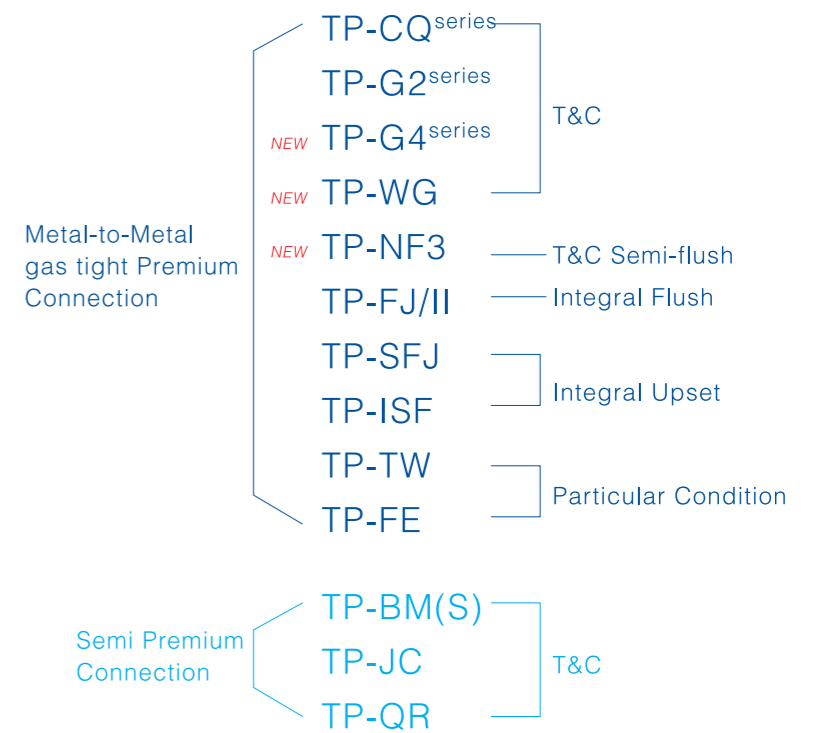




premium connections
TP-WG

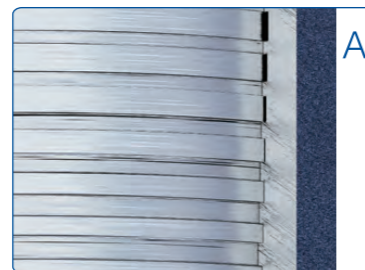


Tianjin Pipe Corporation
 Tianjin Pipe International Economic & Trading Corporation
 Add.: No.396, Jintang Road, Dongli District, Tianjin, P.R. China
 Tel.: +86 22 6628 0988
 Fax: +86 22 6628 0681
 P.C.: 300301
www.tpcointernational.com

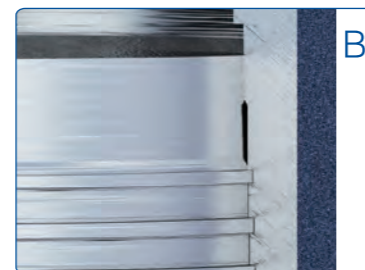
TP-WG 2-3/8in~14-3/8in

T&C type ultra-high torque Gas tight premium connection

- Wedge form threads provide extreme high torque operation ability compares to all other shoulder type premium connection.
- Tapered Metal to Metal seal provide stable gas tight ability under complex loads.
- Very easy stabbing and hand tight with thread flanks space design, less make up turns required compares to traditional type premium connection.
- Torque vs turns record system is not mandatory required for running, make up position and torque value will be enough to judge.
- API 5C5:2017 CAL IV qualified with 100% compression.



Wedge type thread, Gradual thread width changed



Metal to Metal tapered seal

Application:

- Casing while drilling
- High torque operation wells
- Horizontal wells
- Intermediate and production casing and liners
- Tubing

Anti Galling test:

7in 23PPF L80 TP-WG

After 3 Make up and 3 break out no galling was found.



Over torque test :

Note: Due to Clamp slide issue, the real TP-WG yield torque value is even higher than the yield torques shown on below graphs

7in 23PPF L80 TP-WG

Yield torque is over 33000ft-lbs, while the other non-wedge type premium connection for this size can only reach about 20000ft-lbs.



