



Seamless Casing & Tubing



JFE Steel Corporation



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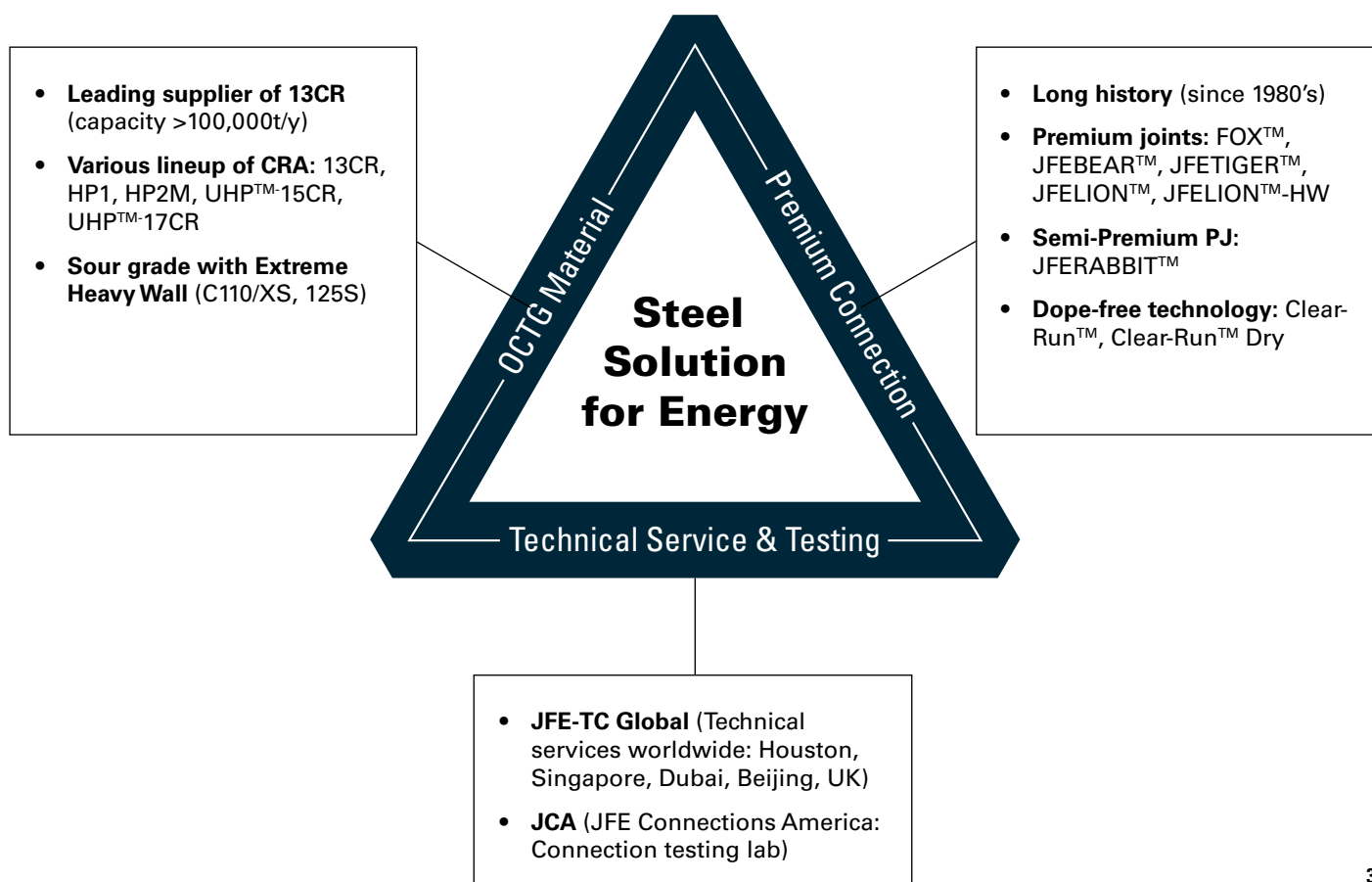
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Since 1971, JFE Steel Corporation has been manufacturing Oil Country Tubular Goods (OCTG). JFE has accumulated extensive expertise through experience and will provide their customers great confidence and satisfaction when purchasing JFE Steel OCTG.

In the past, the well conditions in Oil and Gas drilling were relatively mild and development was straight-forward. Today's Oil and Gas Industry has become a much more complicated operation as engineers continue to drill deeper wells in harsher environments, encountering higher well bore pressures and temperatures in addition to sweet and sour gas.

To meet these ever-increasing industry demands, JFE has developed its JFE series OCTG to a higher level of collapse resistance, yield strength, toughness and corrosion resistance, than standard API OCTG materials. Now, JFE's OCTG products have established an excellent reputation world-wide in terms of quality, performance and manufacturing capability.

JFE's connection development started with the FOX™ connection. FOX™ is an advanced premium threaded connection jointly developed by JFE Steel Corporation, and Hunting Oilfield Services, in early 1980s. In the 1990s, JFE introduced the JFEBEAR™ and in 2009 the JFETIGER™ connections. More recently, in 2011, the JFELION™ and JFELION™ HW connections were developed, designed to meet today's toughest well conditions and industry testing protocols. With JFE's family of connections, JFE can offer customers a choice of products to suit various applications.

