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| 五、数据记录：  组号： 03  １、测量试样的*VH*—*IS* 和*VH*—*IＭ* 曲线，确定样品的霍尔系数  （1）保持励磁电流*IM*（*IM*=0.500A）不变,将实验仪双刀开关倒向“*VH* ”，测试仪功能选择置于“*VH* ”，测绘*VH*—*IS* 曲线．   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *IS/*mA | *V*1*/*mV | *V*2*/*mV | *V*3*/*mV | *V*4*/*mV |  | | +*B*,+*Is* | -*B*,+*Is* | -*B*,-*Is* | +*B*,-*Is* | | 1.00 | 2.4 | -2.6 | 2.5 | -2.4 | 2.475 | | 1.50 | 3.6 | -3.8 | 3.8 | -3.6 | 3.7 | | 2.00 | 4.8 | -5.1 | 5.1 | -4.8 | 4.95 | | 3.00 | 7.2 | -7.7 | 7.7 | -7.2 | 7.45 | | 4.00 | 9.6 | -10.3 | 10.2 | -9.6 | 9.925 |   （2）、保持霍尔片工作电流*IS*的值不变（ *IS**=*3.00mA），测绘曲线*VH*—*IＭ*   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | *IM/*A | *V*1*/*mV | *V*2*/*mV | *V*3*/*mV | *V*4*/*mV |  | | +*B*,+*Is* | -*B*,+*Is* | -*B*,-*Is* | +*B*,-*Is* | | 0.300 | 4.2 | -4.7 | 4.7 | -4.2 | 4.45 | | 0.400 | 5.7 | -6.2 | 6.2 | -5.7 | 5.95 | | 0.500 | 7.2 | -7.7 | 7.7 | -7.2 | 7.45 | | 0.600 | 8.7 | -9.2 | 9.2 | -8.7 | 8.95 | | 0.700 | 10.1 | -10.7 | 10.6 | -10.2 | 10.4 |   励磁线圈参数*K*= 3.88 KGS.A-1  霍尔片厚度 *d*  = 0.5 mm   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | X1/cm | X2/cm | X/cm | *V*1*/*mV | *V*2*/*mV | *V*3*/*mV | *V*4*/*mV | *VH*/mV | *B*/KGS | | +*B*,+*Is* | -*B*,+*Is* | -*B*,-*Is* | +*B*,-*Is* | | 0.0 | 0.0 | 14 | -0.65 | 0.61 | -0.56 | 0.69 | 0.6275 |  | | 0.5 | 0.0 | 13.5 | -0.95 | 0.90 | -0.86 | 0.99 | 0.925 |  | | 1.0 | 0.0 | 13 | -1.12 | 1.08 | -1.04 | 1.16 | 1.1 |  | | 1.5 | 0.0 | 12.5 | -1.20 | 1.16 | -1.12 | 1.24 | 1.18 |  | | 2.0 | 0.0 | 12 | -1.24 | 1.20 | -1.16 | 1.28 | 1.22 |  | | 5.0 | 0.0 | 9 | -1.30 | 1.25 | -1.21 | 1.34 | 1.275 |  | | 8.0 | 0.0 | 6 | -1.30 | 1.26 | -1.22 | 1.34 | 1.28 |  | | 11.0 | 0.0 | 3 | -1.31 | 1.26 | -1.22 | 1.34 | 1.2825 |  | | 14.00 | 0.0 | 0 | -1.31 | 1.26 | -1.22 | 1.34 | 1.2825 |  | | 14.00 | 3.0 | -3 | -1.30 | 1.28 | -1.24 | 1.34 | 1.29 |  | | 14.00 | 6.0 | -6 | -1.30 | 1.26 | -1.22 | 1.34 | 1.28 |  | | 14.00 | 9.0 | -9 | -1.31 | 1.25 | -1.21 | 1.34 | 1.2775 |  | | 14.00 | 12.0 | -12 | -1.23 | 1.18 | -1.14 | 1.26 | 1.2025 |  | | 14.00 | 12.5 | -12.5 | -1.17 | 1.12 | -1.09 | 1.20 | 1.145 |  | | 14.00 | 13.0 | -13 | -1.05 | 0.99 | -0.96 | 1.08 | 1.02 |  | | 14.00 | 13.5 | -13.5 | -0.82 | 0.76 | -0.73 | 0.84 | 0.7875 |  | | 14.00 | 14.0 | -14 | -0.49 | 0.44 | -0.41 | 0.52 | 0.465 |  |   ２、测量螺线管轴线上磁场分布  霍尔片工作电流*IS*= 6 mA , 励磁电流*IM*= 0.6 A,N=111.4（102/m）  霍尔元件灵敏度*KH*= 2.13 mv/mA.KGS |
| **六、数据处理：**  1、绘制试样的*VH-IS*曲线、*VH-IM*曲线。  2、绘制螺线管的中心轴线上的磁场分布曲线。 |