5.5in 26PPF Q125 TP-WG

Yield torque is over 35000ft-lbs, while the other non-wedge type premium connection for this size can only reach about 25000ft-lbs.



Combine load Gas-tight test :

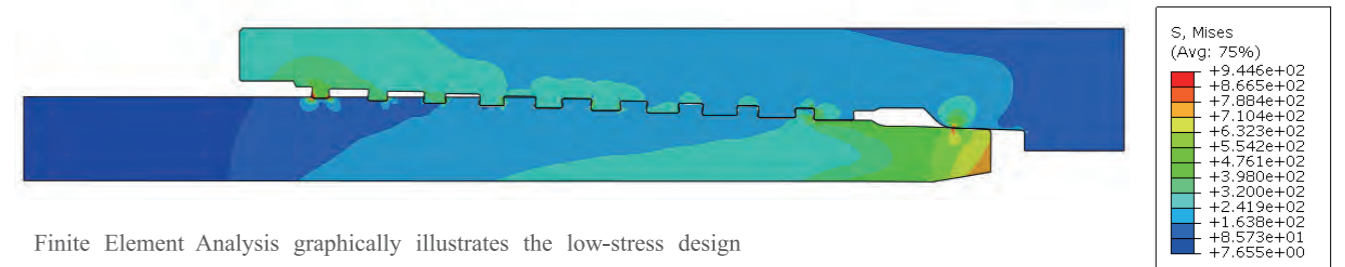
API 5C5:2017 CAI IV
7IN 23PPF L80 TP-WG has passed API 5C5 2017 CAI IV 100% Compression Series A+ B+ C test, no leak or structure damage was found.

天津天管检测技术有限公司 Tianjin TPCO Testing Technology Co., Ltd.					
检验报告 Test Report					
No: J2204005		共 13 页 第 1 页			
产品/项目名称 Product	套管	规格 Size (mm)	Φ177.8*8.05		
钢级/牌号 Grade/Trademark	L80-I	扣型 Connection	TP-WG		
样品号 Heat No.	064397	样品数量 Quantity	1件		
生产日期/批号 Production date/batch	---	样品编号 Specimen No.	1#		
生产单位名称 Manufacturer	天津钢管制造有限公司	委托单位名称 Trust Company	天津钢管制造有限公司		
样品送达日期 Arrived date	2022.04.05	送样人员 Deliverer	检验类别 kind of inspection	委托检验 Consignment inspection	
样品状态 Specimen state	符合试验要求 Meet the test requirements	抽样基数 Sampling base	抽样人员 Checker	---	
检测项目/参数 Item/ Parameter	试样的 B 系、C 系和 A 系载荷包络线试验				
检测依据标准 Test standard	API RP 5C5: 2017				
检验结论 Test conclusion	<p>7.0in 23.3lb/l L80-I TP-WG 的 1 号试样顺利通过 API 5C5: 2017 CAI IV 标准的试验程序。试验载荷包络线(TLE)最大达到了管体屈服强度的 95%。接头拉伸效率等于管体的 100%，接头压缩效率等于管体的 100%，接头内压效率等于管体 100%，接头外压效率等于管体 100%，屈服度 197/100%。</p> <p>Specimen NO.1 of 7.0in 23.3lb/l L80-I TP-WG premium connection successfully passed qualification testing in accordance with the test procedure for casing connection, API 5C5: 2017 CAI IV. The Test load envelope up to 95% pipe body yield strength with connection tension efficiency at 100%, connection compression efficiency at 100%, connection internal pressure efficiency at 100% and 197/100% bending capacity.</p> <p>After samples had tested, please refer to the report.</p>				
备注 Note	委托单位负责加工连接试样。 Trust Company is responsible for the processing of samples.				
批准: Approved by:	审核: Verified by:	主检: Prepared by:			

ISO 13679:2002 CAI IV
7in 29PPF L80 TP-WG has passed ISO 13679:2002 CAI IV 100% Compression Series A+ B+ C test, no leak or structure damage was found.

