

Drill Pipe Performance Characteristics Sheet



Pipe Size & Weight: 5" 19.50# IEU
Pipe Grade: S-135
Range: 20'
Tool Joint Dimensions: 6-5/8" OD x 2-3/4" ID
Connection: NC50 or 4-1/2 IF

THIS TECHNICAL INFORMATION IS FOR REFERENCE ONLY

Pipe Body Information		
	<u>New-API</u>	<u>Premium</u>
OD (in)	5.000	
Wall Thickness (in)	.362	
ID (in)	4.276	
Calculated Plain End weights (lbs./ft)	17.913	
<i>* Note: Premium Properties are calculated based on uniform OD and wall thickness.</i>		
	<u>New-API</u>	<u>Premium</u>
Cross Sectional area pipe body (in ²)	5.275	4.154
Cross Sectional area OD (in ²)	19.635	18.514
Cross Sectional area ID (in ²)	14.360	14.360
Section Modulus (in ²)	5.708	4.476
Polar Section Modulus (in ²)	11.415	8.953
	<u>New-API</u>	<u>Premium</u>
Torsional Strength (ft-lbs.)	74,100	
Tensile Strength (lbs.)	712,100	
80% Torsional Strength (ft-lbs.)	59,300	
Pressure Capacity (psi)	17,105	
Collapse Capacity (psi)	15,672	
Tool Joint Information		
4-1/2 IF or NC50		
	OD (in)	6.625
	ID (in)	2.750
<i>* Tool Joint with a Material Yield Strength of 120,000 psi</i>		
	Pin Tong length (in)	11"
	Box Tong length (in)	13"
	Torsional Strength (ft-lbs.)	63,500
	Max Recommended Make-up Torque (ft-lbs.)	32,900
	Min Recommended Make-up Torque (ft-lbs.)	31,700
	Balance OD (in)	6.620
	Tensile Strength (lbs.)	1,551,700
	Tool Joint / Drill Pipe torsional ratio (New Pipe)	0.86
	Tool Joint / Drill Pipe torsional ratio (Premium Pipe)	1.09
	Min OD for Premium Class (in)	6.313
Drill Pipe Assembly w/ NC 50 Conventional Connection		Drill Pipe Bend Radius
Adjusted Weight (lbs./ft.)	23.96	<i>* These calculations are based on new pipe with nominal wall</i>
Approximate Length (ft.)	31.69	
Fluid Displacement (gal./ft.)	0.366	Based on Bending Stress (psi) at Pipe OD 15,000
Fluid Capacity (gal./ft.)	0.706	Radius of Curvature ® (ft.) (@ OD of pipe) 416.7
Drift Size (in)	2.625	BUR (dogleg) deg/100 ft. 13.8