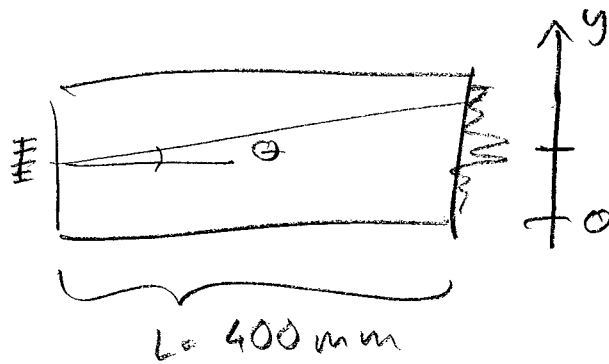


Pbs 6-7



Gitterkonstante

$$a(\sin\theta_i + \sin\theta_m) = m\lambda$$

Man $\lambda = \frac{\lambda_0}{n}$ där $\lambda_0 = \text{vakuum}$

Antag att:

m	y	
-2	9	46
-1	57	74
0	100	101
1	143	127
2	190	154

$$\frac{n=1}{h_1 = y_1 - y_0 = 43 \text{ cm}} \Rightarrow \frac{\lambda_0}{a} = \sin\left(\arctan \frac{h_1}{L}\right) = 0,2102$$

$$h_2 = y_2 - y_0 = 90,5 \text{ cm} \Rightarrow \frac{\lambda_0}{a} = \frac{1}{2} \sin\left(\arctan \frac{h_2}{L}\right) = 0,2061$$

Med $n=1,6$

$$\frac{n}{h_1 = y_1 - y_0 = 26,5 \text{ cm}} \Rightarrow \frac{\lambda_0}{n a} = 0,1314$$

$$h_2 = y_2 - y_0 = 54 \text{ cm} \Rightarrow \frac{\lambda_0}{n a} = 0,1303$$

$$\Rightarrow n = \frac{0,21}{0,13} = \underline{\underline{1,6}}$$