

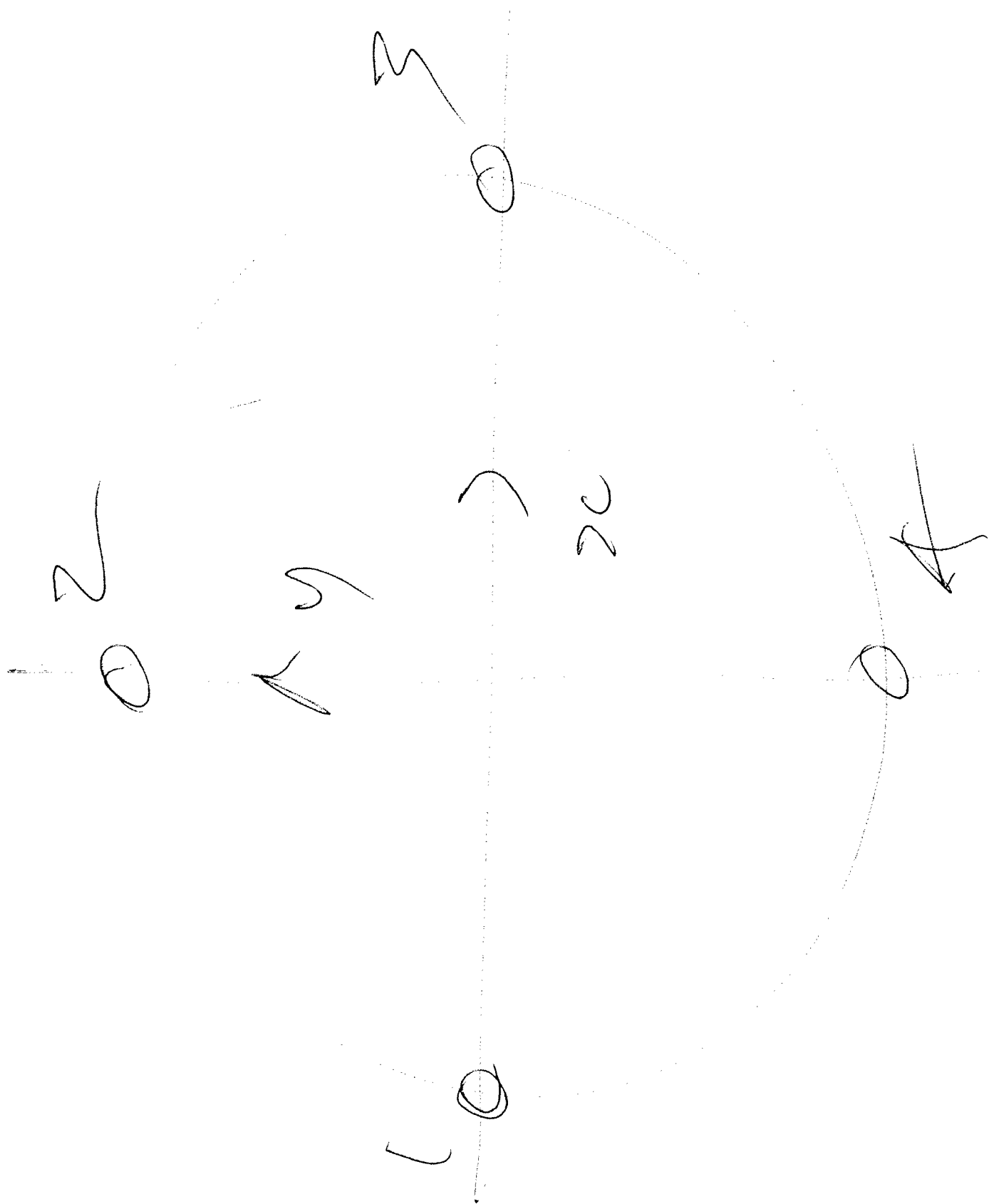
Illustration

PLATE HYDROEOL

Circle Geometry

$$R=1 \quad m=0 \quad n=0$$

$$S=10 \text{ m/s} \quad \theta=10^\circ$$



Mapping function

$$\alpha = x + \frac{a^2 x}{x^2 + y^2}$$

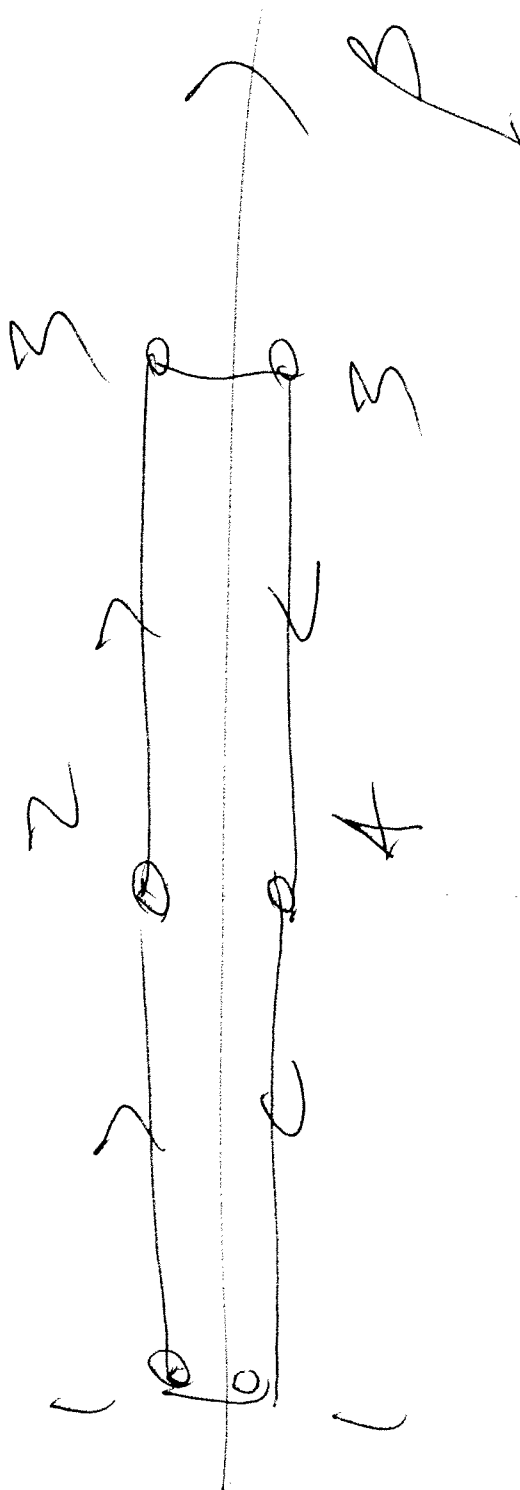
$$\beta = y - \frac{a^2 y}{x^2 + y^2}$$

$$Q^2 = x^2 + y^2$$

$$X = x + xc = 2x$$

$$\beta = y - y = 0$$

↑ α



THEORETICAL CASE

Circulation

$$P = 4\pi S R \sin \theta$$

$$= 4\pi \times 10 \times 1 \times \sin 10$$

$$\approx 21.8$$

$$C_{ft} \approx P_{TS}$$

$$\approx 1000 \times 218 \times 10$$

$$\approx 218 \text{ kJ}$$

UPT from PRESSURES

$$P = \rho \left(\frac{S^2}{2} - \frac{(\Delta\phi)^2}{2} \right)$$

$$UPT \leq P_{sc} \sin(\theta - \phi)$$

