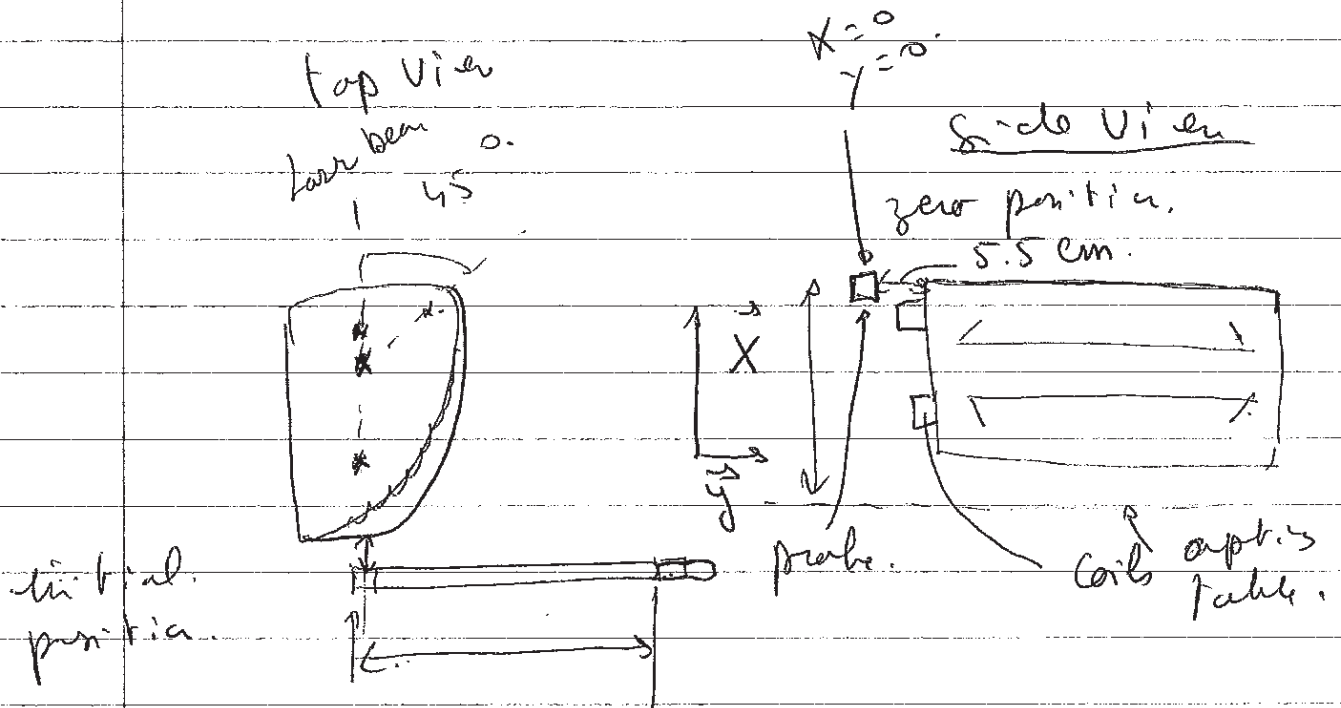
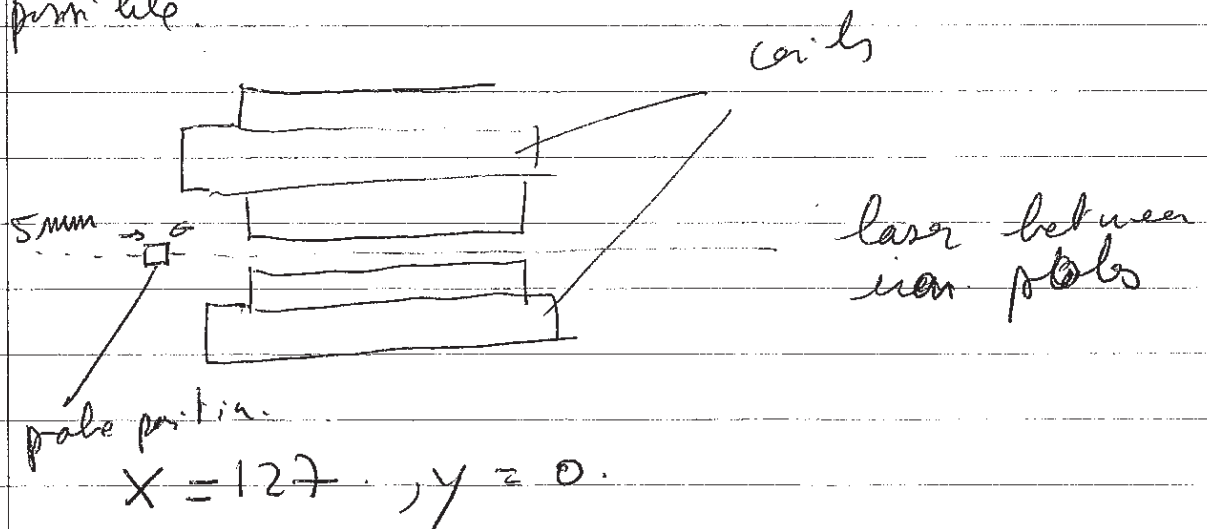


