（3）测量螺线管轴线上磁场分布（ IM=0.300A， IS=3.00mA)。

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Is=3mA | IM=500mA |  | **-B，+IS** | **+B，+IS** | **+B，-IS** | **-B，-IS** |  |  |
| 霍尔灵敏度 | KH=179 | X距离(mm) | V2(mV) | V1(mV) | V4(mV) | V3(mV) | ∣UH(mV)∣ | B(T) |
|  |  | 0 | -0.03 | 0.74 | -0.74 | 0.03 | 0.385 | 0.000716946 |
|  |  | 1 | -0.33 | 1.07 | -1.07 | 0.33 | 0.7 | 0.001303538 |
|  |  | 2 | -0.88 | 1.64 | -1.64 | 0.88 | 1.26 | 0.002346369 |
|  |  | 3 | -1.57 | 2.34 | -2.34 | 1.57 | 1.955 | 0.003640596 |
|  |  | 4 | -2.03 | 2.78 | -2.78 | 2.03 | 2.405 | 0.004478585 |
|  |  | 5 | -2.25 | 3.03 | -3.03 | 2.25 | 2.64 | 0.004916201 |
|  |  | 6 | -2.38 | 3.14 | -3.14 | 2.38 | 2.76 | 0.005139665 |
|  |  | 7 | -2.44 | 3.21 | -3.21 | 2.44 | 2.825 | 0.005260708 |
|  |  | 8 | -2.47 | 3.24 | -3.24 | 2.47 | 2.855 | 0.005316574 |
|  |  | 9 | -2.50 | 3.26 | -3.26 | 2.50 | 2.88 | 0.005363128 |
|  |  | 10 | -2.51 | 3.28 | -3.28 | 2.51 | 2.895 | 0.005391061 |
|  |  | 11 | -2.51 | 3.28 | -3.28 | 2.51 | 2.895 | 0.005391061 |
|  |  | 12 | -2.51 | 3.28 | -3.28 | 2.51 | 2.895 | 0.005391061 |
|  |  | 13 | -2.50 | 3.27 | -3.27 | 2.50 | 2.885 | 0.005372439 |
|  |  | 14 | -2.49 | 3.26 | -3.26 | 2.49 | 2.875 | 0.005353818 |
|  |  | 15 | -2.47 | 3.24 | -3.24 | 2.47 | 2.855 | 0.005316574 |
|  |  | 16 | -2.43 | 3.20 | -3.20 | 2.43 | 2.815 | 0.005242086 |
|  |  | 17 | -2.36 | 3.11 | -3.11 | 2.36 | 2.735 | 0.00509311 |
|  |  | 18 | -2.24 | 3.00 | -3.00 | 2.24 | 2.62 | 0.004878957 |
|  |  | 18.5 | -2.14 | 2.90 | -2.90 | 2.14 | 2.52 | 0.004692737 |
|  |  | 19 | -1.97 | 2.75 | -2.75 | 1.97 | 2.36 | 0.004394786 |
|  |  | 20 | -1.50 | 2.27 | -2.27 | 1.50 | 1.885 | 0.003510242 |
|  |  | 21 | -0.86 | 1.59 | -1.59 | 0.86 | 1.225 | 0.002281192 |
|  |  | 22 | -0.30 | 1.06 | -1.06 | 0.30 | 0.68 | 0.001266294 |

（2）保持工作电流不变，=3.00mA，不断增加,记录大小。

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Is=3mA |  |  |  |  |  |  |
| 线圈励磁参数 | K=4.23 | 工作电流不变，输出电压和磁场强度的关系 | **-B，+IS** | **+B，+IS** | **+B，-IS** | **-B，-IS** |  |
|  | B(10^-4T) | IM(A) | V2(mV) | V1(mV) | V4(mV) | V3(mV) | ∣UH(mV)∣ |
|  | 1.269 | 0.3 | 6.21 | -6.20 | 6.31 | -6.3 | 6.255 |
|  | 1.692 | 0.4 | 8.32 | -8.31 | 8.41 | -8.41 | 8.3625 |
|  | 2.115 | 0.5 | 10.42 | -10.41 | 10.51 | -10.5 | 10.46 |
|  | 2.538 | 0.6 | 12.53 | -12.52 | 12.62 | -12.62 | 12.5725 |
|  | 2.961 | 0.7 | 14.65 | -14.65 | 14.73 | -14.73 | 14.69 |
|  | 3.384 | 0.8 | 16.77 | -16.76 | 16.85 | -16.85 | 16.8075 |

（1）保持励磁电不变，（），不断增大，记录大小。

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IM=0.5A | 磁场不变，输出电压和工作电流的关系 | **-B，+IS** | **+B，+IS** | **+B，-IS** | **-B，-IS** |  |
|  | Is(mA) | V2(mV) | V1(mV) | V4(mV) | V3(mV) | ∣UH(mV)∣ |
|  | 1 | 1.28 | -1.27 | 1.30 | -1.29 | 1.285 |
|  | 1.5 | 1.89 | -1.89 | 1.93 | -1.92 | 1.9075 |
|  | 2 | 2.52 | -2.52 | 2.57 | -2.56 | 2.5425 |
|  | 2.5 | 3.16 | -3.15 | 3.22 | -3.21 | 3.185 |
|  | 3 | 3.79 | -3.78 | 3.86 | -3.85 | 3.82 |
|  | 3.5 | 4.42 | -4.41 | 4.50 | -4.50 | 4.4575 |
|  | 4 | 5.05 | -5.04 | 5.15 | -5.14 | 5.095 |