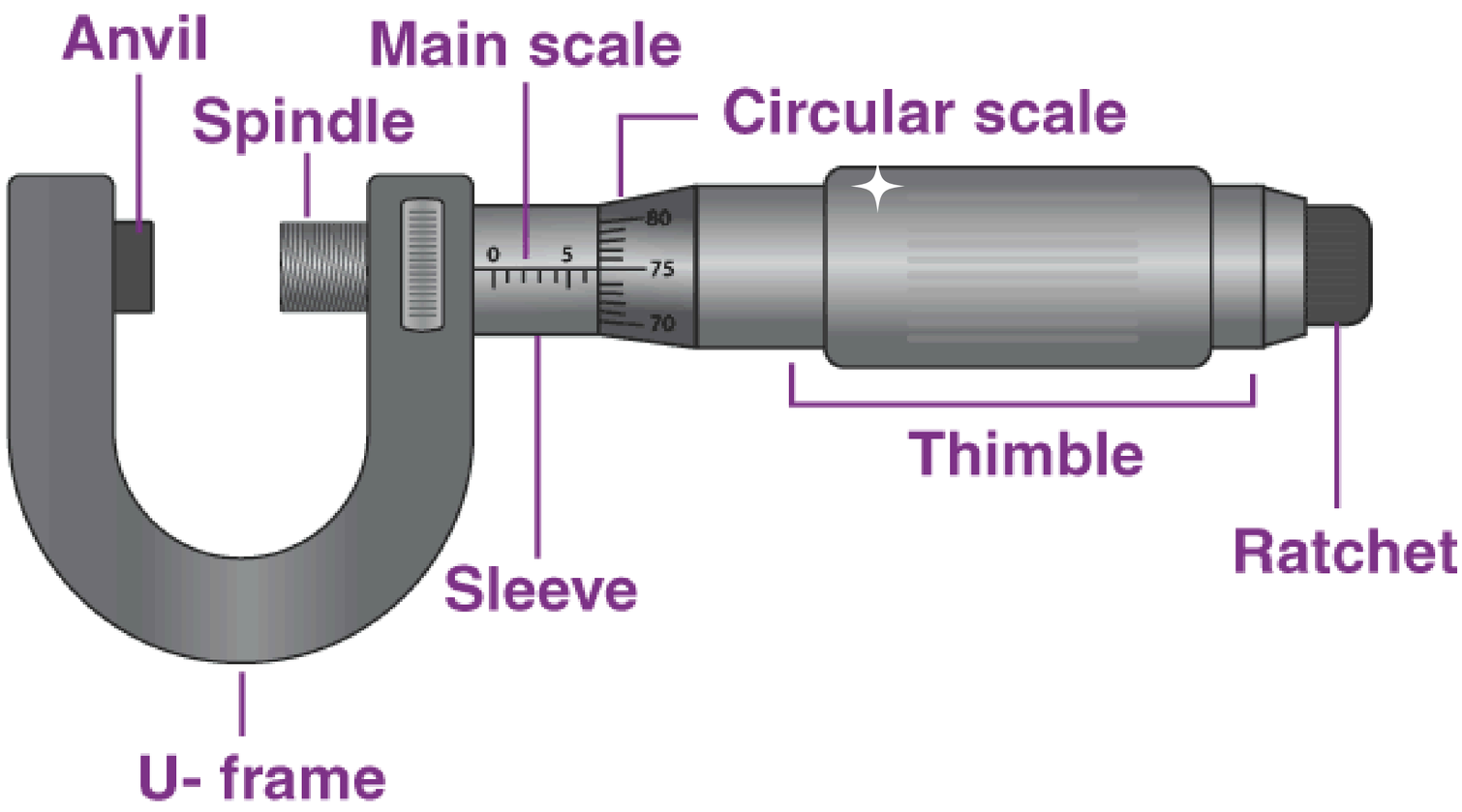
MICRO SCREW GAGE

GROUP PRESENTATION

P.HANISTAN, K.ASWIN, K.VITHUSIKAN,
A.ILAKKIYAN, K.ABISHAN

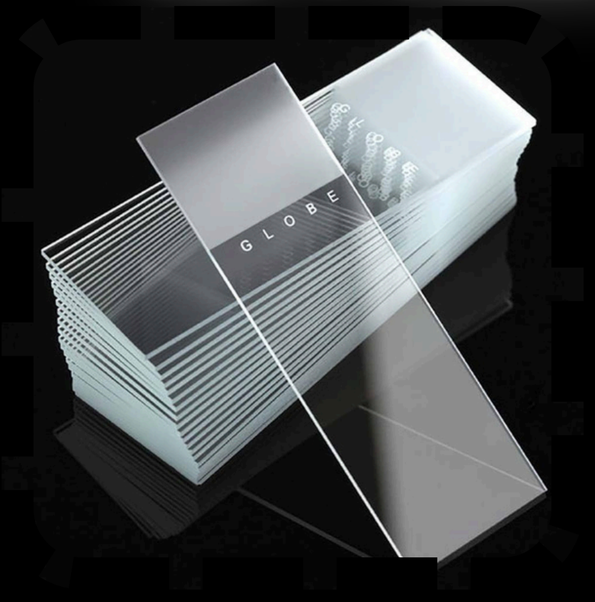
PARTS AND USAGE

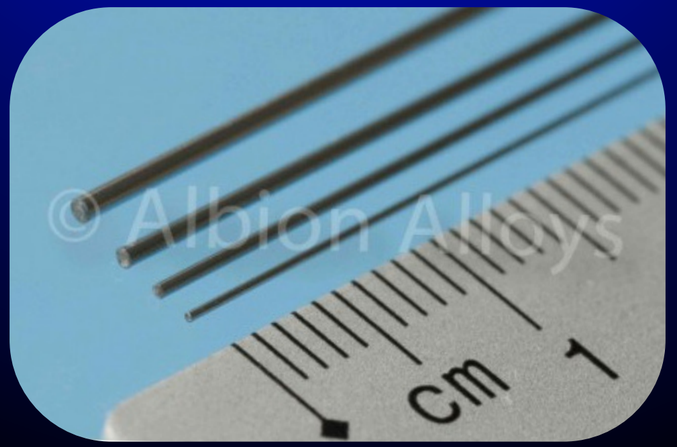


Screw Gauge

MATERIALS AND APPARATUS

