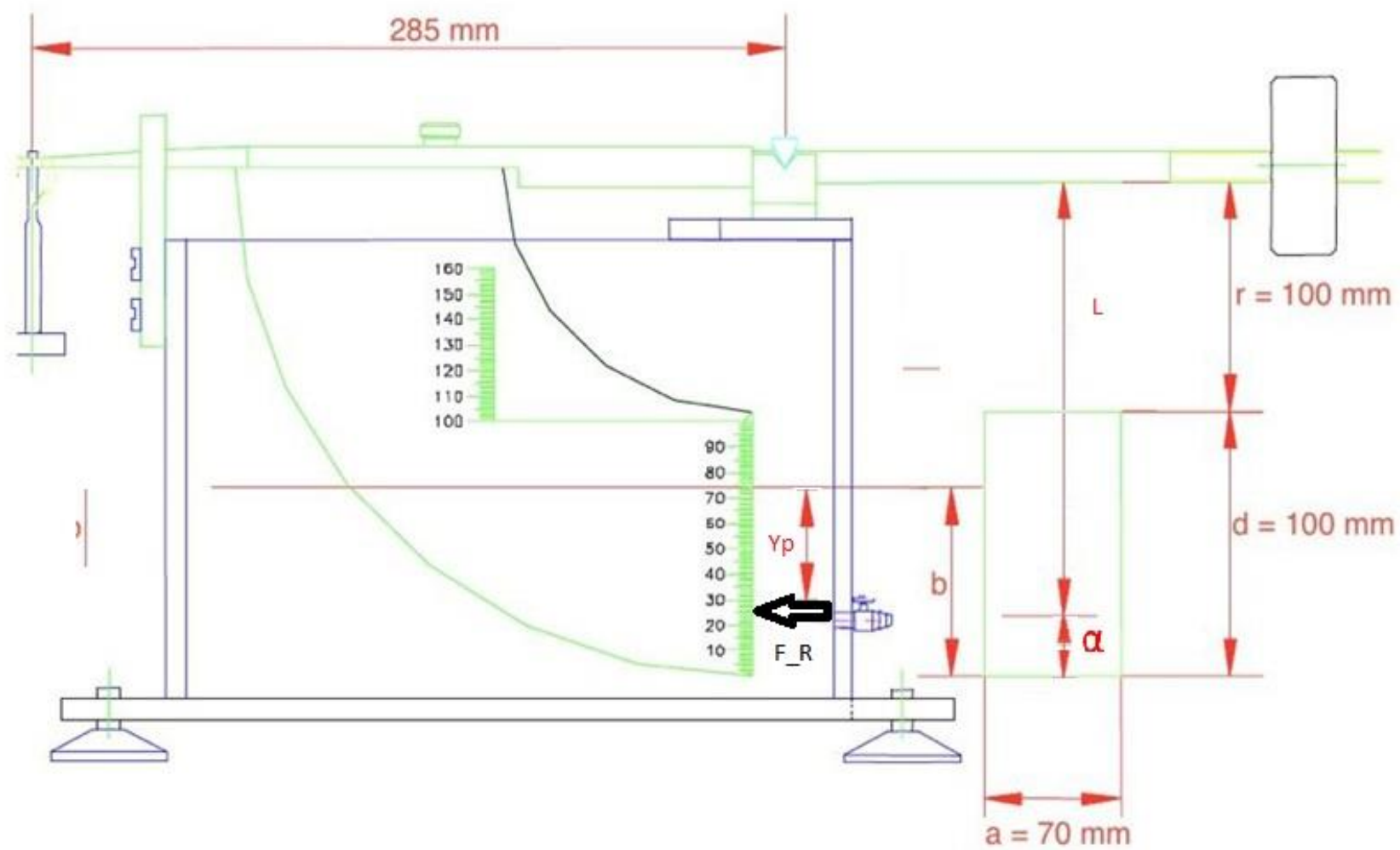




AUM

American University Of The Middle East

Center of Pressure
and Hydrostatic Force



b (m)	Mass (kg)	FR (N)	yp th (m)	L (m)	α (m)	Yp Exp (m)	E%
0.1	0.202						
0.09	0.162						
0.08	0.132						
0.07	0.102						
0.06	0.077						

