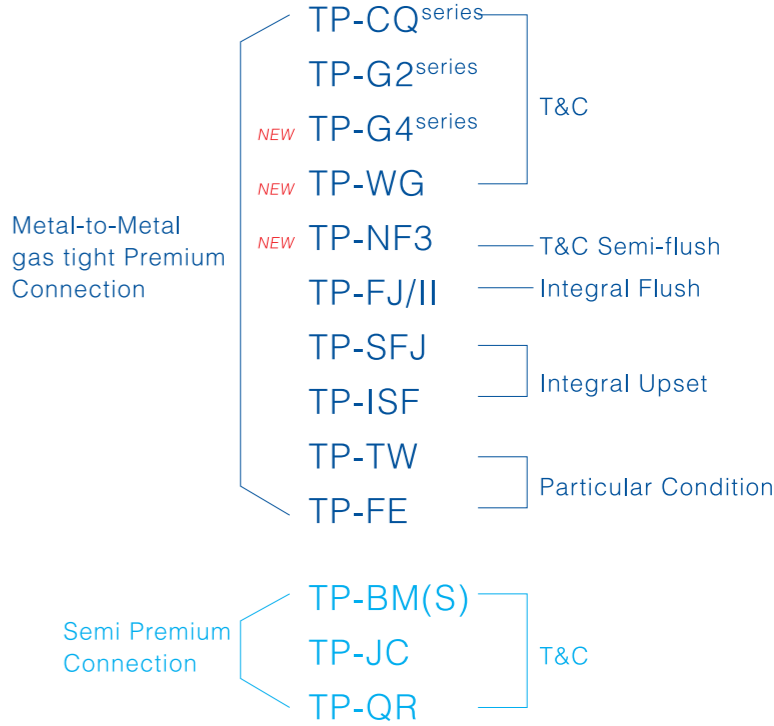




Special Premium Connection
TP-NF3

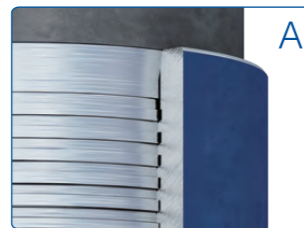
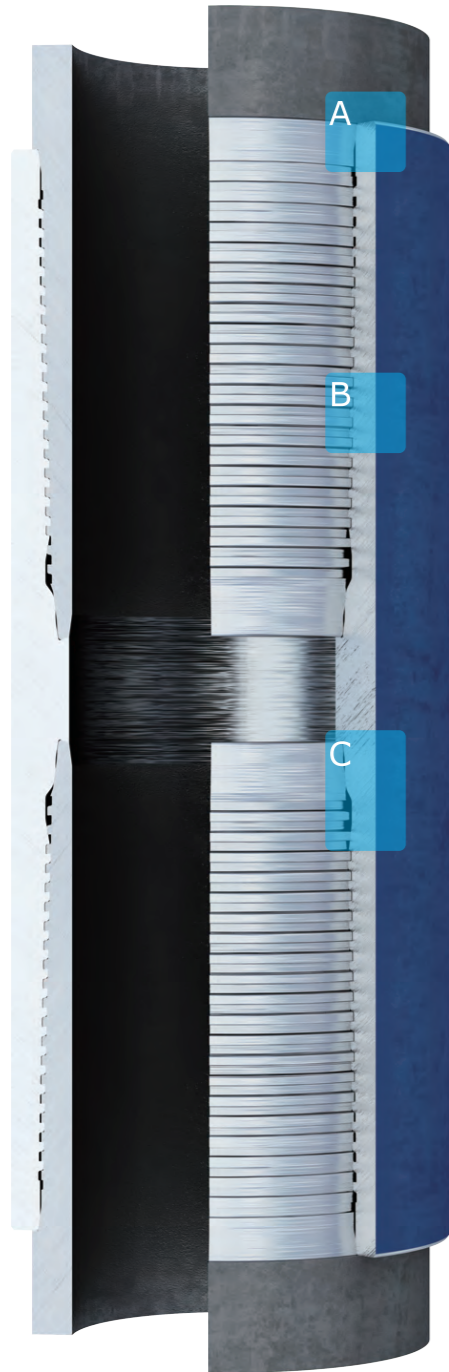


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TP-NF3 Special Premium Connection

5in~16in

- The OD of the coupling is not more than 10% of the pipe body, and the gas seal joint is specially designed for special clearance.
- The internal and external sealing structure design ensures the gas sealing performance of the joint.
- Inverted hook thread design ensures excellent connection performance
- Stepped thread design, easy to make up.
- The compression property is equal to the tensile property.
- Pass 13679 (2002) CAL IV evaluation test.



A Outer Sealing Structure



B Inverted hook thread



C Inner Sealing Structure
Reverse Angle Torque Shoulder
Internal Flush

1. Description

1.1 Threaded Connection

The golden section proportion inverted hook bearing thread design is adopted, which has excellent connection performance in bending state.

The top and bottom of the thread adopt a stepped design parallel to the axis, with strong anti-galling ability. Stepped thread design, easy to make up and not easy to cross thread.

1.2 Sealing Structure

Conical metal seal ensures that the sealing surface has sufficient contact width and reasonable contact pressure.

The sealing system of internal and external sealing ensures the excellent gas sealing ability of the joint under composite load.

The geometric parameters of the sealing surface ensure its good anti-galling performance, and it still has good gas sealing performance after many times of makeup and breakout.

1.3 Reverse Angle Torque Shoulder

Negative angle shoulders provide accurate makeup positioning.

