

## TTRS1 Casing Connection

Material	Imperial	Metric
Yield Stress (min) (psi [kPa])	110,000	758,423
Yield Stress (max) (psi [kPa])	140,000	965,266
Tensile Stress (min) (psi [kPa])	125,000	861,845
Hardness (max) (HRC [HBW])	N/A	N/A
Pipe Body Data		
Outside Diameter, Nominal (in [mm])	4.500	114.30
Weight, Nominal (lbm/ft [kg/m])	15.10	22.47
Wall Thickness, Nominal (in [mm])	0.337	8.56
Inside Diameter, Nominal (in [mm])	3.826	97.18
API Drift Diameter (in [mm])	3.701	94.01
Alternate Drift Diameter (in [mm])	N/A	N/A
Cross Section, Nominal (sq.in. [mm2])	4.407	2843.22
Pipe Performance		
Tensile Yield (lbf [N])	484,800	2,156,497
Internal Yield Pressure (psi [kPa])	14,420	99,422
Collapse Pressure (psi [kPa])	16,240	111,971
Hydrostatic Test Pressure (psi [kPa])	10,000	68,948
Connection Data		
Connection OD (in [mm])	5.090	129.29
Special Clearance OD (in [mm])	N/A	N/A
Connection ID (in [mm])	3.826	97.18
Coupling Length (min) (in [mm])	9.000	228.60
Make-up Loss (in [mm])	3.938	100.03
Threads per Inch (pitch [mm])	5.000	5.08
Torques (Make-Up, Operational, Yield)		
Minimum (lbf-ft[ N.m])	6,300	8,540
Optimum (lbf-ft [N.m])	6,700	9,080
Maximum (lbf-ft [N.m])	8,100	10,980
Max Operational, 1.176 S.F. (lbf-ft [N.m])	12,500	16,950
Yield (lbf-ft [N.m])	14,500	19,660

SIZE: 4.5 in. [114.3]

WEIGHT: 15.1 lbm/ft [22.47]

GRADE: HCP-110

CONNECTION: TTRS1

**Reduced Stress** 

Connection Performance	
Tensile Efficiency (% of pipe Body)	100%
Internal Yield Pressure (% of pipe Body)	100%
External yield pressure (% of pipe Body)	100%
Compression Efficiency (% of pipe Body)	100%
Bending rate, with sealability (°/100 ft)	20°



All connection performance and torque values are calculated (to be verified by testing).

Inspection Criteria: All the material is inspected to 5% Test notch inspection for OD/ID, Long/Trans and wall check per API/ASTM requirements though EMI/SEA.

**Note:** All the information provided is general data. This is not any kind of warranty/quality certificate. Tejas Tubular has the right to change this data at any time for product improvement. This is a non-controlled document. TTRS and Tejas Tubular logo are marks of Tejas Tubular Products, Inc.