EXPERIMENT 2

Day & Date: METRE BRIDGE -1

AIM:-

 To find the resistance of the given wire using meter bridge and hence determine the specific resistance of its material.

Theory:

In a balanced Wheatstone’s bridge, P/Q = R/S

Circuit diagram:

**Table for diameter of wire**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl No | PSR | HSR | CorrectedHSR | Total | Mean (d)mm |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

OBSERVATIONS:

Table for unknown resistance X

|  |  |  |  |
| --- | --- | --- | --- |
| Sl No. | Reading of resistance box (R)  | Balancing length (l) cm | Unknown resistance X = $R\frac{100-l}{l}$   |
|  01 |  |  |  |
| 02 |  |  |  |
| 03 |  |  |  |
| 04 |  |  |  |
| 05 |  |  |  |

Radius of the given wire (r) =

 d/2= mm

 = x 10 -3 m.

Length of the given wire (l)

 = cm = x 10 -2 m.

Specific resistance of the material of given wire = X πr2/l

 =

 =  - m

RESULT

 (a) The resistance of the given wire = Ohm.

(b) The specific resistance of the given wire = Ohm-m