallurgical Microscope from *Pinnacletech* is a precision optical instrument and should be treated with care at all times. Follow these maintenance procedure and handling procedure as stated above and your microscope will require little maintenance and last longer. You should appointed an authorized Service Engineering for maintaining your optical instrument, the recommended period shall be 6 monthly servicing depending on the usage and environment condition.

a. Cleaning the frame and stage
   i. Disconnect the power plug from main socket before cleaning.

   ii. Clean the frame and stage with a soft lean free slight moisture cloth. Ensure the Microscope is dry prior usage.

b. Cleaning Optical Parts
   i. Microscope Eyepieces and objective lens are coated.

   ii. The above should not be wiped in dry as dirt and particles may scratch the surface and remove the coating.

   iii. It is best to remove optical part from frame prior cleaning

   iv. Blow loose dust away from optical surface, use lean free cloth with a len cleaner to wipe and clean the surface. Solvents such as Xylene should NOT be used as the cleaning solution.

   v. Do not disassemble objective lens.

7. Part Replacement.

Use the original Bulb for your microscope illumination as recommended by Pinnacletech to avoid warranty void and incompatibility issue.

Bulb Ordering Code: 1710

For More Information

For more information on our products and services, kindly send an E-mail to sales@pinnacletech.biz

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