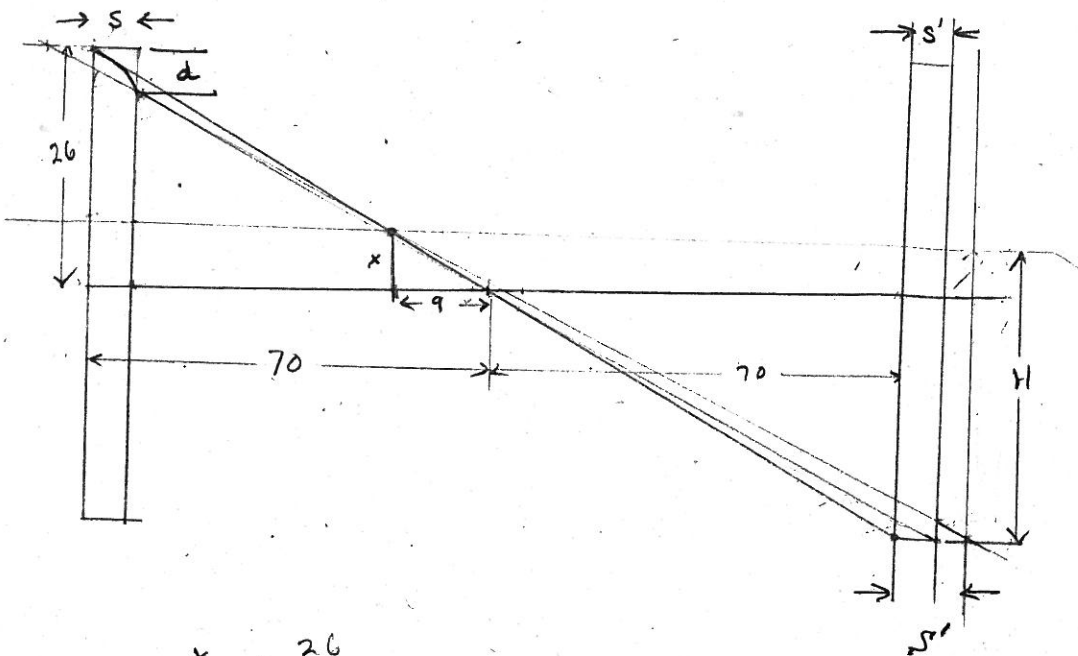


C-C type pinner

(1)



$$\frac{x}{9} = \frac{26}{70}$$

$$x = \frac{9 \times 26}{70} = 3.34 \text{ m/m}$$

$$d = 1.455 \text{ m/m}$$

$$s = 2.095 \text{ m/m}$$

$$\frac{26-d}{70-s} = \frac{26}{70+s'}$$

$$\frac{H}{70+9+s'} = \frac{26-d-x}{70-9-s}$$

Assume $s'=s$ $\therefore H = \frac{(70+9+2.095)(26-1.455-3.34)}{70-9-2.095}$

$$= \frac{(81.095)(21.205)}{(58.905)}$$

$$H = 29.20 \text{ m/m}$$

$$H-x = 25.86 \text{ m/m}$$

26.000
~~4.795~~
 21.205
 1.455
 3.89
 4.795

61500
~~2.095~~
 58.905

$$\frac{y'}{y} = \frac{70 + 7 + S'}{70 - 7 - S'}$$

$$S' = \frac{y'^2}{2R}$$

$$S' = S \frac{y'^2}{y^2}$$

$$S' = S \left(\frac{77 + S'}{63 - S'} \right)^2$$

$$S' = 1.85$$

$$\frac{S'}{S} = \left(\frac{77 + S'}{63 - S'} \right)^2$$

$$= \left(\frac{77 + 1.8(2.02)}{60.98} \right)^2 = \left(\frac{77 + 3.64}{61} \right)^2 = \left(\frac{80.64}{61} \right)^2 = 1.75$$

$$S' = 1.76 S$$

$$\frac{S'}{S} = \frac{77 + 3.56}{61} = 1.745$$

$$H = \frac{[77 + 1.745(2.02)] [26 - 1.745(2.60)]}{60.98}$$

$$H = \frac{(80.56)(21.945)}{60.98} = 29 \text{ m/m}$$

$$H - x = 29 - 2.60 = 26.40$$

(3)

$$\frac{y'}{y} = \frac{70+9+S'}{70-9+S}$$

$$S' = \frac{y'^2}{2R} \approx \frac{y^2}{2R} \left(\frac{70+9+2.1}{70-9-2.1} \right)^2$$

$$S' \approx S (1.89)$$

$$\frac{y'}{y} = \frac{79 + (1.89)(2.095)}{61 - 2.095} = \frac{79 + 3.97}{58.9} = \frac{82.97}{58.9} = 1.41$$

$$S' = S (1.98)$$

$$\frac{y'}{y} = \frac{79 + (1.98)(2.095)}{58.9} = \frac{79 + 4.17}{58.9} = 1.41$$

$$S' = 1.98 S$$

$$H = \frac{79 + (1.98)(2.095)(21.205)}{(58.905)} = 30 \text{ m/m}$$

$$H - X = 30 - 3.34 = 26.66$$

$$26(70-S) = (26-d)(70+S)$$

$$1820 - 26S = 1820 - 70d + 26S - dS$$

$$dS - 52S = -70d$$

$$(52-d)S = 70d$$

$$S = \frac{70d}{52-d}$$

$$= \frac{(70)(1.455)}{50.545} = 2.02$$