



GULF ENGINEERING SERVICES LTD. HEAVY WEIGHT DRILL PIPE PERFORMANCE CHARACTERISTICS

Pipe Size and Weight:	3.500" x 2.250" Heavy Weight
Pipe Grade:	55ksi Standard Heavy Weight
Range:	2
Tool Joint:	4.875" x 2.250" NC38

PIPE BODY:

	New (Nominal)
OD (in):	3.500
Wall Thickness (in):	0.625
ID (in):	2.250
Calculated Plain End Weight (lbs/ft):	19.191
Tensile Strength (lbs):	310 500
Torsional Strength (ft-lbs):	18 500
80% Torsional Strength (ft-lbs):	14 800
Burst Pressure (psi):	17 188
Collapse Pressure (psi):	16 135

	New (Nominal)
Cross Sectional Area of Pipe Body (in ²):	5.645
Cross Sectional Area of OD (in ²):	9.621
Cross Sectional Area of ID (in ²):	3.976
Section Modulus (in ³):	3.490
Polar Section Modulus (in ³):	6.981

TOOL JOINT 120 000 psi MATERIAL YIELD STRENGTH: NC38 (3-1/2" IF)

OD (in):	4.875
ID (in):	2.250
Pin Tong Length (in):	24.0
Box Tong Length (in):	24.0
Torsional Strength (ft-lbs):	22 900
Max Recommended Make-up Torque (ft-lbs):	13 740
Min Recommended Make-up Torque (ft-lbs):	11 450
Tensile Strength (lbs):	790 900
Tool Joint/ Drill Pipe Torsional Ratio (New Pipe):	1.24
Balance OD (in):	4.936

DRILL PIPE ASSEMBLY WITH NC38 CONVENTIONAL CONNECTION:

Adjusted Weight (lbs/ft):	23.73
Approximate Length (ft):	31.00
Fluid Displacement (gal/ft):	0.363
Fluid Capacity (gal/ft):	0.207
Fluid Capacity (bbls/ft):	0.00493
Drift Size (in):	2.000

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

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 end user to determine the appropriate performance ratings, acceptable use of the 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 manual, it is recommended that drilling torque should not exceed 80% of MUT.