

Heavy Weight Drill Pipe Performance Sheet

3/30/2017

Pipe Body Specification		
Nominal OD	in	5.5
Nominal ID	in	3.25
Design		Welded
Heavy Weight Type		Standard
Pipe Body Grade		Standard HW
Approximate Length	ft	31.1
Max Upset OD	in	5.688
Tong Length includes hardbanding if applicable		

HWDP Assembly Performance		
Adjusted Weight *	lbs/ft	57.51
Fluid Displacement *	US gal/ft	0.88
	bbls/ft	0.0209
Fluid Capacity *	US gal/ft	0.43
	bbls/ft	0.0103
Drift Size	in	3.0
Pipe Burst **	psi	19,690
Pipe Collapse **	psi	17,897
Pipe Cross Sectional Area of OD	in ²	23.76
Pipe Cross Sectional Area of ID	in ²	8.296
Pipe Section Modulus	in ³	14.342
Pipe Polar Section Modulus	in ³	29
Pipe Tensile Strength	lbs	850,400
Pipe Torsional Strength	ft-lbs	75,900
Tool Joint/Pipe Body Torsional Ratio		1.2
* At Nominal Wall Thickness Note: Nominal burst calculated at 87.5% RBW per API		
** With no axial load or bending in string Note: Oil field barrel equivalent to 42 US gal		

The Technical information contained herein, including the product performance sheet and other attached documents, is for reference only and should not be consider as a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. NOV Grant Prideco cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. HW Drill Pipe assembly properties are calculated based on uniform OD and wall thickness. No safety factor is applied. The information provided for various inspection classes and for various wear conditions (remaining body wall) is for information only and does not represent or imply acceptable operating limits. It is the responsibility of the customer and the end user to determine the appropriate performance ratings, acceptable use of the product, maintain safe operating practices, and to apply a prudent safety factor suitable for the application. For API connections that have different pin and box IDs, tool joint ID refers to the pin ID. Per Chapter B, Section 4 VII of the drilling manual, it is recommended that drilling torque should not exceed 80% of MUT.

Tool Joint Specification		
Connection Type and Size		TurboTorque™550
SmoothEdge™ Height	in	0.09375
Tool Joint SMYS	psi	130,000
Connection OD	in	6.625
Connection ID	in	3.25
Connection ID Chamfer	in	4.25
Pin Tong	in	24.0
Box Tong	in	24.0
Thread Compound Friction Factor		1.0
Number of Wearpads		1
Wearpad Length (per Wearpad)	in	26.0

Tool Joint Performance		
Max. Make-Up Torque (Recommended)	ft-lbs	63,900
Tension at Shoulder Separation @ Max. MUT	lbs	N/A
Tension at Connection Yield @ Max. MUT	lbs	1,480,300
Min. Make-Up Torque	ft-lbs	45,600
Tension at Shoulder Separation @ Min. MUT	lbs	1,135,100
Tension at Connection Yield @ Min. MUT	lbs	1,534,900
Tensile Strength	lbs	1,534,900
Torsional Strength	ft-lbs	91,300
Min. TJ OD for Counterbore	in	6.315
Balanced OD	in	7.079
The maximum make-up torque should be applied when possible. To maximize connection operational tensile, a MUT (T4) = 61,700 should be applied.		

Advisories and Warnings for HWDP

Advisories:

- Unbalanced connection.

Warnings:

Connection Wear Table

Connection: TurboTorque™ 550 6.625" x 3.25" (130 KSI SMYS) Friction Factor: 1.0

Tool Joint OD (in)	Max MUT	Min MUT
6.625	63900	45600
6.597	62500	44700
6.569	61200	43700
6.54	59800	42700
6.512	58500	41800
6.484	57100	40800
6.456	55800	39900
6.428	54500	38900
6.4	53200	38000
6.371	51900	37000
6.343	50600	36100
6.315	49300	35200

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