Quote/Order #:		Date:	February 18, 2016
Customer:	HP Hood		
Reference:	20K Silo	Product:	
Designer:	FSK		

State: Maine
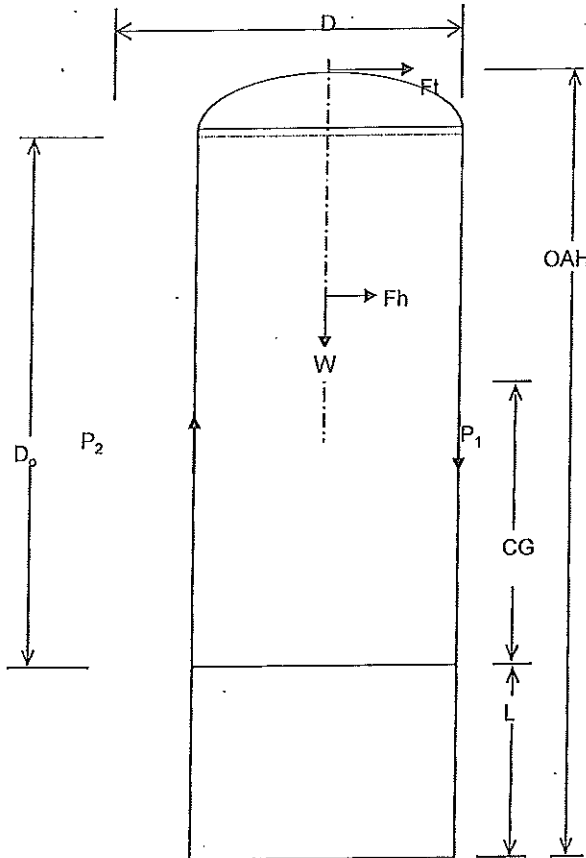
Liner Diameter (ID) = 120 in
Insul Skin (OD)= 126.5
OD of Base Ring (Db) = 129 in
Height (OAH) = .462 in
C.G. (OAH-L)/2 = 218.5 in
Skirt Height (L) = 25 in
Product Ht (Dp) = 420 in
Empty Weight Lining (Wl) = 18,000 lbs
Empty Weight Total (We) = 18,000 lbs
Capacity (V) = 20,000 gal
Int. or Ext. Pressure (Pr) = 0 psi
Spec Gravity (SG) = 1
Number of Anchors (N) = 7
Size of Anchor Bolts: 1"
Yield Strength (Fy) = 30,000 psi
Modulus (E) = 28,000,000 psi
Prod Weight (Wp) = 166,840 lbs
Total Weight (Wt) = 184,840 lbs
Total Weight on Lining (Wℓ) = 184,840 lbs
Silo Skin Type: Light Sheathing or With Slip Joint

Weight per Foot (w) lb/ft = 5,037.66
Moment of Inertia (Im) ir^4 = 71,251 $= \pi r^3 t$

Gravitation Const (g) in/sec^2 = 386

$= 1.79 \sqrt{wH^4/EImg}$

Fundamental Period (sec)= 0.0068
T < .06, Tank is a Rigid Structure

http://www.zipinfo.com/search/zipcode.htm
http://earthquake.usgs.gov/designmaps/us/application.ph

SEISMIC LOADING INPUT: 2009   INTERNATIONAL BUILDING CODE

USE THE LINK BELOW, ENTER A ZIP CODE OR COORDINATES FOR SEISMIC VALUES

GET USGS DATA.jar   <=CLICK THE LINK   Zip Code =>   04102

Silo is considered a   "Non-Building Structure"

Importance Factor	(I)	1.00
Site Class Note:(Additional Info. Is needed for Site Class 'F')		D
Spectral Response Acceleration for short periods (5% damped)	(Ss)	0.317
Spectral Response Acceleration for 1-second periods (5% damped)	(S1)	0.077
Design Response Acceleration for short periods (5% damped)	(SDs)	0.327
Design Response Acceleration for 1-second periods (5% damped)	(SD1)	0.123
Site Coefficient	(Fa)	1.547
Site Coefficient	(Fv)	2.400
Max. Spectral Response Acceleration for short periods	(Sms)	0.490
Max. Spectral Response Acceleration for 1-second periods	(Sm1)	0.185
Base Shear (Full) =.3SdsIWt	(Vs)	46,066 lbs.
Base Shear (Empty) =.3SdsIWe	(Ve)	1,766 lbs.
Base Shear (Full) Lining Only = .3SdsIWℓ	(Vs)	46,066 lbs.

WIND LOADING INPUT: ASCE /SEI 7-10