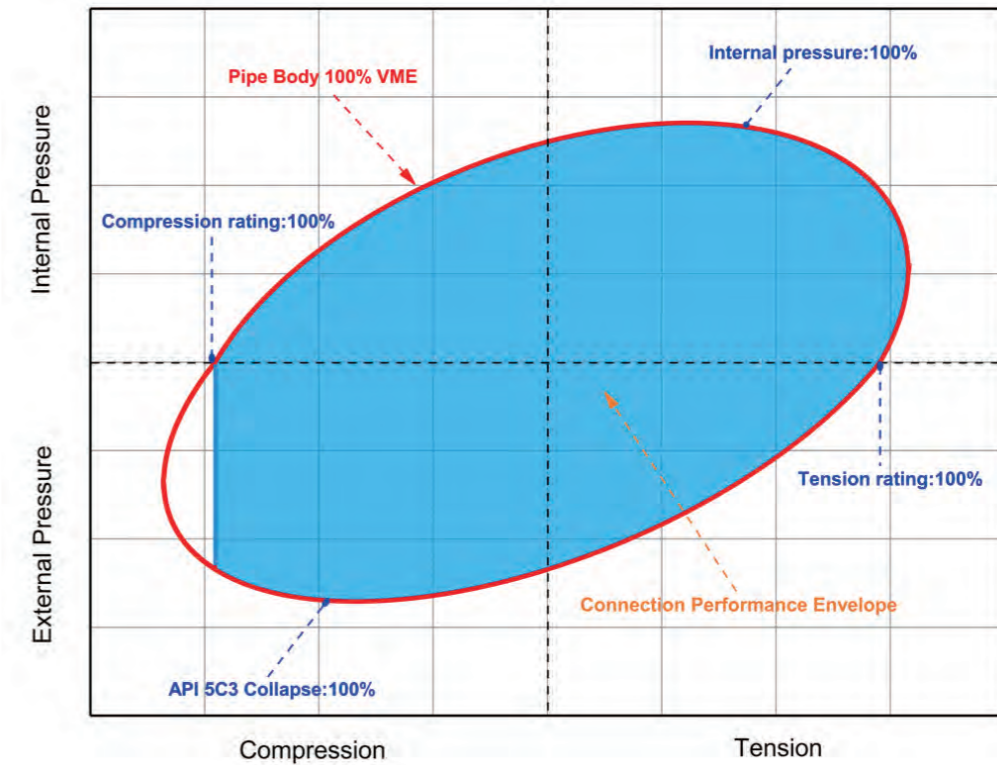
天津钢管制造有限公司技术中心 Technical Center of Tianjin Pipe Corporation Ltd.					
检测报告 Test Report					
No: K1911031		共 40 页 第 1 页			
产品/项目名称 Product	套管 Casing pipe	规格 Size	Φ177.8*10.36 (mm)		
钢级/牌号 Grade/Trademark	L80	样品数量 Quantity	1件		
样品号 Heat No.	082550	样品编号 Specimen No.	1#		
委托单位名称 Trust Company	---	扣型 Connection Type	TP-WG		
生产单位名称 Manufacturer	---	生产日期/批号 Production date/batch	---		
样品送达日期 Arrived date	2019.11.10	检验类别 kind of inspection	委托检验 Consignment inspection		
样品状态 Specimen state	符合试验要求 Meet the test requirements	抽样基数 Sampling base	抽样人员 Checker	---	
检测项目/参数 Item/ Parameter	上卸扣试验、ISO13679:2002 A 系试验、B 系试验、C 系试验 Make up/Break out test, ISO13679:2002 Series A test, Series B test, Series C test				
检测依据标准 Test standard	ISO13679:2002				
检验结论 Test conclusion	<p>上卸扣过程中螺纹及密封面未发生粘扣；气密封评价试验过程中未发生漏泄及结构失效。</p> <p>There were no galling occurred on the thread and seal in the process of make-up and break-up. The leakage and structural failure did not occur throughout the sealability evaluation.</p>				
备注 Note	本中心负责加工连接试样。The center is responsible for the processing of samples.				
批准:	审核:	编制:			

Finite Element Analysis on TP-WG:
5.5in 26.8PPF Q125 TP-WG



Finite Element Analysis graphically illustrates the low-stress design which makes TP-WG excellent choices for critical well applications.

VME application



Supply record of TP-WG:

User	Grade	OD	PPF	Time	Quantity
COSL Canada	L80-D10	7in	23	2022.4	560 ton