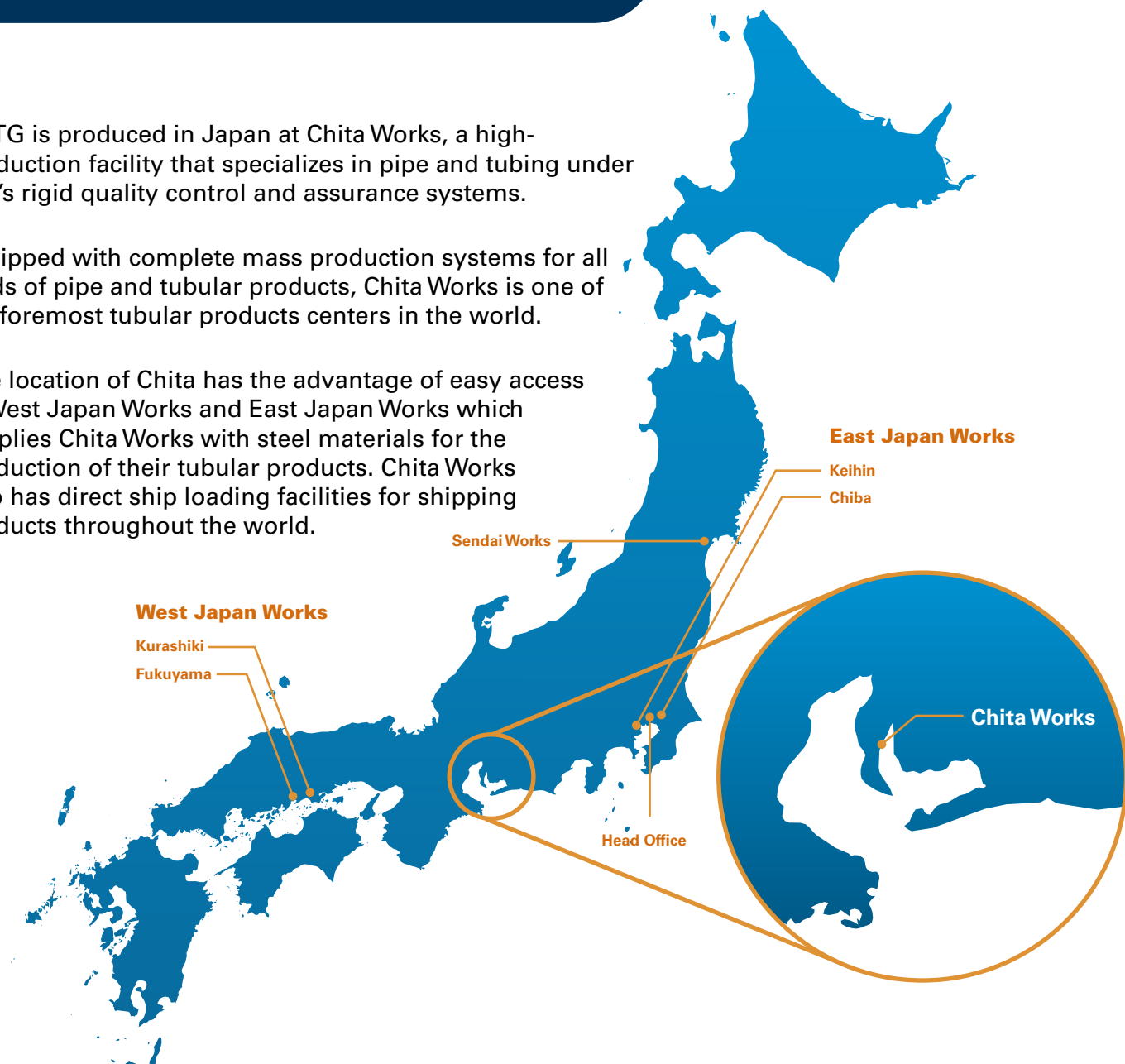


Facilities & Locations

OCTG is produced in Japan at Chita Works, a high-production facility that specializes in pipe and tubing under JFE's rigid quality control and assurance systems.

Equipped with complete mass production systems for all kinds of pipe and tubular products, Chita Works is one of the foremost tubular products centers in the world.

The location of Chita has the advantage of easy access to West Japan Works and East Japan Works which supplies Chita Works with steel materials for the production of their tubular products. Chita Works also has direct ship loading facilities for shipping products throughout the world.



JFE Steel's integrated quality control ensures the consistent high quality for all its tubular products by way of production control at every stage from blast furnace to pipe mill.

Pipe production at JFE Steel is part of a fully integrated steelmaking facility. This means JFE tubular products are manufactured from beginning to end with single source responsibility for quality and performance.



Service & Network

JFE-TC Global was established in 2012 as an organization for JFE's OCTG technical service. JFE-TC has specialized in technical consulting including material & connection recommendation, JFE's premium joint licensee control, and field running service arrangement.

JFE also has alliance mills for threading JFE's premium joints around the world.

