

The pipe was then placed on the platen of our Tinius Olsen 1.2 million pound testing machine. The plug was placed into the pipe. The loading device was placed on the plug and loaded until fracture.

Following are the results:

Sample ID	Maximum Load-Pounds	Comments
15" No Foam	2500	Plug pushed into pipe
15" Foam Filled	4850	Plug pushed into pipe
24" No Foam	2500	Plug pushed into pipe
24" Foam Filled	5250	Plug pushed into pipe
36" No Foam	4900	Plug pushed into pipe
36" Foam Filled	10100	Plug pushed into pipe
48" No Foam	9500	Plug pushed into pipe
48" Foam Filled	18750	Plug broke

For the non-filled plugs, #10 x 2" long screws were placed at 3; 6; 9; and 12 o'clock.

Sample ID	Outside Dia. Inch	Inside Dia. Inch	Bearing Area Square Inch	Maximum Load Pound	Bearing Stress Psi
15" No Foam	16-3/4	14-1/16	67.04	2500	37.3
15" Foam Filled	16-3/4	14-1/16	67.04	4800	71.6
24" No Foam	26	23	115.45	2500	21.7
24" Foam Filled	26	23	115.45	5250	45.5
36" No Foam	37-1/4	34-3/4	141.37	4900	34.7
36" Foam Filled	37-1/4	34-3/4	141.37	10100	71.4
48" No Foam	51-3/4	46-1/8	432.39	9500	21.9
48" Foam Filled	51-3/4	46-1/8	432.39	18750	43.4