$$F_R = \frac{\rho g a b^2}{2}$$

$$y_{p\ th} = \frac{2b}{3}$$

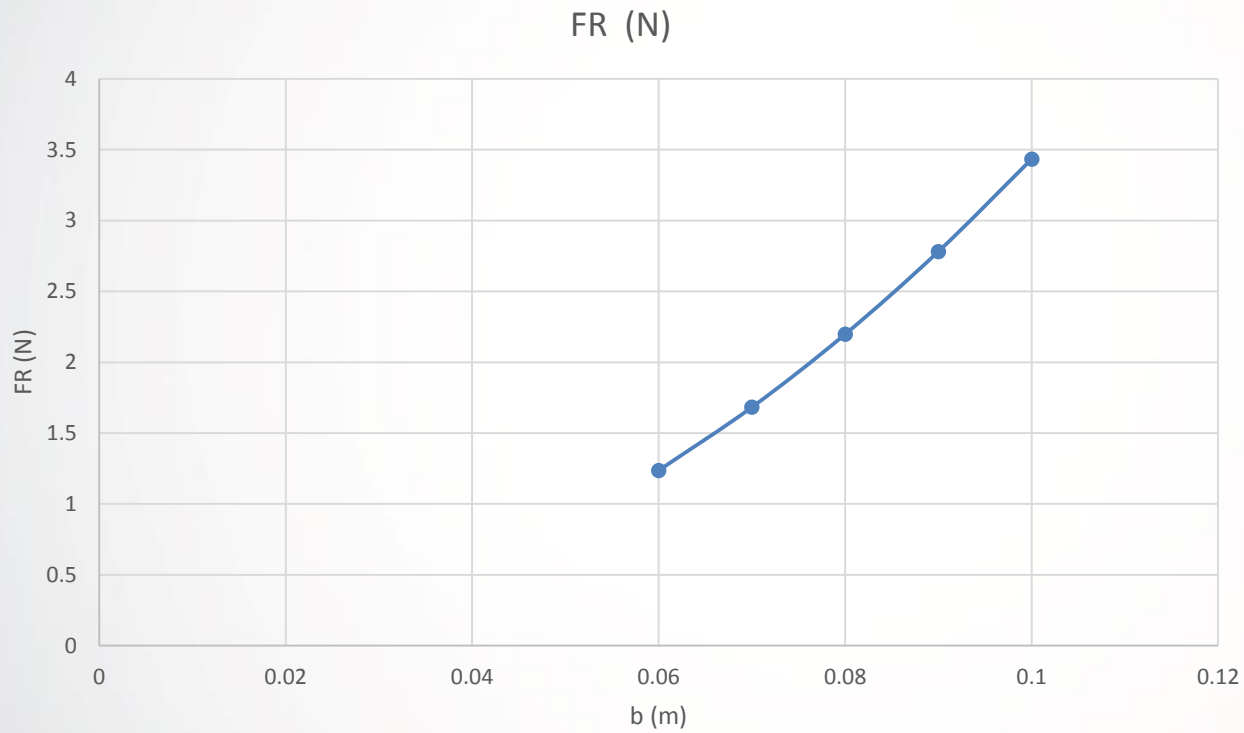
$$a = 0.07m$$

$$L = \frac{0.285mg}{F_R}$$

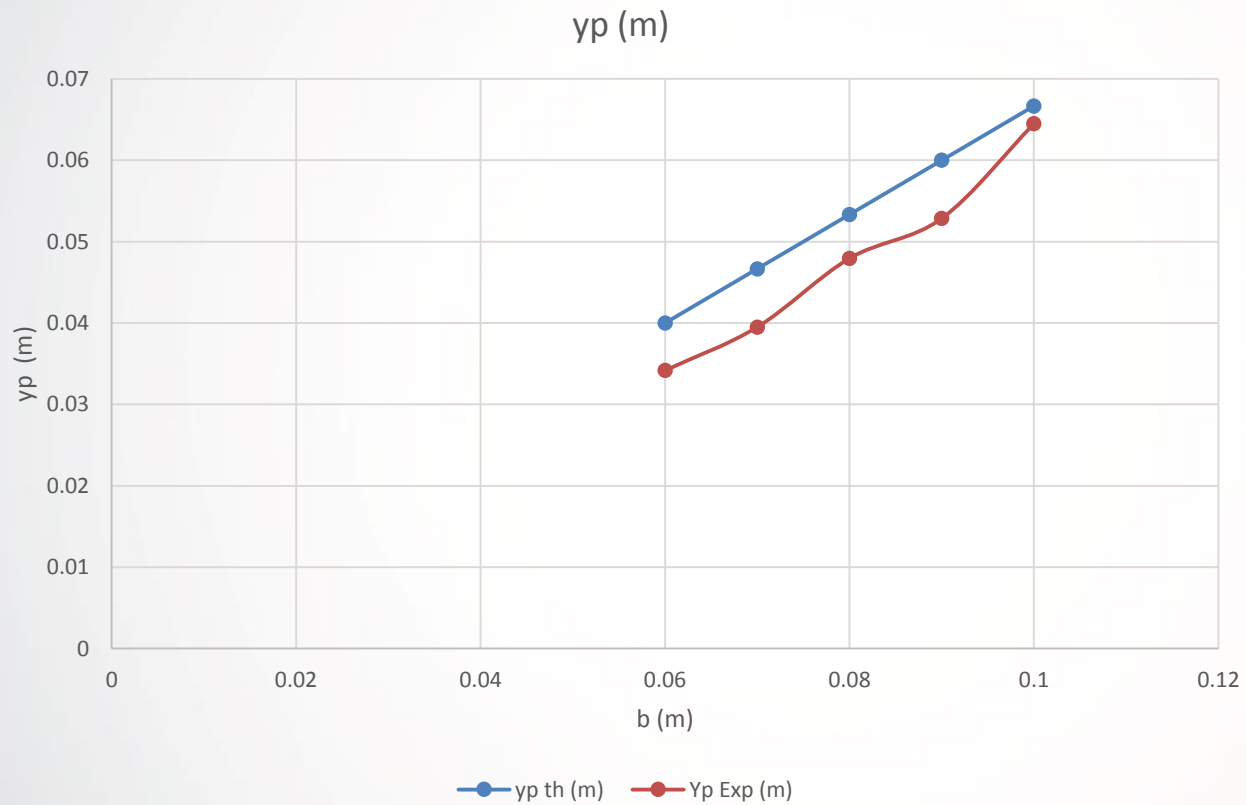
$$\alpha = 0.2 - L$$

$$y_{p\ Exp} = b - \alpha$$

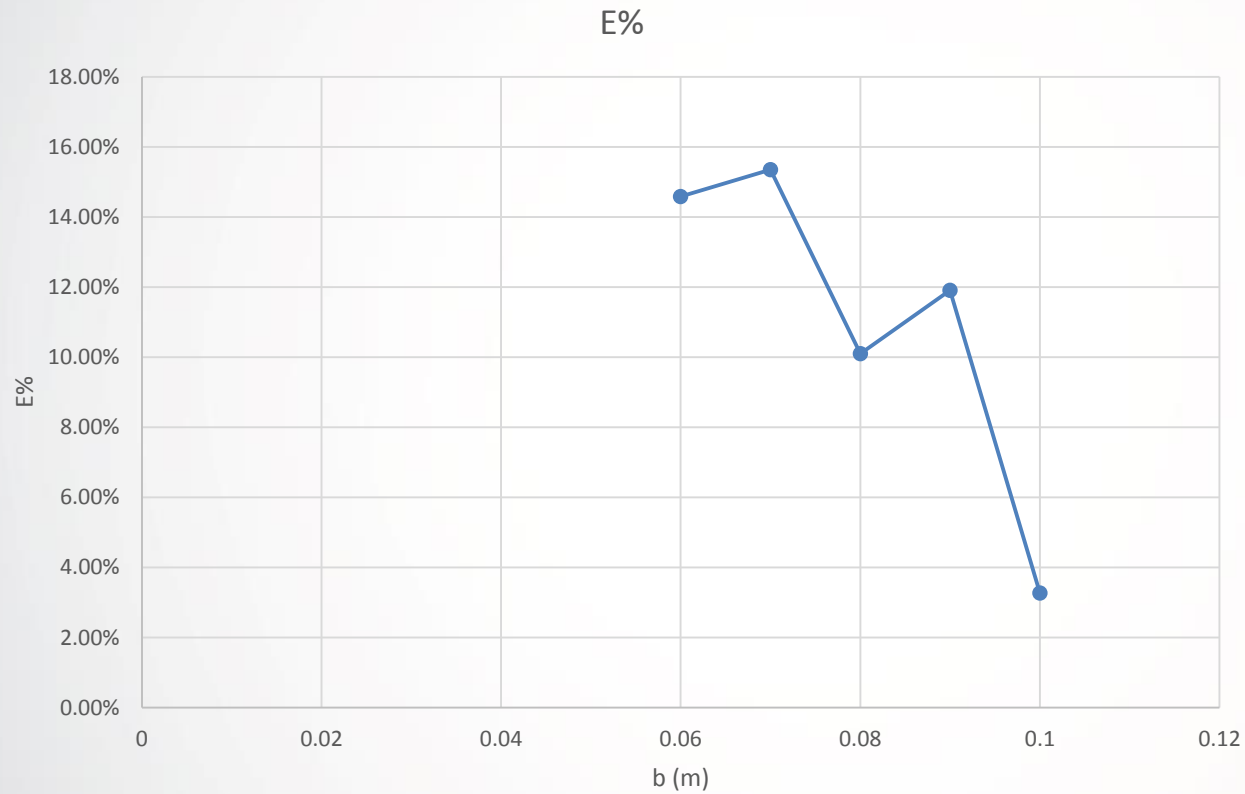
$$\%E = \frac{|Experimental - Theoretical|}{Theoretical} \times 100$$



b(m)	Mass (kg)	F_R (N)	$Y_{p,th}$ (m)	L(m)	α (m)	$Y_{p,Exp}$ (m)	Error %
0.1							
0.09							
0.08							
0.07							
0.06							



b(m)	Mass (kg)	F_R (N)	$Y_{p,th}$ (m)	L(m)	α (m)	$Y_{p,Exp}$ (m)	Error %
0.1							
0.09							
0.08							
0.07							
0.06							



b(m)	Mass (kg)	F _R (N)	Y _{p,th} (m)	L(m)	α (m)	Y _{p,Exp} (m)	Error %
0.1							
0.09							
0.08							
0.07							
0.06							