

Drill Pipe Performance Characteristics Sheet

PTECH Drilling Tubulars, LLC

Pipe Size and Weight: 2 7/8 9.35 EU

Pipe Grade: S-135

Range: 2

Tool Joint: 3 17/32 X 2 1/8 PTECH28B+

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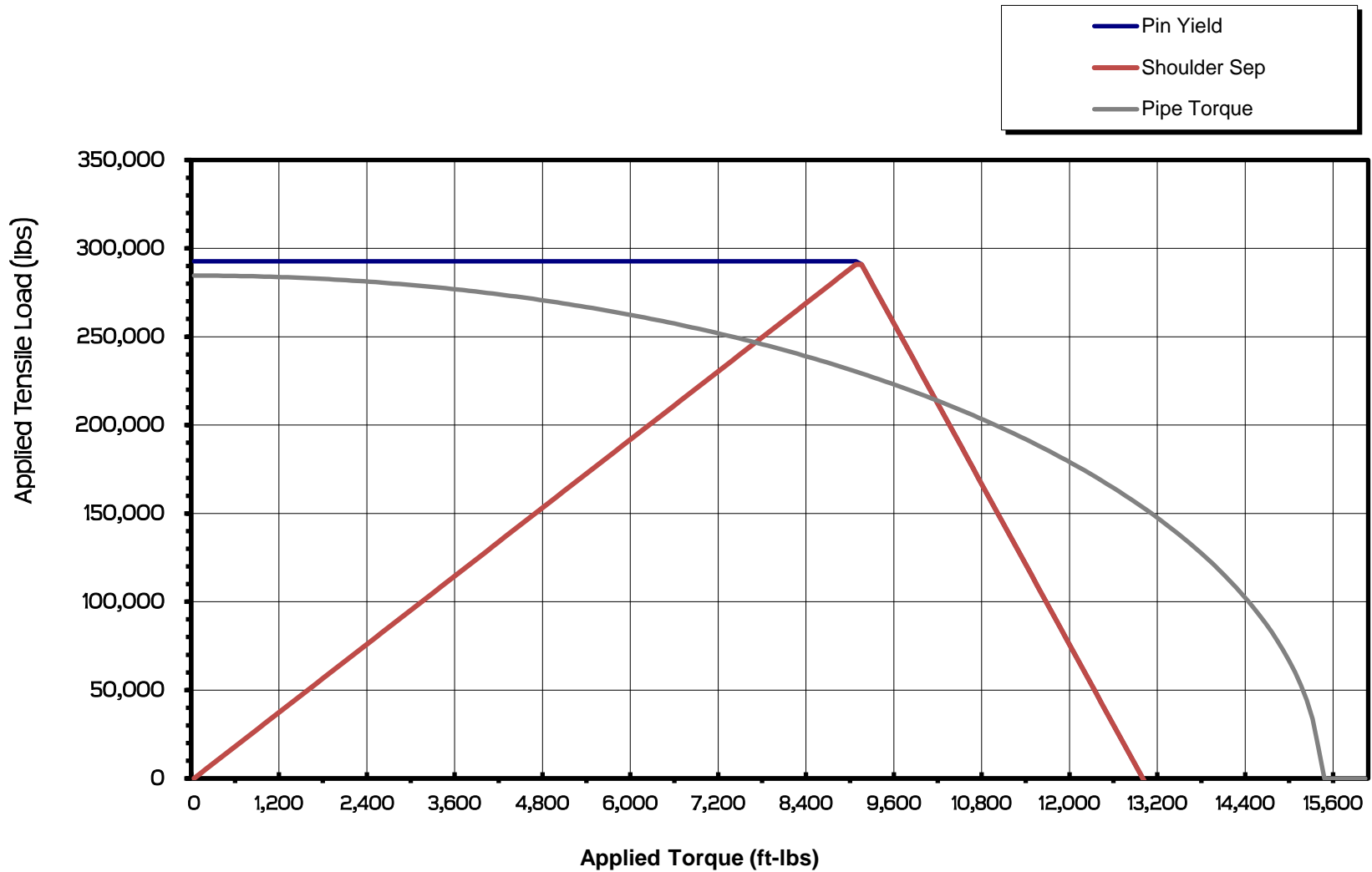
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Revision 1

Pipe Body		
	New-API	Premium
OD (in)	2.875	2.739
Wall Thickness (in)	0.340	0.272
ID (in)	2.195	2.195
Calculated Plain End weights (lbs/ft)	9.201	7.163
Note: Premium properties are calculated based on uniform OD and wall thickness.		
Cross sectional area pipe body (in ²)	2.708	2.108
Cross sectional area OD (in ²)	6.492	5.892
Cross sectional area ID (in ²)	3.784	3.784
Section Modulus (in ³)	1.540	1.185
Polar Section Modulus (in ³)	3.081	2.371
	New-API	Premium
Torsional Strength (ft-lbs)	20,000	15,400
Tensile Strength (lbs)	365,500	284,600
80% Torsional Strength (ft-lbs)	16,000	12,300
Pressure Capacity (psi)	27,939	25,544
Collapse Capacity (psi)	28,154	24,150
Tool Joint		
	PTECH28B+	
	OD (in)	3.531
	ID (in)	2.125
Tool Joint with a Material Yield Strength of 135000 psi		
	Pin Tong length (in)	10
	Box Tong length (in)	13
	Torsional Strength (ft-lbs)	12,960
	Recommended Make-up Torque (ft-lbs)	7,800
	Min Recommended Make-up Torque (ft-lbs)	6,200
	Balance OD (in)	3.530
	Tensile Strength (lbs)	297,900
	Tool joint/Drill pipe torsional ratio (New pipe)	0.65
	Tool joint/Drill pipe torsional ratio (Prem pipe)	0.84
	Min OD for premium class (in)	3.469
Drill Pipe Assembly with PTECH+ Tool Joint	Drill Pipe Bend Radius	
API Adjusted weight (lbs/ft)	10.26	* These calculations are based on new pipe with nominal wall Based on Bending Stress (psi) at Pipe OD 15,000 Radius of Curvature (R) (ft.) (@ OD of pipe) 239.6 BUR (dogleg) deg/100 ft. 23.9
Approximate length (ft)	31.98	
API Fluid Displacement (gal/ft)	0.157	
Fluid Capacity (gal/ft)	0.191	
Drift Size	2.000	

TORQUE TENSION COMBINED LOAD CURVE

For PTECH28B+ 3 17/32 X 2 1/8 Tool Joint with a Material Strength of 135000 psi, using a Coefficient of Friction factor of 0.08 and a Safety Factor of 1.0. On Pipe: 2.875 9.35 S-135 Premium Class.



PTECH28B+ 3 17/32 X 2 1/8 TOOL JOINT OD WEAR CURVE