$$\phi = ZS + \frac{1}{24} \quad \square$$

$$\Delta \phi = ZS + \frac{1}{24} \quad \delta \quad \square$$

$$X = \sum \vec{r}_i \cos \theta + Y \sin \theta$$

$$\sum \vec{r}_i = -R \cos \gamma$$

$$Y = +R \sin \gamma$$

$$X_1 = -0.98$$

$$X_2 = +0.17$$

$$X_3 = +0.98$$

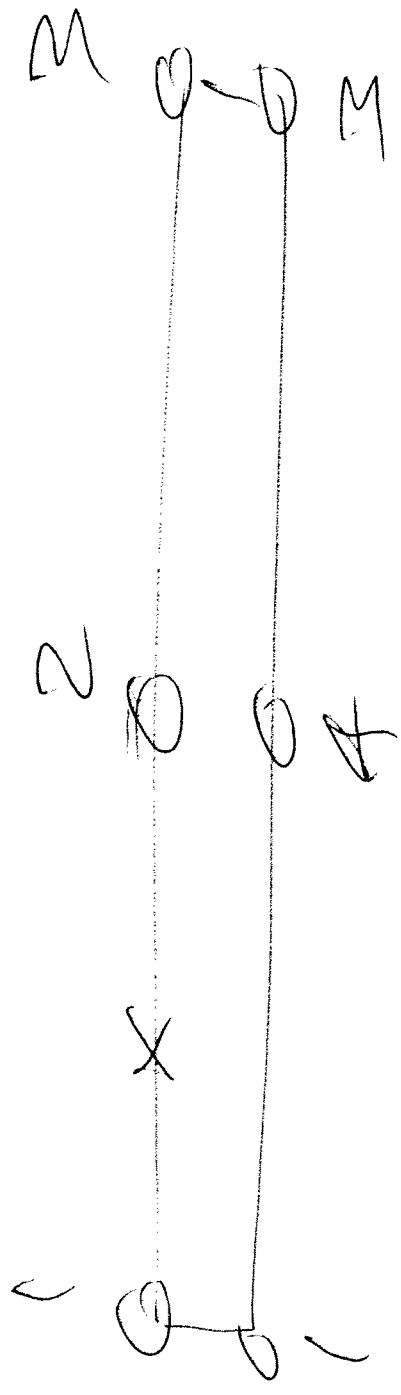
$$X_4 = -0.17$$

$$\beta_C = \Sigma$$

$$\Delta\sigma = \frac{\pi}{2}$$

1	0	x	2	0	x	3	0	0	3
0	x	0	0	x	0	0	x	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0

LEFT FROM PRESSURES



$$\Delta f = 25 \Delta x + \frac{1}{2\pi} \Delta \sigma$$

$$= 2410 \times 1.15 + \frac{1.8}{2\pi}$$

$$= 2773 + 5.45$$

$$= 2778.45$$

$$P = \rho_{1/2} \left[S^2 - \left(\frac{\Delta \phi}{\Delta c} \right)^2 \right]$$