● JFE Steel Representative Office

○ JFE Steel Pipe & Tube Base



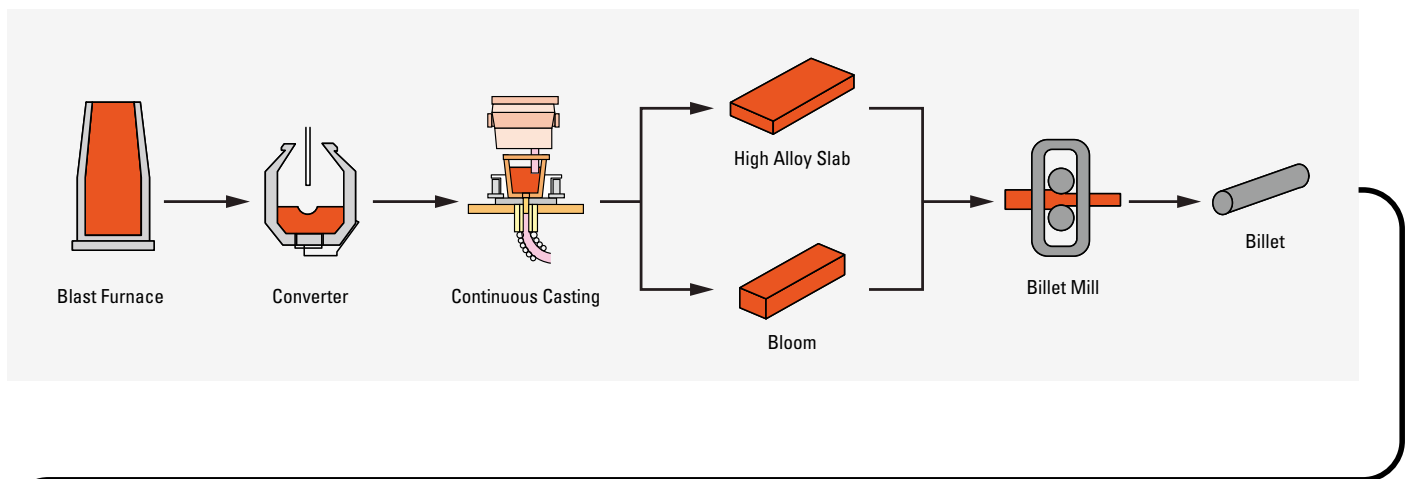
Copyright © Free Vector Map

Seamless Mill

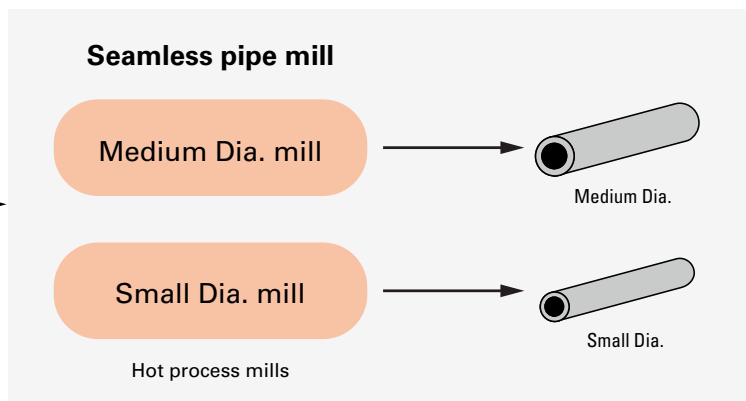
Manufacturing Process

Seamless pipes and tubes are produced either by the mandrel mill or the plug mill process. The former process is used for producing small-diameter pipes up to 7"; and the latter for medium-diameter pipes 7" and above. On either type of mill, each heated billet is pierced through its center on a piercing mill. The pierced billet then moves on to a mandrel or plug rolling mill, where it is rolled with a mandrel bar or plug intersted in it. After withdrawal of the mandrel or plug, the rolled shell is reheated before being processed on a stretch-reducing mill or sizing mill, where the desired OD and wall thickness are obtained. To ensure consistently high quality, the company conducts thorough testing and inspection, using advanced equipment including ultrasonic, electromagnetic, eddy current, and magna flux devices.