- A micrometer screw gauge
- A thin wire
- A steel ball
- A microscope slide
- photocopy paper



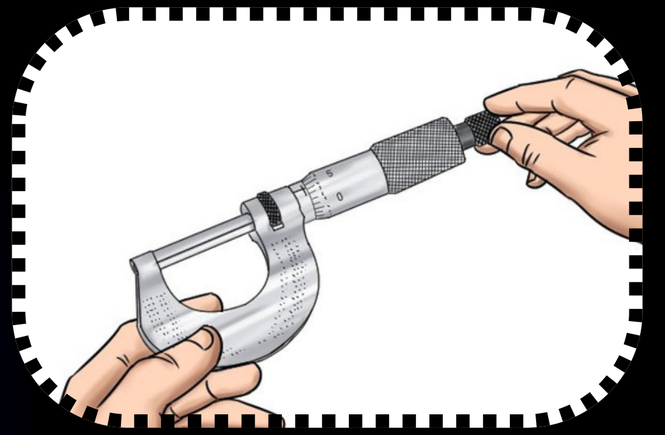


THEORY

IF X IS THE PITCH OF THE SCREW AND N THE NUMBER OF DIVISIONS ON THE CIRCULAR SCALE, THEN,
LEAST COUNT OF THE INSTRUMENT IN RELEVANT UNITS

