

CASING TECHNICAL DATA SHEET
4.5 x 0.29 HPP110 GBCD

Reviewed by: Sr. Quality Engineer
Approved by: Corporate Director-QEHS

TDS Date (MM/DD/YY)

10-15-24

PIPE BODY DATA

Nominal Outside Diameter
Nominal Wall Thickness
Remaining Body Wall (RBW)
Type of Thread
Grade

Label Weight
Plain End Weight
Pipe Minimum Yield
Pipe Maximum Yield
Pipe Minimum Tensile
Standard Drift Diameter (min)
Alternate Drift Diameter (min)
Pipe Body Plain End Yield
Pipe Body Internal Yield
Collapse Pressure - Standard
Collapse Pressure - High

CONNECTION DATA

Coupling Minimum Yield
Coupling Maximum Yield
Coupling Minimum Tensile
Coupling or Joint Outside Diameter (nom)
Coupling Thread Fracture Strength
Pipe Thread Fracture Strength
Pull Out Strength
Nominal Make-Up Torque or Make-up Torque Range
Coupling Internal Yield
Internal Yield of Joint

WELDED TUBE GENERAL INPUT CRITERIA

Coupling Color Code
Coupling Color Code for the Band
Pipe Color Code Identification
Additional Color Band (approx. 10' from box end)

Note:

Unit	Imperial	Metric	Unit
in	4.500	114.30	mm
in	0.290	7.37	mm
	95.0%	95.0%	
	GBCD	GBCD	
	HPP110	HPP110	
	13.50	13.50	
lb/ft	13.05	19.44	kg/m
ksi	125	862	MPa
ksi	140	965	MPa
ksi	125	862	MPa
in	3.795	96.38	mm
in	N/A	N/A	mm
lb	479,000	217,270	kg
psi	15,310	105,560	kPa
psi	N/A	N/A	kPa
psi	11,810	81,430	kPa
ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
ksi	See Next Page	See Next Page	MPa
in	See Next Page	See Next Page	mm
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
lb	See Next Page	See Next Page	kg
ft-lb	See Next Page	See Next Page	N-m
psi	See Next Page	See Next Page	kPa
psi	See Next Page	See Next Page	kPa

2" Band(s)	White
	None
	One White
	Orange

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GB Connection Performance Properties Sheet

Rev. 0 (10/15/2024)

ENGINEERING THE RIGHT CONNECTIONS™

Casing: 4.5 OD, 13.5 ppf
Casing Grade**: WTC HP P110 (95% RBW)

Connection: GB CD Butt 5.250
Coupling Grade: API P-110



PIPE BODY GEOMETRY					
Nominal OD (in.)	4 1/2	Wall Thickness (in.)	0.290	Drift Diameter (in.)	3.795
Nominal Weight (ppf)	13.50	Nominal ID (in.)	3.920	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	13.05	Plain End Area (in. ²)	3.836		

PIPE BODY PERFORMANCE**					
Material Specification	WTC HP P110 (95% RBW)	Min. Yield Str. (psi)	125,000	Min. Ultimate Str. (psi)	125,000
Collapse		Tension		Pressure	
API (psi)	11,600	Pl. End Yield Str. (kips)	479	Min. Int. Yield Press.** (psi)	15,310
High Collapse ** (psi)	11,810	Torque		Bending	
		Yield Torque (ft-lbs)	45,640	Build Rate to Yield (°/100 ft)	127.3

GB CD Butt 5.250 COUPLING GEOMETRY					
Coupling OD (in.)	5.250	Makeup Loss (in.)	4.0625	Nominal ID (in.)	3.920
Coupling Length (in.)	8.125	Critical Cross-Sect. (in. ²)	6.570	Drift Diameter (in.)	3.795

GB CD Butt 5.250 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES					
Material Specification	API P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Tension		Efficiency		Bending	
Thread Str. (kips)	452	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	96.0
Min. Tension Yield (kips)	687	External Pressure (%)	100%	Yield Torque	
Min. Tension Ult. (kips)	780	Tension (%)	100%	Yield Torque (ft-lbs)	16,900
Joint Str. (kips)	452	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.71		

MAKEUP TORQUE					
Min. MU Tq. (ft-lbs)	5,620	Max. MU Tq. (ft-lbs)	11,240	Running Tq. (ft-lbs)	See GBC RP
				Max. Operating Tq. (ft-lbs)*	16,050

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

* See Running Procedure for description and limitations.

See attached: Notes for GB Connection Performance Properties.

GBC Running Procedure (GBC RP): www.gbconnections.com/resources/running-procedures/

Blanking Dimensions: www.gbconnections.com/resources/documentation/#blanking-dimensions

Connection yield torque rating based on physical testing or extrapolation therefrom

** Casing properties applicable to WTC HP P110 (95% RBW) grade with min. yield 125 ksi.