Tag numbr. 079270

10-16-10 beding magnet that was
to be used with LCS (compact
magnets)
the horizontal & vertical tolerances. here
a range of 150 mm. i.e 15 cm



aligned as much as
possible



at zero position $X = 0, y = 0$

power app. $B = 5 \cdot 10^5 \text{ hG}$, power on $I = 20.4 \text{ A}$
 $B = +3.34 \cdot 10^3 \text{ hG}$

~~XXXXXXXXXX~~

$X = 127 \text{ mm}, y = 0 \quad B = -6.7 \cdot 10^{-2} \text{ hG}$

$X = 127 \quad y = 10 \text{ mm} \quad B = -0.106 \text{ hG}$

$X = 127 \quad y = 20 \text{ mm} \quad B = -0.169 \text{ hG}$

$X = 127 \quad y = 30 \text{ mm} \quad B = -0.2729 \text{ hG}$

$X = 127 \quad y = 40 \text{ mm} \quad B = -0.448 \text{ hG}$

$X = 127 \quad y = 50 \text{ mm} \quad B = -0.728 \text{ hG}$

$y = 60 \quad B = -0.97 \text{ hG}$

$y = 70 \quad B = -1.025 \text{ hG}$

$y = 80 \quad B = -1.029 \text{ hG}$

$y = 90 \text{ mm} \quad B = -1.03 \text{ hG}$

$y = 100 \quad B = -1.029 \text{ hG}$

$$X = 127 \text{ mm} \quad Y = 110 \quad B = -1.028 \pm 6$$

$$Y = 120 \quad B = -1.028 \pm 6$$

$$Y = 130 \quad B = -1.028 \pm 6$$

$$Y = 140 \quad B = -1.028 \pm 6$$

$$Y = 150 \quad B = -1.028 \pm 6$$

roughly
center of
bed

again

$$X = 127 \text{ mm} \quad Y = 150 \text{ mm} \quad B = -1.028 \pm 6$$

$$Y = 140 \text{ mm} \quad B = -1.031 \pm 6$$

$$Y = 130 \text{ mm} \quad B = -1.0342 \pm 6$$

$$Y = 120 \text{ mm} \quad B = -1.036 \pm 6$$

$$Y = 110 \text{ mm} \quad B = -1.036 \pm 6$$

$$Y = 100 \quad B = -1.036 \pm 6$$

$$Y = 90 \quad B = -1.036 \pm 6$$

$$Y = 80 \text{ mm} \quad B = -1.0355 \pm 6$$

$$y = 70 \quad B = -1.03 \text{ 26}$$

$$y = 60 \quad B = -0.977 \text{ 26}$$

$$y = 50 \quad B = -0.7354 \text{ 26}$$

$$y = 40 \quad B = -0.4527 \text{ 26}$$

$$y = 30 \quad B = -0.275 \text{ 26}$$

$$y = 20 \quad B = -0.17 \text{ 26}$$

$$y = 10 \quad B = -0.1066 \text{ 26}$$