East Japan Works/West Japan Works

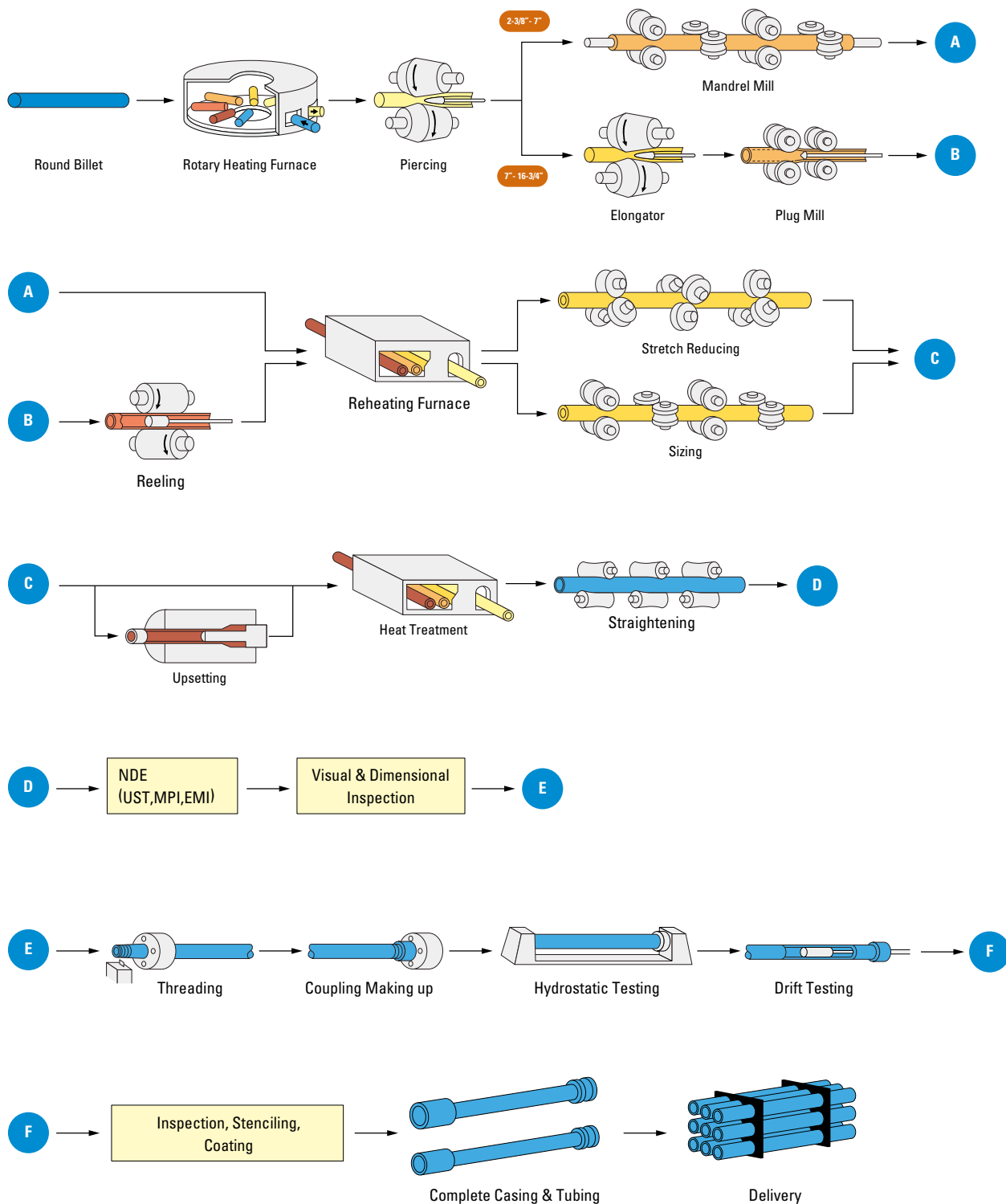


Chita Works



Seamless Mill

Manufacturing Flow



Available Grades

Seamless: OD 2-3/8" ~ 16-3/4"

Yield Strength Minimum KSI (MPa)	API 5CT	API 5CT Enhanced Grade					API 5CRA	JFE Special OCTG: JFE Series			
		Restricted Yield	High Collapse	Mild Sour Service	Enhanced Sour Service	Sour Service & High Collapse		Sour Service	Wet CO ₂ Sour Service		
55 (379)	J55 K55										
80 (552)	N80 N80 Q L80 L80 13Cr							JFE-80S	JFE-13CR-80		
85 (586)								JFE-85S JFE-85SS	JFE-13CR-85		
90 (621)	C90							JFE-90S JFE-90SS			
95 (655)	R95 T95	T95E				T95-HC T95-HCX	JFE-HP2-13CR-95CRA	JFE-95S JFE-95SS	JFE-13CR-95	JFE-HP1-13CR-95 JFE-HP2-13CR-95M	
110 (758)	C110 P110	P110E	P110-HC P110-HCX	P110-MS	C110-XS	C110-HC C110-HCX C110-XSHC C110-XSHCX	JFE-HP2-13CR-110CRA	JFE-110S JFE-110SS		JFE-HP1-13CR-110 JFE-HP2-13CR-110M	JFE-UHP™-17CR-110
125 (862)	Q125		Q125-HC Q125-HCX					JFE-125S			JFE-UHP™-15CR-125 (*1)

**Please feel free to contact JFE Steel about the additional grades that are not listed in the table.
In most cases, the API industry mark can be applied to the above grades when requested.**

Mild Sour Service : Region 1 and 2 of NACE MR0175/ISO15156 Latest Edition is covered.

