

Calculations

**Elevator Hoist Capacity**

	New wall =	0.362
	Prem. Wall =	0.290
Tool Joint OD= 3 3/4	Tube OD =	2.875
Elevator Bore Dia = 3 3/32	Tube ID =	2.151
Elevator Wear Factor= 1/32	Tube Grade =	105000
Elevator Contact Stress= 110,100		
	With Wear Factor	With no Wear Factor
Line Pull=	371,561	388,366

OD Increment 1/16

Tool Joint OD (in)	Elevator Hoist Capacity (lb)	
	No wear Factor	W/wear Factor
3 3/4	388,366	371,561
3 11/16	348,169	331,365
3 5/8	308,649	291,844
3 9/16	269,804	252,999
3 1/2	231,634	214,830
3 7/16	194,141	177,336
3 3/8	157,322	140,518
3 5/16	121,179	104,375
3 1/4	85,712	68,908
3 3/16	50,921	34,116
3 1/8	16,805	0

Note: Elevator hoist capacity is usually calculated at 65,000 psi contact stress. Wear rate increases w

Pipe Strength= 105,000	Pipe Strength
Pipe OD= 2.875	New 300,082
Pipe Wall= 0.362	Premium 233,149
Pipe ID= 2.151	
Pipe OD Premium Class= 2.730	
Pipe Wall Premium Class= 0.290	

Elevator hoist capacity for 2.875 pipe with 100,100 psi contact stress.

New Tube Ten. Capacity	Prem. Tube Ten. Capacity	Elev. Cap. @ 65% SMYS	
		No WF	w/WF
300,082	233,149	252,438	241,515
300,082	233,149	226,310	215,387
300,082	233,149	200,622	189,699
300,082	233,149	175,372	164,449
300,082	233,149	150,562	139,639
300,082	233,149	126,191	115,268
300,082	233,149	102,259	91,336
300,082	233,149	78,767	67,844
300,082	233,149	55,713	44,790
300,082	233,149	33,098	22,175
300,082	233,149	10,923	0