$$X = 127 \text{ mm} \quad y = 0 \quad B = -0.0673 \text{ 26}$$

уеган

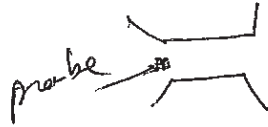
$$X = 127 \text{ mm} \quad y = 0 \text{ mm} \quad B = -0.0672 \text{ 26}$$

$$y = 10 \text{ mm} \quad B = -0.1062 \text{ 26}$$

$$y = 20 \text{ mm} \quad B = -0.1699 \text{ 26}$$

$$y = 30 \text{ mm} \quad B = -0.2738 \text{ 26}$$

$$y = 40 \quad B = -0.449 \text{ 26}$$



$$y = 50 \quad B = -0.7283 \rightarrow 6 \text{ (edge of poles.)}$$

$$y = 60 \quad B = -0.9712 \rightarrow 6$$

$$y = 70 \quad B = -1.0253 \rightarrow 6$$

$$y = 80 \quad B = -1.03 \rightarrow 6$$

$$y = 90 \quad B = -1.03 \rightarrow 6$$

$$y = 100 \quad B = -1.0298 \rightarrow 6$$

$$y = 110 \quad B = -1.028 \rightarrow 6$$

$$y = 120 \quad B = -1.0285 \rightarrow 6$$

$$y = 130 \quad B = -1.0286 \rightarrow 6$$

$$y = 140 \quad B = -1.0282 \rightarrow 6$$

$$27 \text{ mm } y = 150 \text{ mm } B = -1.0278 \rightarrow 6$$

$$N = 127 \text{ mm } y = 150 \text{ mm } I = 20.1 \text{ A, } B$$

$$B = -1.0279 \rightarrow 6$$

$$\text{for } I = 30.1 \text{ A } B = -1.53 \rightarrow 6$$

vertical scan; Gap width ≈ 5 cm

$X = 127$ mm $y = 150$ ^{mm} ~~mm~~

go for ~~X=130~~ $I = 20$ A

$I = 20$ A $X = 135$ mm $y = 150$ mm $V_s = -1.0369 \approx 6$
1/2 edge \rightarrow

$X = 132$ mm $y = 150$ $V_s = -1.0379 \approx 6$

$X = 129$ mm $y = 150$ $V_s = -1.0382 \approx 6$

$X = 126$ mm $y = 150$ $V_s = -1.0385 \approx 6$

$X = 123$ mm $y = 150$ $V_s = -1.0385 \approx 6$

$X = 120$ $y = 150$ $V_s = -1.0386 \approx 6$

$X = 118$ $y = 150$ $V_s = -1.0387 \approx 6$

$X = 116$ $y = 150$ $V_s = -1.0388 \approx 6$

1/2 edge \rightarrow $X = 114$ $y = 150$ $V_s = -1.039 \approx 6$

114 \rightarrow 135

go for vertical scan $X = 124.5$ $y = 150$ (dipole center) $I = 20$ A
 $X = 124.5$ $y = 150$ $V_s = -1.0388 \approx 6$