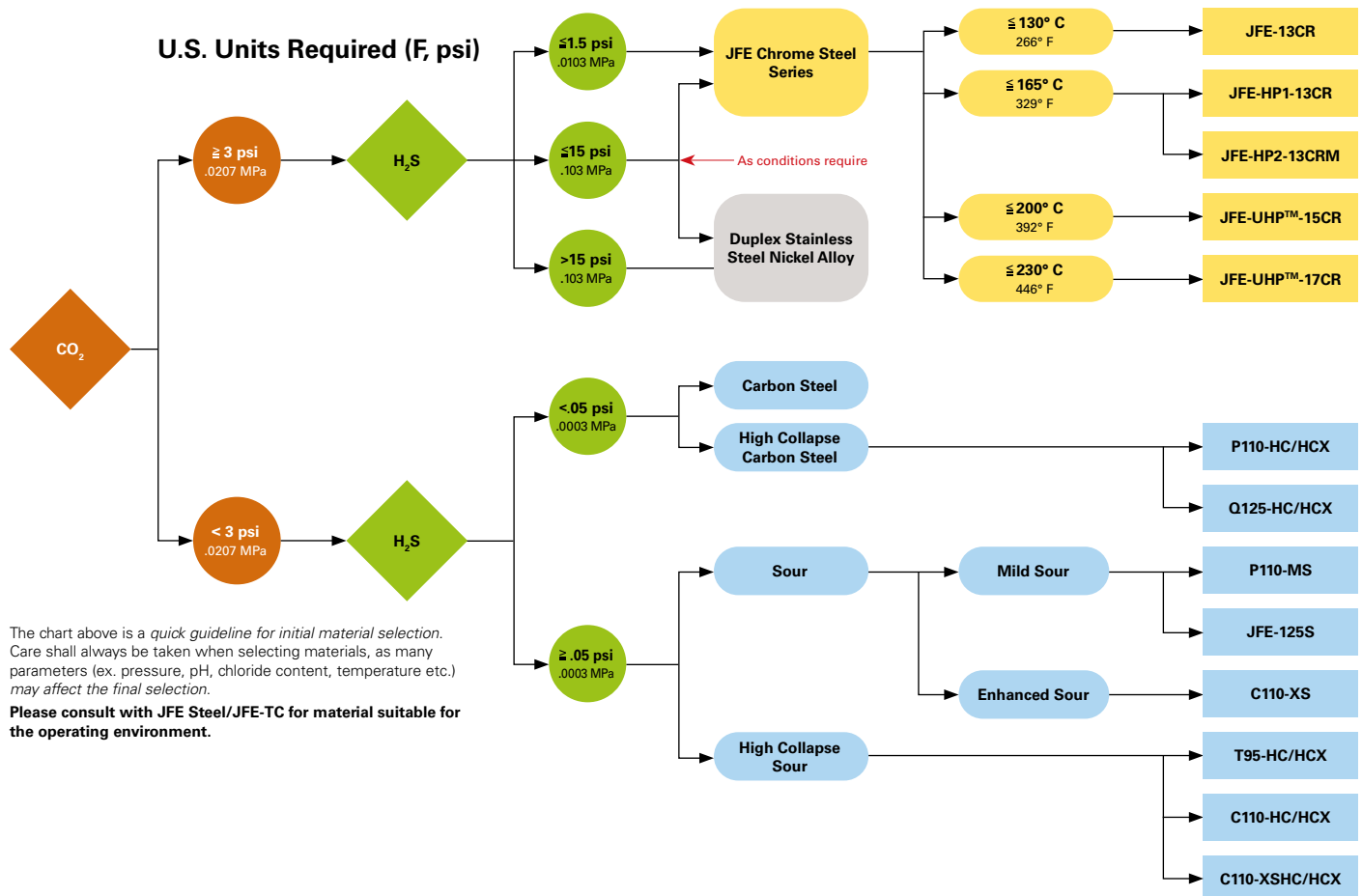
Enhanced Sour Service : SSC resistance at high H₂S pressure as shown on Page 14.

(*1) High strength (SMYS: 135ksi) JFE-UHP™-15CR grade is also available.

