


ANALYSIS OF BASE ANCHORED HARD CONNECTED PIPE SYSTEM (CONCENTRATED HYD LOAD AT BASE)

SUITABLE FOR EXPANSIVE AND CONTRACTIVE SYSTEMS

		KINETICS NOISE CONTROL, INC. 6300 IRELAN PLACE DUBLIN, OHIO 43017 614-889-0480																
Project: BASE ANCHORED HARD CONNECTED (TYPE 1)		3/12/2006																
Riser: TYPICAL RISER																		
Note: Supports are assumed to be at floor level, if at ceiling level, identify as being on floor above																		
Expansion Coef 7.60E-05 in/ft/degF																		
Installed Temp 70																		
Oper Temp 91																		
Anchor Elevation 0 (If Anchored System)																		
Anchor Type FX (Fixed-FX or Floating FL)																		
Static Head 0 (Ft at top of pipe)																		
Water Supported Y (Y or N) Is water column weight supported by Riser?																		
Hyd Lift @ Top Y If an Intermediate Riser section with telescoping Coupling at top, Enter "N" otherwise enter "Y"																		
Liq or Gas Piping L (L or G) Is the pipe filled with water or gas?																		
Steam Pressure 0 (Enter a value only if steam pressure is present (psi))																		
Indicate Support locations with a "Y" and guide locations with a "G" in the Support Location Column. Restrained Spring Isolators such as FRS are indicated with an "R" under "Support/Res" + Force loads are Tension, - Force loads are Compression (in pipe) *- indicates no supports above this point																		
Floor (Ref)	Support Loc	Res	Floor Ht Ft	Floor Elev Ft	Pipe Size in	Local Pipe Wt (lb)	Local Liquid Wt (lb)	Init Support Pt Load From Pipe Wt (Lb)	Hyd Thrust Pipe Lift is + (lb)	Spring Rate Lb/in	Init Defl In	Init Supt Pt Force Lbs	Oper Sprng Defl or Disp + is Down in	Oper Supt Pt Load Lbs	Init Tens Pipe Force Lbs	Oper Tens Pipe Force Lbs	Initial Pipe Stress PSI	Combined Burst + Tens Oper Stress PSI
Roof				82				0	0			0		0	0	0		
10	-			82				0	217			0	-0.13	0	0	0		
9	Y		10.00	72	8			571	0	600	1.00	600	0.89	531	315	462	37	72
8			10.00	62	8			0	0			0		0	29	177	3	95
7	Y		10.00	52	8			571	0	600	1.00	600	0.92	550	344	442	41	149
6			10.00	42	8			0	0			0		0	58	156	7	187
5	Y		10.00	32	8			690	621	750	1.00	750	0.95	712	523	1203	62	273
4			10.00	22	10			0	0			0		0	118	798	10	363
3	Y		10.00	12	10			810	0	1000	0.75	750	0.73	731	463	1124	39	427
2			10.00	2	10			0	0			0		0	58	719	5	479
1	A		2.00	0	10			81	-2796			23	0.00	2158	0	0	0	487
0				0				0	0			0		0	0	0		

Critical Buckling Load for piping -23254 lb

SAMPLE 8 STORY RISER WITH ANCHOR AT BASE AND NON-VERTICALLY RESTRAINED ISOLATORS ON 3, 5, 7 AND 9TH FLOORS

NOTE LOW STRESSES IN PIPE AND CONCENTRATED HYDRAULIC LOAD (2158 LB) AT BOTTOM ANCHOR LOCATION

ANALYSIS OF TYPE 1 BASE ANCHORED HARD CONNECTED RISER

PAGE 1 OF 1



DUBLIN, OHIO, USA • MISSISSAUGA, ONTARIO, CANADA

Toll Free (USA only): 800-959-1229
 International: 614-889-0480
 Fax: 614-889-0540
 World Wide Web: www.kineticsnoise.com
 Email: sales@kineticsnoise.com

DOCUMENT:

R2.1