$$I = 25.1 \text{ A} \quad V_s = -1.2916 \text{ V}$$

$$I = 20.0 \text{ A} \quad V_s = -1.0359 \text{ V}$$

$$I = 15 \quad V_s = -0.781 \text{ V}$$

$$I = 10 \text{ A} \quad V_s = -0.534 \text{ V}$$

$$I = 5 \text{ A} \quad V_s = -0.277 \text{ V}$$

$$I = 0 \text{ A} \quad V_s = -0.017 \text{ V}$$

agar $I = 0 \text{ A} \quad V_s = -0.017 \text{ V}$

$$I = 5 \text{ A} \quad V_s = -0.266 \text{ V}$$

$$I = 10 \text{ A} \quad V_s = -0.518 \text{ V}$$

$$I = 15 \text{ A} \quad V_s = -0.7713 \text{ V}$$

$$I = 20 \text{ A} \quad V_s = -1.02 \text{ V}$$

$$I = 25 \text{ A} \quad V_s = -1.272 \text{ V}$$

$$I = 30 \text{ A} \quad V_s = -1.52 \text{ V}$$

$$\left. \begin{array}{l} X=0, \quad Y=0 \quad K=0.00344 \approx 6 \\ I=20 \end{array} \right\}$$

*
vary current $X=124.5 \quad Y=150$

$$I=0 \quad K=-0.0123 \approx 6.$$

$$I=5A \quad K=-0.2676 \approx 6$$

$$I=10A \quad K=-0.516 \approx 6.$$

$$I=15A \quad K=-0.771 \approx 6.$$

$$I=20A \quad K=-1.028 \approx 6.$$

$$I=25A \quad K=-1.2735 \approx 6.$$

$$I=30A \quad K=-1.5217 \approx 6.$$

$$I=30A \quad K=-1.5218 \approx 6.$$

$$I=25A \quad K=-1.287 \approx 6.$$