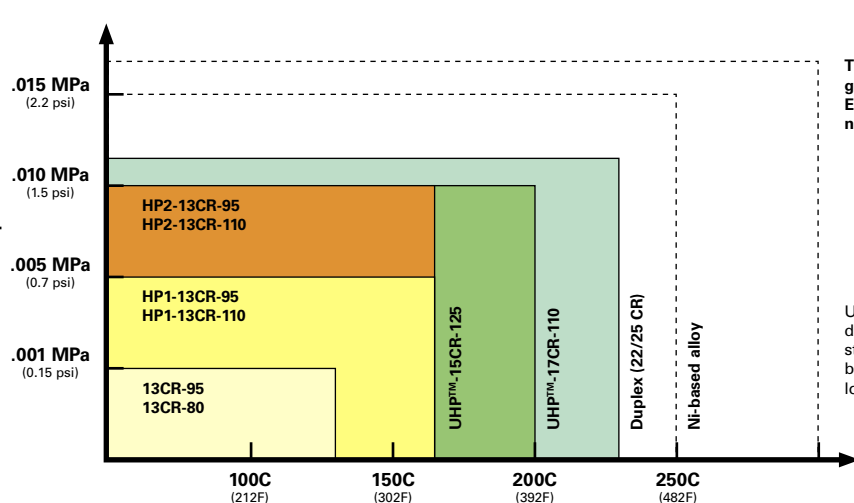
Available Grades

Series	Application	Grade	Yield Strength		Tensile Strength	Hardness
			Min KSI (MPa)	Max KSI (MPa)	Min KSI (MPa)	Max Average (HRC)
API 5CT		J55	55 (379)	80 (552)	75 (517)	
		K55	55 (379)	80 (552)	95 (655)	
		N80Type 1	80 (552)	110 (758)	100 (689)	
		N80Type Q	80 (552)	110 (758)	100 (689)	
		R95	95 (655)	110 (758)	105 (724)	
		L80 Type 1	80 (552)	95 (655)	95 (655)	23.0
		L80 Type 13CR	80 (552)	95 (655)	95 (655)	23.0
		C90	90 (621)	105 (724)	100 (689)	25.4
		T95	95 (655)	110 (758)	105 (724)	25.4
		C110	110 (758)	120 (828)	115 (793)	29.0
		P110	110 (758)	140 (965)	125 (862)	
		Q125	125 (862)	150 (1,034)	135 (931)	
API 5CT Enhanced	Enhanced Yield	T95E	100 (689)	110 (758)	105 (724)	25.4
		P110E	125 (862)	140 (965)	125 (862)	
	High Collapse	P110-HC	125 (862)	140 (965)	125 (862)	
		P110-HCX	125 (862)	140 (965)	125 (862)	
		Q125-HC	135 (931)	150 (1,034)	135 (931)	
		Q125-HCX	135 (931)	150 (1,034)	135 (931)	
	Sour Service & High Collapse	T95-HC	95 (655)	110 (758)	105 (724)	25.4
		T95-HCX	95 (655)	110 (758)	105 (724)	25.4
		C110-HC	110 (758)	120 (828)	115 (793)	29.0
		C110-HCX	110 (758)	120 (828)	115 (793)	29.0
		C110-XSHC	110 (758)	120 (828)	115 (793)	28
		C110-XSHCX	110 (758)	120 (828)	115 (793)	28
	Enhanced Sour Service	C110-XS	110 (758)	120 (828)	115 (793)	28
	Mild Sour Service	P110-MS	110 (758)	125 (862)	125 (862)	31
JFE Series	Sour Service	JFE-80S	80 (552)	95 (655)	95 (655)	22
		JFE-85S	85 (586)	100 (689)	95 (655)	23
		JFE-90S	90 (621)	105 (724)	100 (689)	24
		JFE-95S	95 (655)	110 (758)	105 (724)	25.4
		JFE-110S	110 (758)	120 (828)	115 (793)	29
		JFE-85SS	85 (586)	100 (689)	95 (655)	23
		JFE-90SS	90 (621)	105 (724)	100 (689)	24
		JFE-95SS	95 (655)	110 (758)	105 (724)	25.4
	JFE-110SS	110 (758)	120 (828)	115 (793)	29	
	Mild Sour Service	JFE-125S	125 (862)	140 (965)	130 (896)	36
	Wet CO ₂ Service	JFE-13CR-80	80 (552)	95 (655)	95 (655)	23.0
		JFE-13CR-85	85 (586)	100 (689)	100 (689)	24
		JFE-13CR-95	95 (655)	110 (758)	105 (724)	27
	Wet CO ₂ & Mild Sour Service	JFE-HP1-13CR-95	95 (655)	110 (758)	105 (724)	28
		JFE-HP2-13CR-95M	95 (655)	110 (758)	105 (724)	28
		JFE-HP1-13CR-110	110 (758)	130 (896)	120 (828)	32
		JFE-HP2-13CR-110M	110 (758)	130 (896)	115 (793)	31
		JFE-HP2-13CR-115	115 (793)	135 (931)	120 (828)	33
JFE-UHP™-15CR-125		125 (862)	150 (1,034)	135 (931)	37	
Wet CO ₂ , Mild Sour Service, & HPHT	JFE-UHP™-17CR-110	110 (758)	130 (896)	120 (828)	34	
	API 5CRA	Group 1	JFE-HP2-13CR-95CRA	95 (655)	110 (758)	105 (724)
JFE-HP2-13CR-95CRA-L2			95 (655)	105 (724)	105 (724)	27
JFE-HP2-13CR-110CRA			110 (758)	140 (965)	115 (793)	32

Material Selection



SSC (sour) resistance
(upper limit H₂S pressure @ pH4.0)

