12.0 # Foundation Loading Data

Live load transferred to foundation

Live Load on roof	L_r	=	1.20	kPa
Develoed area of roof	A_r	=	8.20	m^2
Total Live Load	L_r	=	9.85	KN
Circumference of Tank	C	=	10.08	m
Live Load transferred to Foundation	L_L	=	0.98	KN/m

Dead load of Acting on Foundation

Total Dead Load acting on shell	$(W - W_b)$	W_D	=	76.97	KN
Dead Load Transferred to Foundation		D_L	=	7.6	KN/m

Operating & Hydrostatic Test Loads

Self Weight of Tank	W	=	83.64	KN
Weight of Fluid in Tank at Operating Conditions	W_o	=	445.21	KN
Weight of Water in Tank at Hydrotest Conditions	W_H	=	374.76	KN
Uniform Load Operating Condition = Self wt.+ fluid	W_o	=	65.35	KN/m^2
Uniform Load Hydrotest Condition = Self wt.+ water	W_H	=	56.64	KN/m^2

Wind Load Transferred to Foundation

Moment due to wind load	M_w	=	85.98	KN-m
Base Shear due to wind load	F_w	=	$M_w \times H_T/2$	
		=	28.11	KN
Reaction due to wind load	R_w	=	$M_w / \pi \times D^2$	
		=	2.66	KN/m

Seismic Load Transferred to Foundation

Moment due to seismic load	M_s	=	165.89	KN-m
Base Shear due to seismic load	$F_s = V$	=	74.15	KN
Reaction due to seismic load	R_S	=	$M_S / \pi \times D^2$	
		=	5.12	KN/m

PLEASE CONFIRM REACTION DUE TO SEISMIC LOAD (18 KN/M) THAT SEEMS VERY LOW. THIS REACTION SHOULD BE = 4*Ms / (3.14*D*D) = 4*165.89 / 3.14*3.2*3.2 = 20.5 KNM