$$I=20A \quad K=-1.037 \approx 6.$$

$$I=15A \quad K=-0.7855 \approx 6.$$

$$I=10A \quad K=-0.5313 \approx 6$$

$$I=5A \quad K=-0.2747 \approx 6$$

$$I=0 \quad K=-0.0164 \approx 6$$

$$X=124.5 \quad Y=140 \quad B=-1.04 \approx 6$$

$$X=124.5 \quad Y=130 \quad B=-1.04 \approx 6$$

$$X=124.5 \quad Y=120 \quad B=-1.0409 \approx 6$$

$$X=124.5 \quad Y=110 \quad B=-1.041 \approx 6$$

$$X=124.5 \quad Y=100 \quad B=-1.0411 \approx 6$$

$$X=124.5 \quad Y=90 \quad B=-1.041 \approx 6$$

$$u \quad Y=80 \quad B=-1.0408 \approx 6$$

$$u \quad Y=70 \quad B=-1.355 \approx 6$$

$$X=124.5 \quad Y=60 \quad B=-0.9799 \approx 6$$

$$Y=50 \quad B=-0.74 \approx 6$$

$$Y=40 \quad B=-0.457 \approx 6$$

$$Y=30 \quad B=-0.2776 \approx 6$$

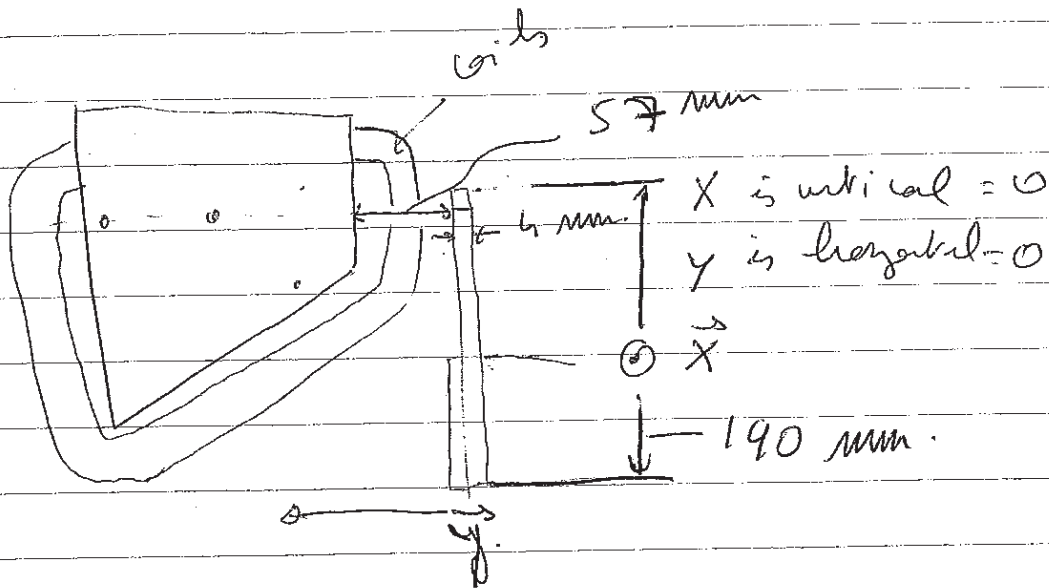
$$Y=20 \quad B=-0.1718$$

$$X=124.5 \quad Y=0 \quad B=-0.0684 \approx 6$$

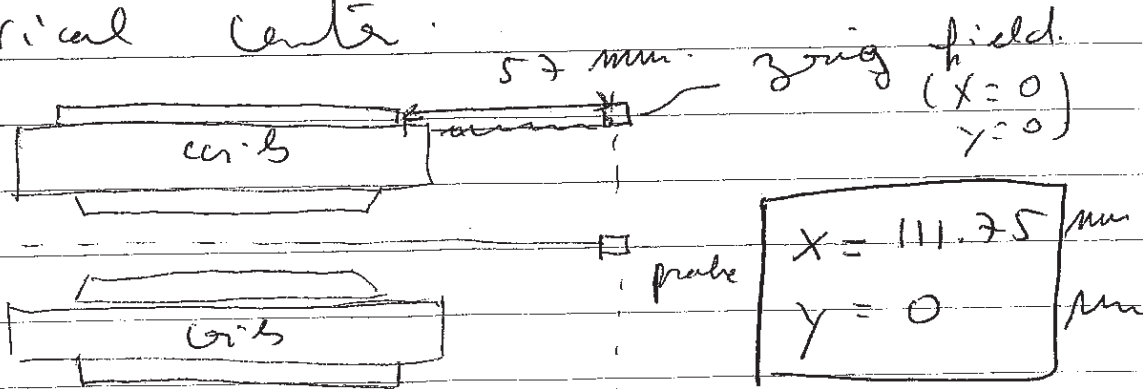
10-19-10

head #12 Tag # 42175?
(or b)

top view



vertical center



$X=0, Y=0 \quad B = -5 \cdot 10^{-5} \text{ gauss}$ power up

power on $I = 20 \text{ A} \quad X=0, Y=0 \quad B = -6 \cdot 10^{-5} \text{ gauss}$

