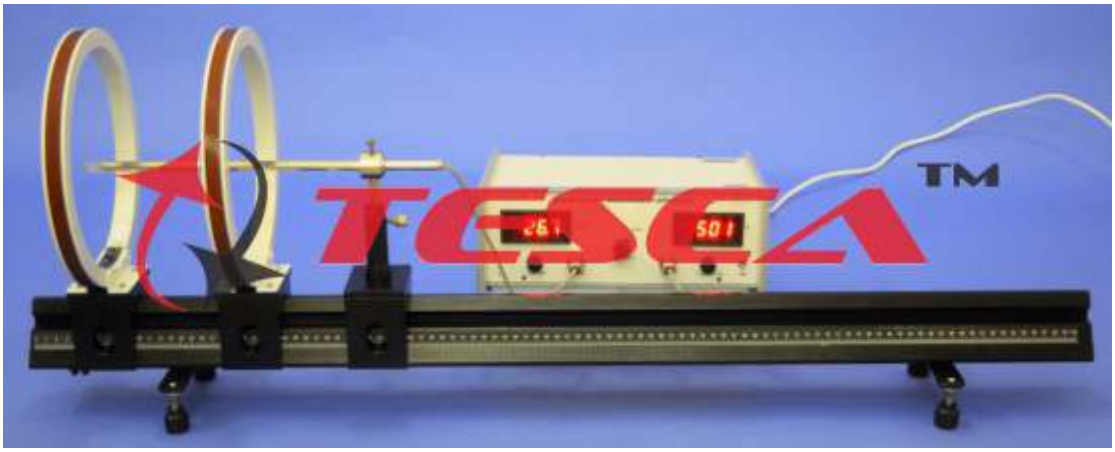

The experiment consists of two coils, Constant Current Power Supply and Gaussmeter. The Gaussmeter probe is mounted on a rail with a scale. It can move smoothly and precisely for measurement of magnetic field along the centre of the coils.

The following studies Biot Savartrs Law can be carried out with the set-up:

1. Study of magnetic field due to one coil and calculation of its diameter.
2. Study of Principal of super-imposition of magnetic field due to 2 coils by keeping the distance between the coils at a, >a and <a, where a is the radius of the coil.

Legend

Line 1 : Magnetic Profile when the distance between the coils is >a

Line 2 : Magnetic Profile when the distance between coils is =a

Line 3 : Magnetic Profile when the distance between coils is <a Superimposition overlaps completely

Apparatus consists of the following

1. Digital Gaussmeter

Range : 0-200
Resolution : 0.1G
Accuracy : ± 0.5%
Display : 3'12 digit 7 segment LED with autopolarity.

2. Two Coil

Diameter : 200mm
Number of turn : 1000

3. Constant Current Power Supply

Current : 0-0.5A Smoothly adjustable

Line Regulator : ± 0.2%for 10% mains variation.
Load Regulator : ± 0.2% for 0 to full load
Display : 3'12 digit 7 Segment LED Display
Protection : Against overload/ short current.

The 2 coils are mounted on platform one coil is fixed and other coil move smoothly on a rail along with the axis of the coils.

The experiment is complete in itself.

Note: Specifications are subject to change.

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