

$$0.20 \times 0.10 = 0.02$$

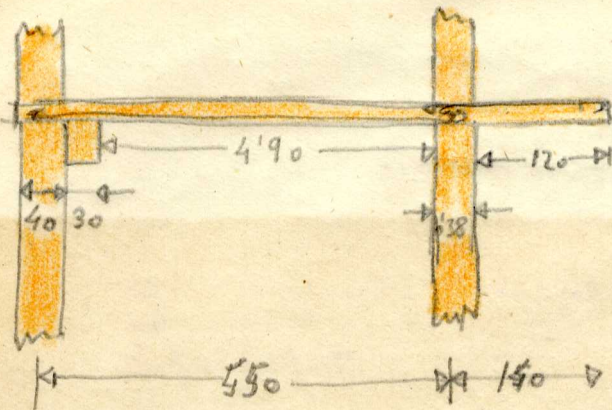
$$0.25 \times 0.05 = \frac{0.0125}{0.0325 \times 2400} = 78 \text{ K.}$$

$$0.25 \times 0.15 = \frac{0.0375 \times 1600}{1} = 60 \text{ "}$$

$$P. m. l. viga = 138 \text{ K.}$$

$$\frac{138 \times 1000}{35} = 3942.0 \text{ K. m}^2 \text{ de vigo}$$

$$500 \times 0.35 = 175 \text{ K. u. l. v. p. i. o}$$



$$\frac{P l^2}{8} = \frac{175 \times 5.5^2}{8} = \frac{175 \times 30.25}{8} = \frac{5294}{8} = 661.75 \text{ K. m.}$$

$$\frac{P l^2}{10} = \frac{5294}{10} = 529.4 \text{ K. m.}$$

$$\frac{P l^2}{12} = \frac{5294}{12} = 441.17 \text{ K. m.}$$

$$P l \times \frac{l}{2} = 175 \times 1.40 \times \frac{1.4}{2} = 245 \times 0.7 = 171.5 \text{ K. m.}$$

$$175 \times 2.20 \times \frac{2.2}{2} = 385 \times 1.10 = 423 \text{ K. m.}$$

$$\alpha = \sqrt{\frac{M}{I}} = \sqrt{\frac{662}{0.35}} = \sqrt{1.890} = 44$$

$$\beta = \alpha \cdot b = 44 \times 0.35 = 15.40$$

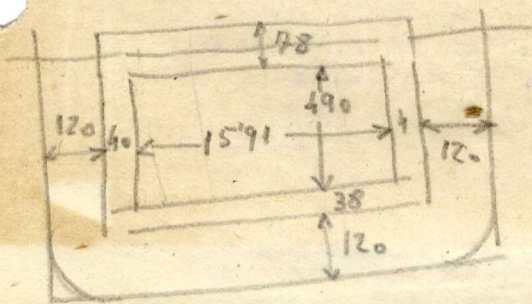
Para  $\begin{matrix} 1200 \\ 40 \end{matrix}$

$$h' = 0.411 \times 44 = 18.02 \text{ cm.}$$

$$J = 0.228 \times 15.4^3 = 3.59 \text{ cm}^2 \quad \phi 22 \text{ mm} = 3.8 \text{ cm}^2$$

$$p = 0.333 \times 18.02 = 6.00 \text{ cm.}$$

$$20 \text{ mm } \phi = 3.14 \text{ cm}^2 \quad \text{"} \quad 22 \text{ mm } \phi = 3.8$$



$$\frac{15.91}{0.35} = 45.4$$

$$\frac{0.38 + 4.90 + 0.38 + 1.20}{0.35} = \frac{6.86}{0.35} = 19.6$$

$$\boxed{P_i = 1}$$

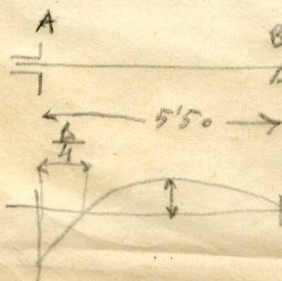
$$46 \text{ varillas de } 6.06 = 4.90 + 0.38 + 0.38 = \boxed{6.00}$$

$$2 \times 2 \text{ " de } 1.60 = 0.40 + 1.20 = \boxed{2.00}$$

$$\frac{L}{4} = \frac{5.5}{4} = 1.375 \rightarrow 4.8 \text{ " de } 3.10 = 0.40 + 1.20 + 1.50 = \boxed{3.50}$$

$$\boxed{P_i = 2}$$

$$46 \text{ varillas de } 16.00 = \boxed{6.00}$$



$$M_A = \frac{P l^2}{8} = 661 \text{ K. m.}$$

$$M_{AB} = \frac{9 P l^2}{128} = \frac{9 \times 5294}{128} = \frac{47.646}{128} = 372 \text{ K. m.}$$

$$\frac{L}{4} = \frac{5.5}{4} = 1.375 \text{ m.}$$