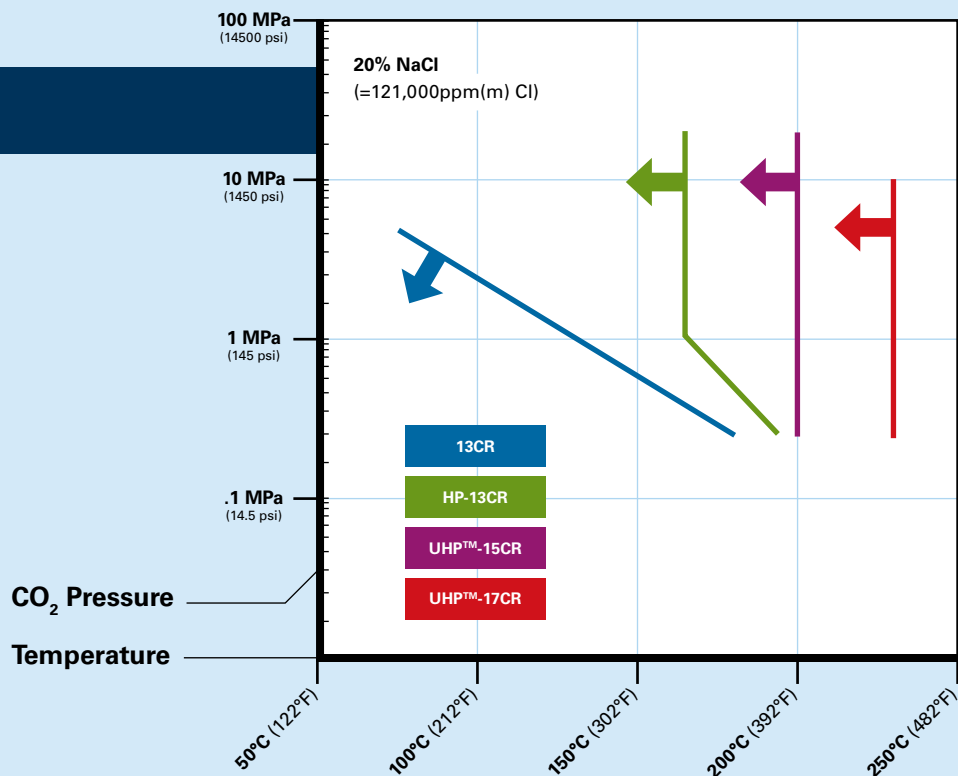


This diagram is intended to depict a general sense of limitation for each alloy. Each limit changes by the parameters not listed here (pH, Cl⁻, etc.)

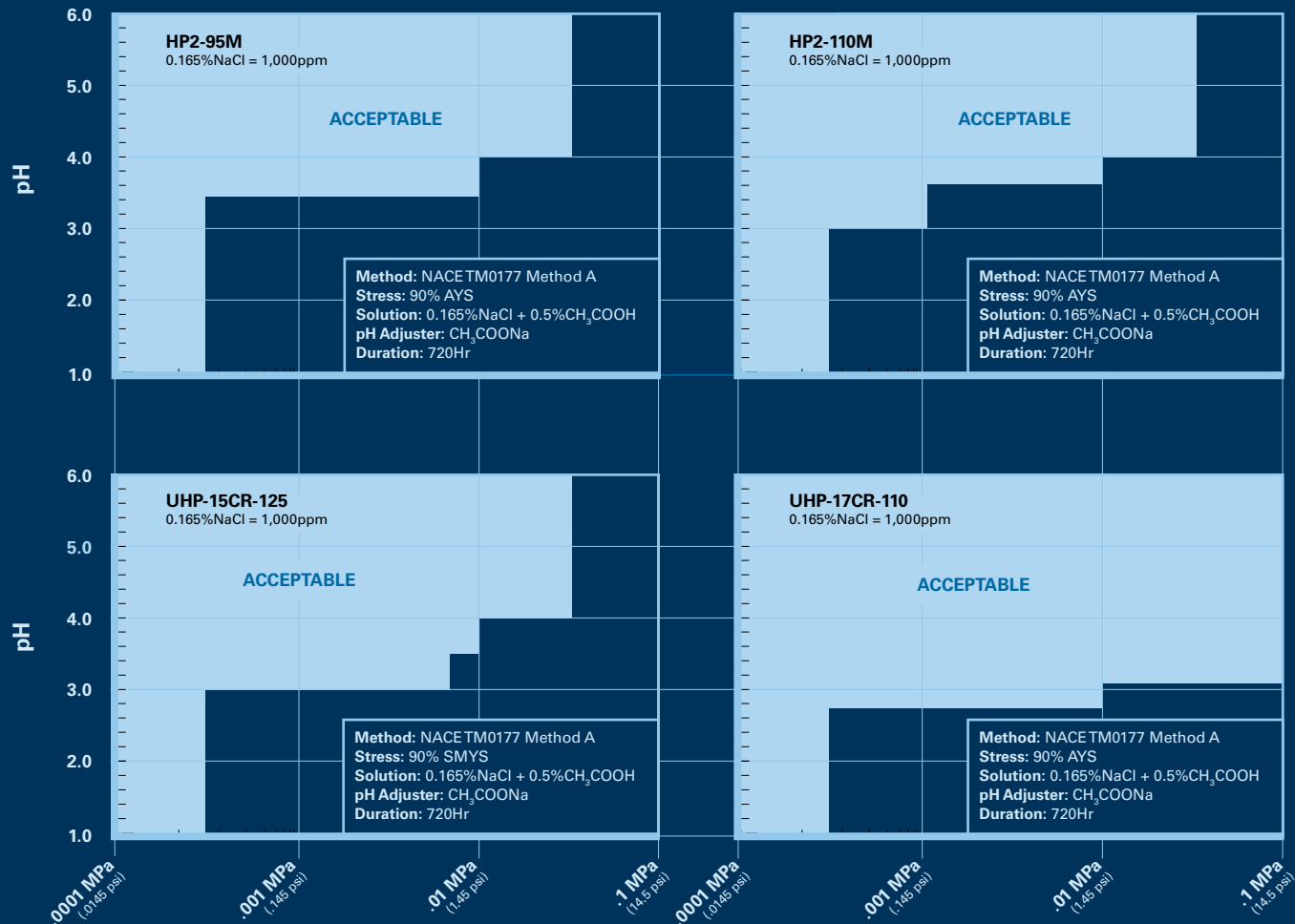
UHP™-15CR and UHP™-17CR have been developed as alternatives to Duplex stainless steel. UHP—in some cases—can be used as a substitute to Duplex with lower cost and shorter delivery time.

