Physics Practical - Screw Gauge

<u>Aim</u>: To find the volume of the given wire using a Screw Gauge.

Procedure:

- 1. Determine the Least Count of the Screw Gauge.
- 2. Determine the Zero Error of the Screw Gauge.
- 3. Find the Diameter of the given wire using the given Screw Gauge.
- 4. Take a minimum of 5 different readings at different positions of the wire.
- 5. Find the radius of the given wire.
- 6. Determine the length of the given wire using a meter scale.
- 7. Determine the volume of the given wire.

Observations:

Pitch = Distance moved by thimble on Main Scale / Number of rotations of thimble=

Pitch = _____

Least count = Pitch / Number of Circular Scale divisions =

Least count = _____ (1)

Zero Error = _____ (2) Correction = _____

Determine the Diameter of the wire:

Observed Reading = Main Scale Reading + Circular Scale Reading Corrected Reading = Observed Reading + Correction

<u>Reading</u> <u>Number</u>	<u>Main Scale</u> <u>Reading</u>	<u>Circular Scale</u> <u>Reading</u>	<u>Observed</u> Diameter	<u>Corrected</u> Diameter
1				
2				
3				
4				
5				

Average Diameter of the wire cylinder = _____ (3)

Radius (r) of the wire cylinder = Diameter /2 = (5)

Length (l) of the wire = (6)

Conclusion:

Volume of the wire = $\pi r^2 l$ = _____

Volume of the wire is _____ (7)