Physics Practical -Vernier Calliper

Aim: To find the thickness of the given hollow cylinder using a Vernier Calliper.

Procedure:

1. Determine the Least Count of the Vernier Calliper.
2. Determine the Zero Error of the Vernier Calliper.
3. Find the outer Diameter of the given hollow cylinder using the given Vernier Calliper.
4. Take a minimum of 5 different readings at different positions of the cylinder.
5. Find the inner Diameter of the given hollow cylinder using the given Vernier Calliper.
6. Again take a minimum of 5 different readings by rotating the hollow cylinder.
7. Determine the thickness of the hollow cylinder.

Observations:

Pitch = 1 Unit / Number of divisions in the Unit = _____

Pitch = _____

Least count = Pitch / Number of Vernier Scale divisions = _____

Least count = _____ (1)

Zero Error = _____ (2)   Correction = _____

Determine the outer Diameter of the hollow cylinder:

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

Reading Number	Main Scale Reading	Vernier Scale Reading	Observed Reading	Corrected Reading
1				
2				
3				
4				
5				

Average outer Diameter of the hollow cylinder = _____ (3)

Determine the inner Diameter of the hollow cylinder:

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

Reading Number	Main Scale Reading	Vernier Scale Reading	Observed Reading	Corrected Reading
1				
2				
3				
4				
5				

Average inner Diameter of the hollow cylinder = _____ (5)

Conclusion:

Thickness of the hollow cylinder = (Outer Diameter – Inner Diameter)/2

= _____

The thickness of the hollow cylinder is _____ (7)