The "wedge effect" formed by negative angle torque shoulder and sealing surface strengthens the sealing ability of metal sealing surface.

1.4 Streamlined Internal Profile

The streamlined internal profile minimizes turbulence and energy loss when high-velocity gas flows.

1.5 Coupling Design

The outer diameter of the coupling shall not exceed 10% of the outer diameter of the pipe body, which provides the maximum annular clearance while ensuring sufficient connection performance.

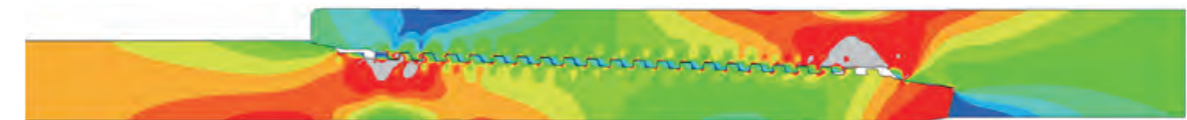
1.6 Connection Lower Stress Design

Ensure that the joint is safe and reliable in corrosive environment.

1.7 Technical Support

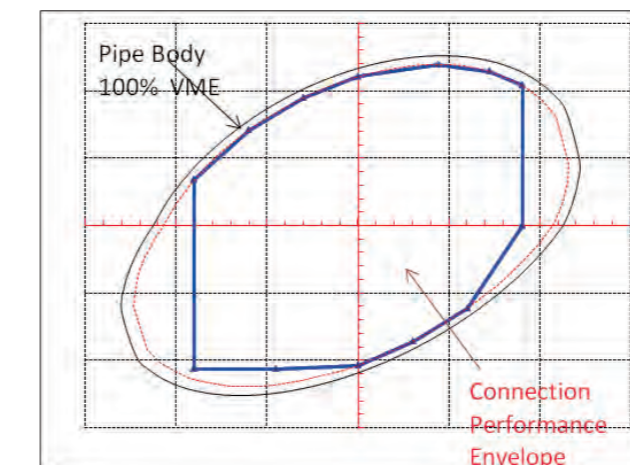
Provide rapid and all-round technical support for commodity inspection, acceptance and well drilling.

2. Finite Element Analysis on TP-NF3



The joint meets the low stress design.

VME



3. Proven Test

3.1 Typical Qualification Test

OD		t (mm)	Grade	Test Standard	CAL	Lab.
mm	in					
206.38	8-1/8	17.25	TP140HC	ISO 13679(2002)	IV	TPCO

3.2. Performance of TP-NF3 Connection

Size	Wall thickness	Dirft	Coupling OD	Coupling Length	Make up loss	Yield strength (KN)				External Pressure (Mpa)				Minimum internal yield pressure (Mpa)			
						80Ksi	110Ksi	125Ksi	140Ksi	80Ksi	110Ksi	125Ksi	140Ksi	80Ksi	110Ksi	125Ksi	140Ksi
mm	mm	mm	mm	mm	mm	80Ksi	110Ksi	125Ksi	140Ksi	80Ksi	110Ksi	125Ksi	140Ksi	80Ksi	110Ksi	125Ksi	140Ksi
139.7	10.54	115.45	146.81	280.0	127.0	1770	2438	2765	3097	77	100.3	110.8	120.6	72.8	100.1	113.8	127.4
	14.27	107.99	155.00	286.0	130.0	2172	2986	3393	3800	101.2	139.5	158.1	177.1	98.6	135.6	154.1	172.6
	15.80	104.93	155.00	286.0	130.0	2375	3266	3711	4156	110.7	152.2	173	193.7	109.3	150.1	170.6	191.1
187.33	17.42	149.32	200.90	350.0	150.0	3848	5290	6012	6733	93	128	145.4	162.9	89.8	123.4	140.3	157.1
203.2	25.40	149.23	225.00	330.0	140.0	5871	8072	9173	10274	120.7	165.9	188.6	211.2	120.8	165.9	188.6	211.3
206.38	17.25	168.71	220.00	330.0	140.0	4241	5831	6627	7422	84.6	116.2	132.1	146.5	80.8	111.0	126.1	141.3
	19.05	165.11	215.90	355.0	158.2	4330	5953	6765	7477	92.5	127.1	144.5	161.8	89.1	122.6	139.3	155.9
273.05	13.84	241.40	283.00	354.0	152.0	4663	6412	7287	8161	35.6	40.5	41.9	44	49.0	67.3	76.5	85.8
	13.93	241.22	283.00	354.0	152.0	4692	6452	7331	8211	36.1	41.3	42.6	44.7	49.3	67.8	77.0	86.3
279.00	17.10	240.83	293.45	338.0	150.0	5822	8005	9096	10188	53.5	66.1	71.2	75.5	59.3	81.4	92.5	103.6
282.58	17.32	243.97	293.45	350.0	151.0	5574	7664	8709	9755	53.5	66.1	71.2	75.5	59.3	81.4	92.5	103.6
	18.64	241.33	298.45	350.0	150.0	6395	8794	9993	11192	61.4	77.4	84.3	90.4	63.8	87.6	99.5	111.4
298.45	13.56	267.36	304.80	340.0	145.0	4687	6445	7323	8202	26.7	30.8	32.3	33.2	43.9	60.3	68.6	76.8
339.72	13.06	309.63	346.70	350.0	150.0	5176	7117	8087	9058	18.4	19.9	19.9	19.9	37.1	51.0	58.0	65.0
406.40	12.57	376.50	415.00	352.0	151.0	6006	8258	9285	10511	10.2	10.2	10.2	10.2	29.9	41.0	46.8	52.3