0A $X = 111.75 \text{ mm} \quad Y = 0 \quad B = 0.0405 \text{ gauss}$

$$X = 111.25 \text{ mm} \quad y = 90$$

$$y = 100$$

$$y = 110$$

$$y = 120$$

$$y = 130$$

$$y = 140$$

$$y = 150$$

$$B = 1.0358 \text{ } \approx 6$$

$$B = 1.0362 \text{ } \approx 6$$

$$B = 1.0362 \text{ } \approx 6$$

$$B = 1.03625 \text{ } \approx 6$$

$$B = 1.0362 \text{ } \approx 6$$

$$B = 1.036 \text{ } \approx 6$$

$$B = 1.036 \text{ } \approx 6$$

$$\ast X = 111.25 \quad y = 150$$

$$I = 0 \text{ A} \quad B = 0.0076 \text{ } \approx 6$$

$$I = 5 \text{ A} \quad B = 0.262 \text{ } \approx 6$$

$$I = 10 \text{ A} \quad B = 0.52 \text{ } \approx 6$$

$$I = 15 \text{ A} \quad B = 0.7754 \text{ } \approx 6$$

$$I = 20 \text{ A} \quad B = 1.0313 \text{ } \approx 6$$

$$I = 25 \text{ A} \quad B = 1.2869 \text{ } \approx 6$$

$$I = 30 \text{ A} \quad B = 1.5389 \text{ } \approx 6$$

$$I = 30 \text{ A} \quad B = 1.5389 \text{ } \approx 6$$

$$I = 25 \text{ A} \quad B = 1.3 \text{ } \approx 6$$

$$I = 20 \text{ A} \quad B = 1.0484 \text{ } \approx 6$$

$$I = 15 \text{ A} \quad B = 0.7945 \text{ } \approx 6$$

$$I = 10 \text{ A} \quad B = 0.534 \text{ } \approx 6$$

$$I = 5 \text{ A} \quad B = 0.276 \text{ } \approx 6$$

$$I = 0 \text{ A} \quad B = 0.01386 \text{ } \approx 6$$

$$x = 111.75 \text{ mm} \quad y = 10 \text{ mm} \quad B = 0.0637 \quad \frac{1}{2} G$$

$T = 20 \text{ A}$

" "

$y = 20$	$B = 0.102$	$\frac{1}{2} G$
$y = 30$	$B = 0.1678$	$\frac{1}{2} G$
$y = 40$	$B = 0.2774$	$\frac{1}{2} G$
$y = 50$	$B = 0.4658$	$\frac{1}{2} G$
$y = 60$	$B = 0.755$	$\frac{1}{2} G$
$y = 70$	$B = 0.9828$	$\frac{1}{2} G$
$y = 80$	$B = 1.0312$	$\frac{1}{2} G$
$y = 90$	$B = 1.0358$	$\frac{1}{2} G$
$y = 100$	$B = 1.0362$	$\frac{1}{2} G$
$y = 110$	$B = 1.0363$	$\frac{1}{2} G$
$y = 120$	$B = 1.0363$	$\frac{1}{2} G$
$y = 130$	$B = 1.0362$	$\frac{1}{2} G$
$y = 140$	$B = 1.036$	$\frac{1}{2} G$
$y = 150$	$B = 1.036$	$\frac{1}{2} G$

$$x = 111.75 \text{ mm}$$

$y = 0$	$B = 0.0402$	$\frac{1}{2} G$
$y = 10$	$B = 0.0635$	$\frac{1}{2} G$
$y = 20$	$B = 0.1022$	$\frac{1}{2} G$
$y = 30$	$B = 0.1674$	$\frac{1}{2} G$
$y = 40$	$B = 0.2773$	$\frac{1}{2} G$
$y = 50$	$B = 0.4652$	$\frac{1}{2} G$
$y = 60$	$B = 0.755$	$\frac{1}{2} G$
$y = 70$	$B = 0.9828$	$\frac{1}{2} G$
$y = 80$	$B = 1.0312$	$\frac{1}{2} G$

$$X = 111.25 \quad y = 150 \quad B = 1.0343 \rightarrow 6$$

$$X = 108.25 \quad y = 150 \quad B = 1.0342 \rightarrow 6$$

$$X = 105.25 \quad y = 150 \quad B = 1.0343 \rightarrow 6$$

$$X = 102.25 \quad y = 150 \quad B = 1.0344 \rightarrow 6$$

P

$$X = 99.25 \quad y = 150 \quad B = 1.03435 \rightarrow 6$$

again decrease. Center appears at $x = 111.25$

$$X = 111.25 \quad y = 150 \quad B = 1.0339 \rightarrow 6$$

$$X = 111.25 \quad y = 0 \quad B = 0.04 \rightarrow 6$$

$$y = 10 \quad B = 0.0633 \rightarrow 6$$

$$y = 20 \quad B = 0.102 \rightarrow 6$$

$$y = 30 \quad B = 0.1671 \rightarrow 6$$

$$y = 40 \quad B = 0.2767 \rightarrow 6$$

$$y = 50 \quad B = 0.4643 \rightarrow 6$$

$$y = 60 \quad B = 0.7544 \rightarrow 6$$

$$y = 70 \quad B = 0.9818 \rightarrow 6$$

$$y = 80 \quad B = 1.0295 \rightarrow 6$$

$$y = 90 \quad B = 1.034 \rightarrow 6$$

$$y = 100 \quad B = 1.0344 \rightarrow 6$$

$$y = 110 \quad B = 1.0345 \rightarrow 6$$

* vertical scan.

