

## MAXIMUM ALLOWABLE RESTRAINT SPACING – STANDARD STEEL PIPE

Table A6.1-1; Max Allowable Restraint Spacing for Non-Insulated Standard Steel Pipe – Empty

Seismic Coefficient $C_s$				0.25	0.50	0.75	1.00	1.50	2.00
Seismic Hazard Level SHL				D	C	B	A	-----	-----
Pipe Size (in)	Pipe O. D. (in)	Pipe I. D. (in)	Pipe Weight $w_p$ (lb/ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)
3/4	1.050	0.824	1.1	40	30	30	20	20	20
1	1.315	1.049	1.7	40	40	30	30	30	20
1 1/4	1.660	1.380	2.3	40	40	40	40	30	30
1 1/2	1.900	1.610	2.7	40	40	40	40	30	30
2	2.375	2.067	3.6	40	40	40	40	40	40
2 1/2	2.875	2.469	5.8	40	40	40	40	40	40
3	3.500	3.068	7.6	40	40	40	40	40	40
3 1/2	4.000	3.548	9.1	40	40	40	40	40	40
4	4.500	4.026	10.8	40	40	40	40	40	40
5	5.563	5.047	14.6	40	40	40	40	40	40
6	6.625	6.065	19.0	40	40	40	40	40	40
8	8.625	7.981	28.5	40	40	40	40	40	40
10	10.750	10.020	40.4	40	40	40	40	40	40
11	11.750	11.000	45.5	40	40	40	40	40	40
12	12.750	12.000	49.5	40	40	40	40	40	40
14	14.000	13.250	54.5	40	40	40	40	40	40
16	16.000	15.250	62.5	40	40	40	40	40	40
18	18.000	17.250	70.5	40	40	40	40	40	40
20	20.000	19.250	78.5	40	40	40	40	40	40
22	22.000	21.250	86.5	40	40	40	40	40	40
24	24.000	23.250	94.5	40	40	40	40	40	40

## MAXIMUM ALLOWABLE RESTRAINT SPACING – STANDARD STEEL PIPE PAGE 1 of 4

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RELEASED ON: 07/30/2008



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Table A6.1-2; Max Allowable Restraint Spacing for Non-Insulated Standard Steel Pipe Filled – Water

Seismic Coefficient $C_s$				0.25	0.50	0.75	1.00	1.50	2.00
Seismic Hazard Level SHL				D	C	B	A	----	----
Pipe Size (in)	Pipe O. D. (in)	Pipe I. D. (in)	Pipe Weight $w_p$ (lb/ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)
3/4	1.050	0.824	1.4	40	30	30	20	20	20
1	1.315	1.049	2.1	40	40	30	30	20	20
1 1/4	1.660	1.380	2.9	40	40	40	30	30	30
1 1/2	1.900	1.610	3.6	40	40	40	40	30	30
2	2.375	2.067	5.1	40	40	40	40	40	30
2 1/2	2.875	2.469	7.9	40	40	40	40	40	40
3	3.500	3.068	10.8	40	40	40	40	40	40
3 1/2	4.000	3.548	13.4	40	40	40	40	40	40
4	4.500	4.026	16.3	40	40	40	40	40	40
5	5.563	5.047	23.3	40	40	40	40	40	40
6	6.625	6.065	31.5	40	40	40	40	40	40
8	8.625	7.981	50.2	40	40	40	40	40	40
10	10.750	10.020	74.6	40	40	40	40	40	40
11	11.750	11.000	86.7	40	40	40	40	40	40
12	12.750	12.000	98.5	40	40	40	40	40	40
14	14.000	13.250	114.3	40	40	40	40	40	40
16	16.000	15.250	141.7	40	40	40	40	40	40
18	18.000	17.250	171.8	40	40	40	40	40	40
20	20.000	19.250	204.6	40	40	40	40	40	40
22	22.000	21.250	240.2	40	40	40	40	40	40
24	24.000	23.250	278.5	40	40	40	40	40	40

## MAXIMUM ALLOWABLE RESTRAINT SPACING – STANDARD STEEL PIPE SECTION – A6.1

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Table A6.1-3; Max Allowable Restraint Spacing for Insulated Standard Steel Pipe Filled – Water

Seismic Coefficient $C_s$				0.25	0.50	0.75	1.00	1.50	2.00
Seismic Hazard Level SHL				D	C	B	A	----	----
Pipe Size (in)	Pipe O. D. (in)	Pipe I. D. (in)	Pipe Weight $w_p$ (lb/ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)
3/4	1.050	0.824	2.1	30	30	20	20	20	15
1	1.315	1.049	2.1	40	40	30	30	20	20
1 1/4	1.660	1.380	2.9	40	40	40	30	30	30
1 1/2	1.900	1.610	3.6	40	40	40	40	30	30
2	2.375	2.067	5.1	40	40	40	40	40	30
2 1/2	2.875	2.469	7.9	40	40	40	40	40	40
3	3.500	3.068	10.8	40	40	40	40	40	40
3 1/2	4.000	3.548	13.4	40	40	40	40	40	40
4	4.500	4.026	16.3	40	40	40	40	40	40
5	5.563	5.047	23.3	40	40	40	40	40	40
6	6.625	6.065	31.5	40	40	40	40	40	40
8	8.625	7.981	50.2	40	40	40	40	40	40
10	10.750	10.020	74.6	40	40	40	40	40	40
11	11.750	11.000	86.7	40	40	40	40	40	40
12	12.750	12.000	98.5	40	40	40	40	40	40
14	14.000	13.250	114.3	40	40	40	40	40	40
16	16.000	15.250	141.7	40	40	40	40	40	40
18	18.000	17.250	171.8	40	40	40	40	40	40
20	20.000	19.250	204.6	40	40	40	40	40	40
22	22.000	21.250	240.2	40	40	40	40	40	40
24	24.000	23.250	278.5	40	40	40	40	40	40

## MAXIMUM ALLOWABLE RESTRAINT SPACING – STANDARD STEEL PIPE PAGE 3 of 4 SECTION – A6.1

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Table A6.1-4; Max Allowable Restraint Spacing for Insulated Standard Steel Pipe Filled – Steam

Seismic Coefficient $C_s$				0.25	0.50	0.75	1.00	1.50	2.00
Seismic Hazard Level SHL				D	C	B	A	----	----
Pipe Size (in)	Pipe O. D. (in)	Pipe I. D. (in)	Pipe Weight $w_p$ (lb/ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)	Actual Maximum Spacing $S_T$ (ft)
3/4	1.050	0.824	1.9	30	30	20	20	20	15
1	1.315	1.049	1.7	40	40	30	30	30	20
1 1/4	1.660	1.380	2.3	40	40	40	40	30	30
1 1/2	1.900	1.610	2.7	40	40	40	40	30	30
2	2.375	2.067	3.7	40	40	40	40	40	40
2 1/2	2.875	2.469	5.8	40	40	40	40	40	40
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3 1/2	4.000	3.548	9.1	40	40	40	40	40	40
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14	14.000	13.250	54.6	40	40	40	40	40	40
16	16.000	15.250	62.6	40	40	40	40	40	40
18	18.000	17.250	70.6	40	40	40	40	40	40
20	20.000	19.250	78.6	40	40	40	40	40	40
22	22.000	21.250	86.6	40	40	40	40	40	40
24	24.000	23.250	94.7	40	40	40	40	40	40

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