$$= 1000 \left[10^2 - \left(\frac{+29.45}{2} \right)^2 \right]$$

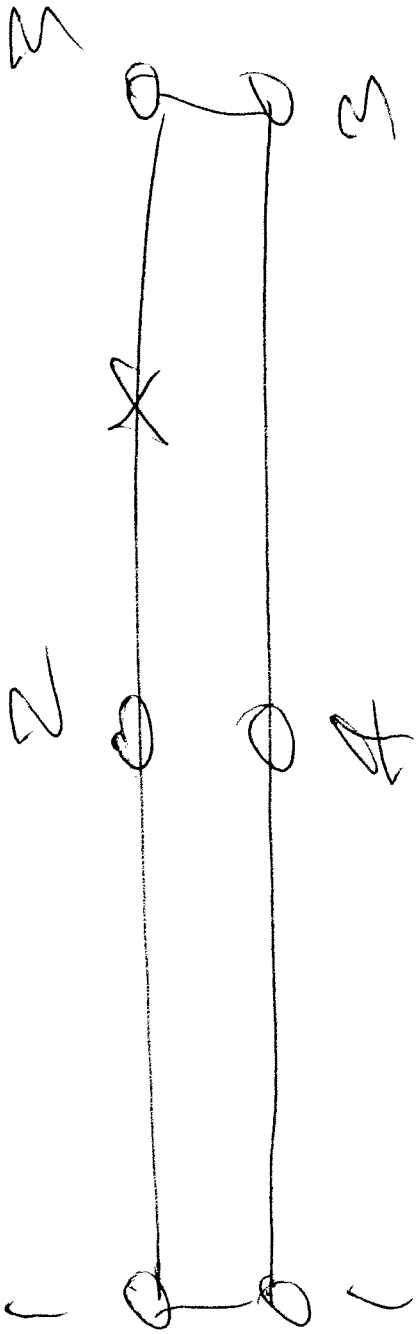
$$= 1000 \left[100 - 202 \right]$$

$$= -100150$$

$$P_{DC} \sum_m (\theta - \theta)$$

$$= -51000 + 2 \times \sum_m (270 - 10)$$

$$= +100 + 50$$



$$10 \frac{112}{17} + 10 \frac{112}{17} = 10 \frac{112}{17}$$

$$54.5 + 18.10 \times 0.18 = 54.5 + 3.258 = 57.758$$

$$54.5 + 2.914 = 57.414$$

$$59.12 + 1.65 = 60.77$$

$$P = \frac{1}{\sqrt{2}} \left[S^2 - \left(\frac{\Delta\phi}{\Delta c} \right)^2 \right]$$