button plate

$$I = 20 \text{ A}$$

$$X = 123.25$$

$$Y = 150$$

$$B = 1.0339 \rightarrow 6$$

$$I = 20 \text{ A}$$

$$X = 120.25$$

$$Y = 150$$

$$B = 1.0338 \rightarrow 6$$

$$X = 117.25$$

$$Y = 150$$

$$B = 1.034 \rightarrow 6$$

$$X = 114.25$$

$$Y = 150$$

$$B = 1.034 \rightarrow 6$$

$$X = 111.25$$

$$Y = 150$$

$$B = 1.0342 \rightarrow 6$$

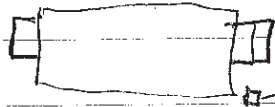
plot

I = 20

$$X = 111.25 \quad y = 43 \text{ mm}$$

\approx middle of core

$$I = 0 \text{ A} \quad B = 3.610^3 \rightarrow 6$$



probe.

$$I = 5 \text{ A} \quad B = 0.0822 \rightarrow 6$$



$$I = 10 \text{ A} \quad B = 0.1615 \rightarrow 6$$

$$I = 15 \text{ A} \quad B = 0.242 \rightarrow 6$$

$$I = 20 \text{ A} \quad B = 0.3227 \rightarrow 6$$

$$I = 25 \text{ A} \quad B = 0.4019 \rightarrow 6$$

$$I = 30 \text{ A} \quad B = 0.4793 \rightarrow 6$$

$$I = 0 \text{ A} \quad B = 2.8 \cdot 10^3 \rightarrow 6$$

$$I = 5 \text{ A} \quad B = 0.08 \rightarrow 6$$

$$I = 10 \text{ A} \quad B = 0.1613 \rightarrow 6$$

$$I = 15 \text{ A} \quad B = 0.242 \rightarrow 6$$

$$I = 20 \text{ A} \quad B = 0.3215 \rightarrow 6$$

$$I = 25 \text{ A} \quad B = 0.4 \rightarrow 6$$

$$I = 30 \text{ A} \quad B = 0.4783 \rightarrow 6$$