$$= x/n$$

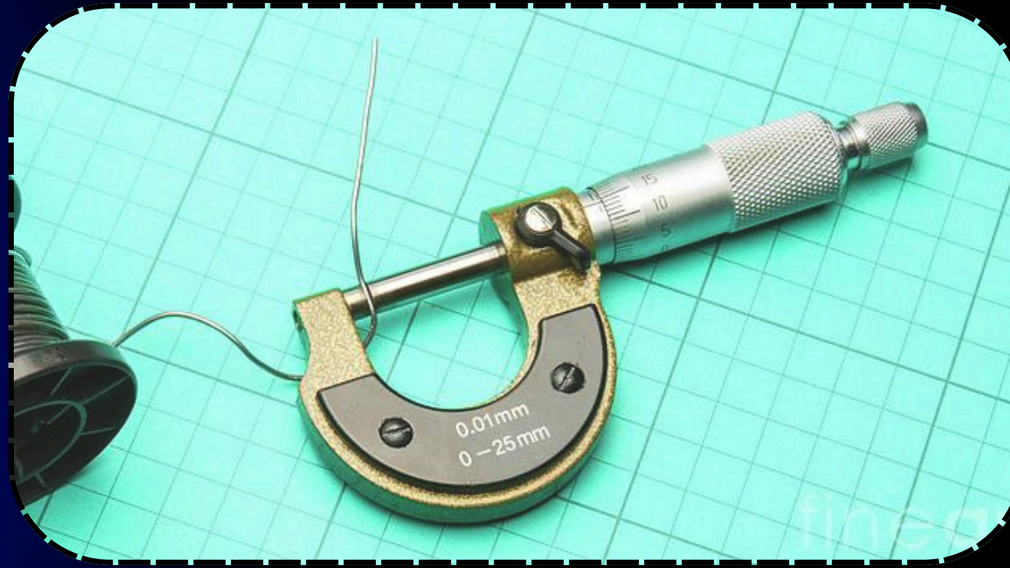
METHOD



- Obtain the least count of the micrometer screw gauge.
- Rotate holding thimble head only until the
- spindle touches the anvil (when the spindle touches the anvil or when these two are in contact with
- any other object the thimble head would rotate freely making a “ticking” sound)
- Note down any zero error if shown.

STEP-1

- To measure the diameter of the wire place it between the anvil and the spindle and rotate the thimble head until the wire is held properly between those two.
- Obtain the value of the diameter.
- Rotate the wire by 90° and obtain reading again.
- Repeat these measurements for three places of the wire and enter the corrected readings in Table

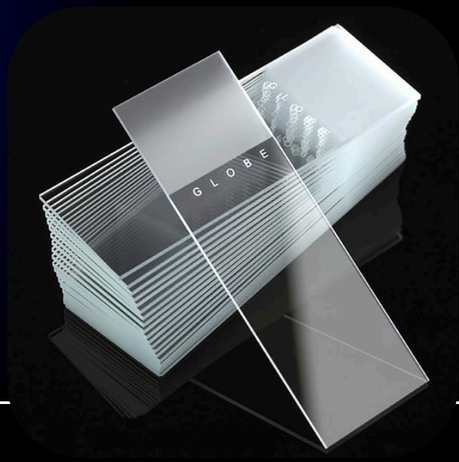


STEP-2

- Arrange the ball to fi t properly between the anvil and the spindle and obtain readings for three diameters normal to each other. Enter the corrected readings in Table

STEP-3

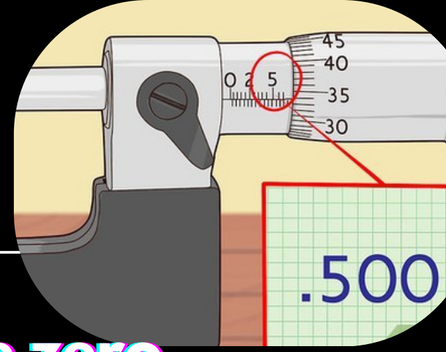
- Arrange the microscope slide to fit between the anvil and the spindle and obtain readings for thickness of the slide in three different places.
- Enter the corrected readings in Table



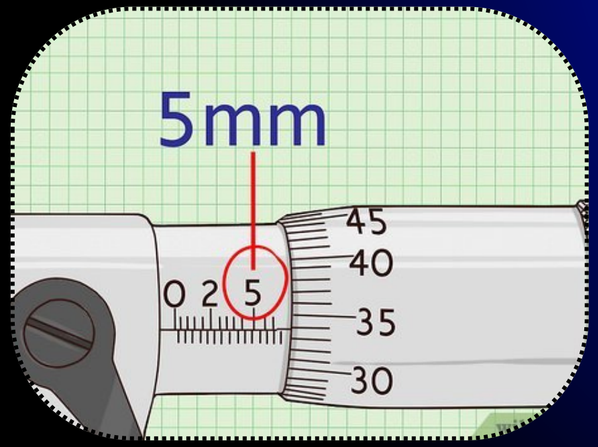
STEP-4

- Cut the photocopy paper into 20 pieces, place the pieces one over the other into a bundle
- and obtain readings for thickness of the bundle at three different places. Enter the corrected readings in Table

NOTE



It is important to read the zero error according to the position of the zero of the circular scale related to the line of the main scale of a micrometer screw gauge and also to decide whether for correction this value should be subracted from or added to the relevant measurment.



THE END OF JOURNEY

THANKYOU