$$= \frac{1000}{2} \left[10^2 - \left(\frac{21.6}{2} \right)^2 \right]$$

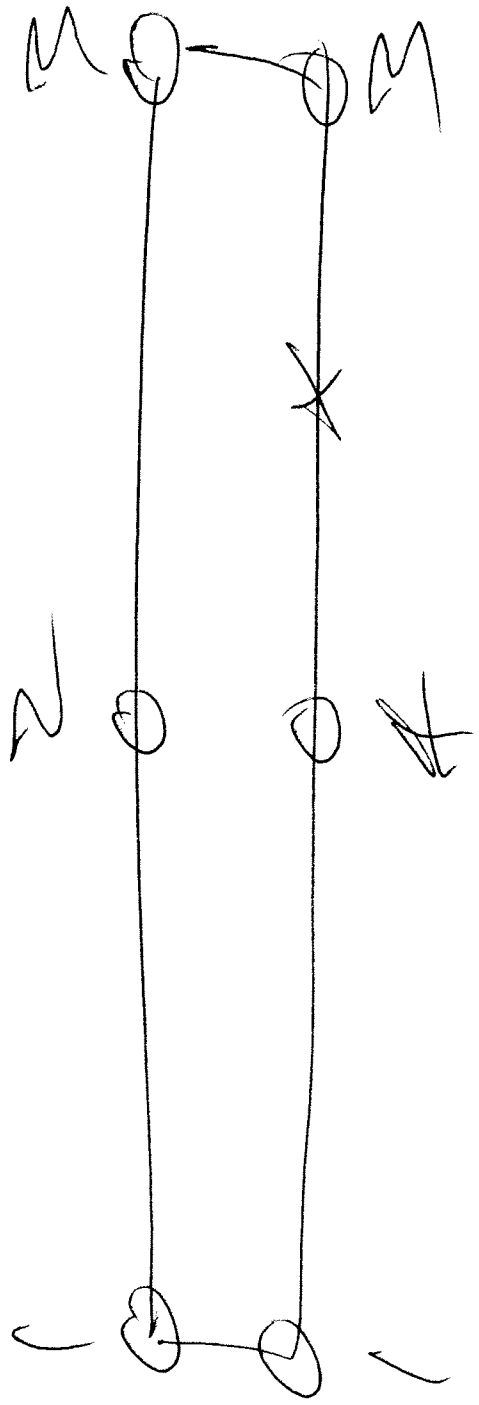
$$= \frac{1000}{2} (100 - 118)$$

$$= -9000$$

$$P_{\Delta C} \sum_m (\theta - \theta)$$

$$= -9000 \times 2 \times \sum_m (270 - 10)$$

$$= +17726$$



$$\Delta \phi = 25 \Delta x + \frac{1}{2} \Delta x^2$$

$$= -2 \times 10 \times 1.5 + 5.45$$

$$= -23 + 5.45$$

$$= -17.55$$

$$00511 + =$$

$$[22 - 001] \frac{2}{0001} \approx$$

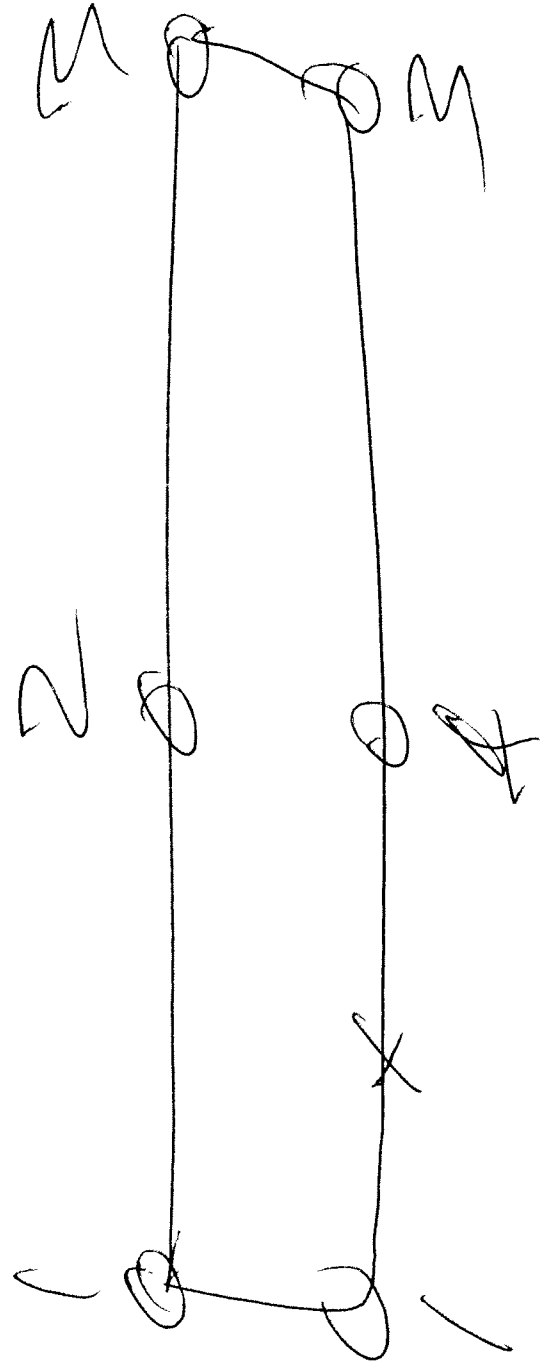
$$[2(\frac{2}{\sqrt{2}}) - (-175)] \frac{2}{10^2} \frac{2}{0001} \approx$$

$$[2(\frac{2\phi}{\Delta c}) - 5^2] \frac{2}{21} \approx 1$$

$$P_{AC} S_m(\theta - \theta)$$

$$= +11500 \times 2 \times S_m(90-10)$$

$$\approx +22650$$



$$\begin{aligned}
 \phi &= 25 \text{ kX} + \frac{17}{58} \text{ kS} \\
 &= -2 \times 10^4 \times 0.01 + 5.45 \\
 &= -160.2 + 5.45 \\
 &= -10.75
 \end{aligned}$$

$$0055 \pm \equiv$$

$$[62 - 00] \frac{2}{000} =$$

$$[2(\frac{2}{2} - (-0.75))] \frac{2}{000} \approx$$

$$P = \frac{1}{2} [8^2 - (86)^2]$$

7 DC Sm (~~0~~ - ~~0~~)

= + 355082 * S_{1A} (90-10)

= + 69921

$$\sum P_{dc} \sum_n (\textcircled{0} - \textcircled{0})$$

$\approx$

$$+10450 + 17726 + 22650 + 69928$$

$\approx$

$$\approx 10747 \text{ K}$$

DRAFT FROM PRESSURES

$$+ (-5/000 - 9000) * 2 * 60 (270 - 10) \\ + (+1/500 + 3/500) * 2 * 60 (90 - 10)$$

=

$$+17712 + 3126 + 3994 + 12829$$

$$= 37161 \text{ N}$$