$$X = 111.25 \quad y = 120 \text{ mm} \quad B = 1.0345$$

$$y = 130 \quad B = \cancel{1.0345} \approx 6$$

$$y = 140 \text{ mm} \quad B = 1.0343 \approx 6$$

$$y = 150 \quad B = 1.0342 \approx 6$$

I = 2004

$$X = 111.25 \quad y = 0 \quad B = 0.040 \approx 6$$

$$y = 10 \quad B = 0.032 \approx 6$$

$$y = 20 \quad B = 0.1018 \approx 6$$

$$y = 30 \quad B = 0.1669 \approx 6$$

$$y = 40 \quad B = 0.2364 \approx 6$$

$$y = 50 \quad B = 0.4639 \approx 6$$

$$y = 60 \quad B = 0.754 \approx 6$$

$$y = 70 \quad B = 0.9816 \approx 6$$

$$y = 80 \quad B = 1.0294 \approx 6$$

$$y = 90 \quad B = 1.034 \approx 6$$

$$y = 100 \quad B = 1.0344 \approx 6$$

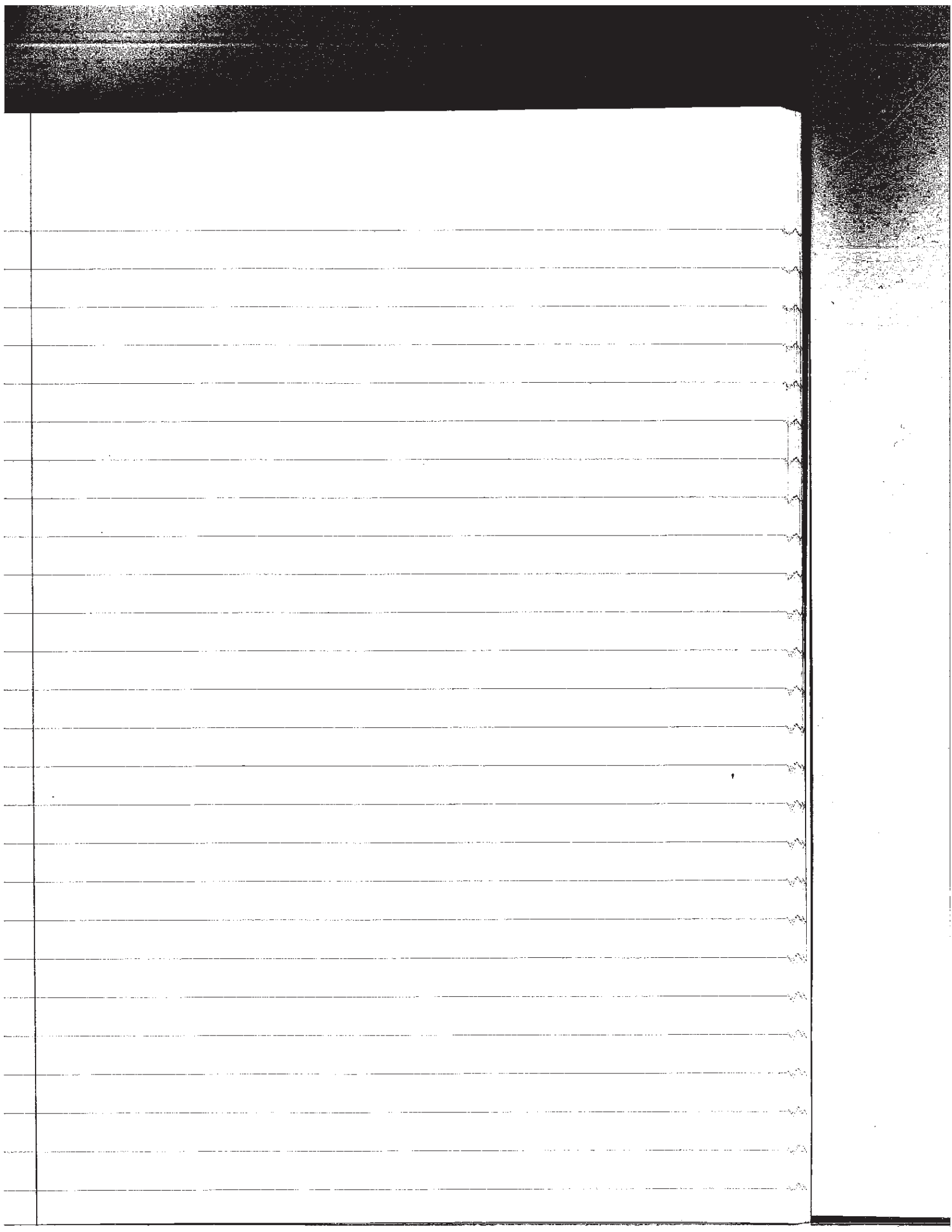
$$y = 110 \quad B = 1.0344 \approx 6$$

$$y = 120 \quad B = 1.0344 \approx 6$$

$$y = 130 \quad B = 1.0343 \approx 6$$

$$y = 140 \quad B = 1.0342 \approx 6$$

$$y = 150 \quad B = 1.0342 \approx 6$$



$$\left. \begin{aligned} I &= 20 \text{ A.} & X &= 111.25 & Y &= 0 \\ B &= 0.041 & \text{kg} \end{aligned} \right\}$$

$$I = 20 \text{ A} \quad X = 0 \quad Y = 0 \quad B = -6.58 \cdot 10^{-3} \text{ kg}$$

$$I = 0 \text{ A} \quad X = 0 \quad Y = 0 \quad B = -7.4 \cdot 10^{-4} \text{ kg}$$