

## New Tool Joints and New Drill Pipe

Pipe		Tool Joint						Pipe	Tool Joint	Pipe	Tool Joint	
API Label 1 (Pipe OD) (in)	API Label 2 (Nominal Weight) (lbs/ft)	Grade	Connection Size and Style RSC Type	OD (in)	ID (in)	Make-Up Torque (ft-lbs)	Drift Diameter (in)	Tensile Yield (lbs)	Tensile Yield (lbs)	Torsional Yield Strength (ft-lbs)	Torsional Yield Strength (ft-lbs)	Torsional Ratio
4	14.00	E	NC 40	5 1/4	2 11/16	15,319	2.563	285,359	776,400	23,288	25,532	1.10
		X	NC 40	5 1/4	2 11/16	15,319	2.563	361,454	776,400	29,498	25,532	0.87
		X	TSDS 40	5 1/4	2 11/16	22,180	2.563	361,454	873,400	29,498	36,970	1.25
		X	PTech39+	4 7/8	2 5/8	23,900	2.500	361,454	768,000	29,498	39,840	1.35
		X	PTech41+	5 1/8	2 13/16	27,000	2.688	361,454	1,093,700	29,498	44,940	1.52
		G	NC 40	5 1/2	2 7/16	17,858	2.313	399,502	897,100	32,603	29,764	0.91
		G	TSDS 40	5 1/2	2 7/16	27,180	2.313	399,502	1,009,300	32,603	45,300	1.39
		G	PTech41+	5 1/4	3	28,000	2.875	399,502	978,100	32,603	46,660	1.43
		S	NC 40	5 1/2	2 7/16	17,858	2.313	513,646	897,100	41,918	29,764	0.71
		S	TSDS 40	5 1/2	2 7/16	27,180	2.313	513,646	1,009,300	41,918	45,300	1.08
	S	PTech41+	5 1/4	2 15/16	28,700	2.813	513,646	1,017,500	41,918	47,860	1.14	
	15.70	E	NC 40	5 1/4	2 11/16	15,319	2.563	324,118	776,400	25,810	25,532	0.99
		X	NC 40	5 1/4	2 7/16	15,319	2.313	410,550	776,400	32,692	25,532	0.78
		X	TSDS 40	5 1/4	2 11/16	22,180	2.563	410,550	873,400	32,692	36,970	1.13
		X	PTech39+	4 7/8	2 5/8	23,900	2.500	410,550	768,000	32,692	39,840	1.22
		X	PTech41+	5 1/8	2 13/16	27,000	2.688	410,550	1,093,700	32,692	44,940	1.37
		G	NC 40	5 1/2	2 7/16	17,858	2.313	453,765	897,100	36,134	29,764	0.82
		G	TSDS 40	5 1/2	2 7/16	27,180	2.313	453,765	1,009,300	36,134	45,300	1.25
		G	PTech41+	5 1/4	3	28,000	2.875	453,765	978,100	36,134	46,660	1.29
		S	NC 40	5 1/2	2 7/16	17,858	2.313	583,413	897,100	46,458	29,764	0.64
S		TSDS 40	5 1/2	2 7/16	27,180	2.313	583,413	1,009,300	46,458	45,300	0.98	
S	PTech41+	5 1/4	2 13/16	30,100	2.688	583,413	1,093,700	46,458	50,170	1.08		

The torsional yield strength is based on a shear strength of 57.7% of the minimum yield strength and nominal wall thickness.

TSDS and Ptech+ Values based on 135Ksi Material Yield Strength. API NC Values based on 120Ksi Material Yield Strength.

Pin tensile yield values are based on tensile loading conditions only, and do not include the combined effect of torsional and tensile loading.