GULF ENGINEERING SERVICES LTD. HEAVY WEIGHT DRILL PIPE PERFORMANCE CHARACTERISTICS

Pipe Size and Weight: Pipe Grade: Range: Tool Joint: 4.000" x 2.5625" Heavy Weight 55ksi Standard Heavy Weight 2 4.875" x 2.5625" XT39

PIPE BODY:

	New (Nominal)		New (Nominal)
OD (in):	4.000	Cross Sectional Area of Pipe Body (in ²): Cross Sectional Area of OD (in ²):	7.409
Wall Thickness (in):	0.719	Cross Sectional Area of OD (in ²):	12.566
ID (in):	2.563	Cross Sectional Area of ID (in ²):	5.157
Calculated Plain End Weight (lbs/ft):	25.188	Section Modulus (in ³):	5.225
		Polar Section Modulus (in ³):	10.450
Tensile Strength (lbs):	407 600		
Torsional Strength (ft-lbs):	27 600		
80% Torsional Strength (ft-lbs):	22 080		
Burst Pressure (psi):	17 301		

TOOL JOINT 120 000 psi MATERIAL YIELD STRENGTH: XT39

Collapse Pressure (psi):

OD (in):	4.875
ID (in):	2.563
Pin Tong Length (in):	24.0
Box Tong Length (in):	24.0
Torsional Strength (ft-lbs):	37 000
Max Recommended Make-up Torque (ft-lbs):	22 200
Min Recommended Make-up Torque (ft-lbs):	12 400
Tensile Strength (lbs):	724 100
Tool Joint/ Drill Pipe Torsional Ratio (New Pipe):	1.34
Balance OD (in):	4.992

16 2 18

Note: Minimum make-up is based on shoulder separation caused by bending

DRILL PIPE ASSEMBLY WITH GRANT PRIDECO XT39 eXtreme TORQUE CONNECTION:

Adjusted Weight (lbs/ft):	28.24
Approximate Length (ft):	31.00
Fluid Displacement (gal/ft):	0.431
Fluid Capacity (gal/ft):	0.268
Fluid Capacity (bbls/ft):	0.00638
Drift Size (in):	2.3125

The technical information contained herein, including the product performance sheet and other attached documents, has been extracted from information available from the manufacturer and is for reference only and not a recommendation. The user is fully responsible for the accuracy and suitability of use of the technical information. Gulf Engineering Services Ltd. cannot assume responsibility for the results obtained through the use of this material. No expressed or implied warranty is intended. 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 operation limits. It is the responsibility of the customer and the appropriate performance ratings, acceptable product, maintain safe operational 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 IADC drilling tranual, it is recommended that drilling torque should not exceed 80% of MUT.