CO₂ Corrosion resistance
Upper limit temperature @CO₂
Pressure 1~10MPa, Cl⁻: 120,000 ppm (m)

CO₂ Corrosion Map



SSC Domain Maps



JFE OCTG Series

13Cr Wet CO₂ Mild Sour

JFE-13CR-80
JFE-13CR-85
JFE-13CR-95

JFE-HP1-13CR-95
JFE-HP1-13CR-110

JFE-HP2-13CR-95M
JFE-HP2-13CR-110M

JFE-HP2-13CR-95CRA
JFE-HP2-13CR-110CRA

API industry mark can be applied to
CRA grades upon request

CO₂ is a major corrosion concern for production tubing and liners in Oil and Gas wells. This has created a demand for CO₂ corrosion resistant materials. JFE Steel Corporation's range of martensitic stainless steels provide outstanding corrosion resistance in wells containing high levels of CO₂. Even at higher temperatures up to 165°C, JFE-HP grades provide excellent corrosion resistance in a range of yield strengths. JFE has various types, strengths, and corrosion resistance levels for the 13Cr grades. Please contact JFE Steel/JFE-TC for recommendations for the most suitable, cost effective material for a given application.

a) Manufacturing Process

Process: Hot Rolled Seamless

Heat Treatment: Quenched and Tempered

b) Chemical Composition

Grade	C	Mn	Mo	Cr	Ni	Cu	P	S	Si	Ti	V
JFE-13CR-80 JFE-13CR-85 JFE-13CR-95	0.15 - 0.22	0.25 - 1.00	-	12.0 - 14.0	Max 0.50	Max 0.25	Max 0.02	Max 0.01	Max 1.0	-	-
JFE-HP1-13CR-95 JFE-HP1-13CR-110	Max 0.04	Max 0.6	0.8 - 1.5	12.0 - 14.0	3.5 - 4.5	-	Max 0.02	Max 0.01	Max 0.5	-	-
JFE-HP2-13CR-95M* JFE-HP2-13CR-95CRA JFE-HP2-13CR-110M* JFE-HP2-13CR-110CRA	Max 0.03	Max 0.50	1.5 - 3.0	11.5 - 13.5	4.5 - 6.5	-	Max 0.02	Max 0.005	Max 0.50	0.01 - 0.50	Max 0.50

*JFE's proprietary grades. Chemical composition and mechanical properties comply with API 5CRA requirements.

b) Specified Physical Properties (at ambient temperature)

Grade	Yield Strength		Tensile Strength	Elongation (%)	Hardness Max Avg. HRC
	Min ksi (MPa)	Max. ksi (MPa)	Min ksi (MPa)		
JFE-13CR-80	80 (552)	95 (655)	95 (655)	API Formula	23.0
JFE-13CR-85	85 (586)	100 (689)	100 (689)		24
JFE-13CR-95	95 (655)	110 (758)	105 (724)		27
JFE-HP1-13CR-95	95 (655)	110 (758)	105 (724)		28
JFE-HP1-13CR-110	110 (758)	130 (896)	120 (828)		32
JFE-HP2-13CR-95M	95 (655)	110 (758)	105 (724)		28**
JFE-HP2-13CR-110M	110 (758)	130 (896)	115 (793)		31
JFE-HP2-13CR-95CRA	95 (655)	110 (758)	105 (724)		28
JFE-HP2-13CR-95CRA-L2	95 (655)	105 (724)	105 (724)		27
JFE-HP2-13CR-110CRA	110 (758)	130 (896)	115 (793)		31

**Max. 27HRC (Equivalent to API 5CRA PSL2) is also applicable

Wet CO₂ Mild Sour & HPHT

JFE-UHP™-15CR
JFE-UHP™-17CR

High demands for natural gas, deep water drilling and an increasing number of high pressure, high temperature (HPHT) wells has generated the need for high strength OCTG material with superior corrosion resistance at high temperatures. JFE-UHP™-15CR-125 / JFE-UHP™-17CR-110 is a material that has excellent corrosion resistance to

acidizing conditions in corrosive environment. High yield strength and superior corrosion resistance are achieved even in the high temperature environment. The UHP materials are manufactured without cold drawing so it has a lower yield strength de-rating ratio at high temperatures compared to duplex material. Ultra-heavy wall pipe (>1-in. WT) and coupling stock (2.5-in. WT) size can be manufactured for HPHT wells. UHP materials with excellent corrosion resistance properties can be supplied with lower cost and shorter lead times than cold hardened duplex materials.

a) Manufacturing Process

Process: Hot Rolled Seamless

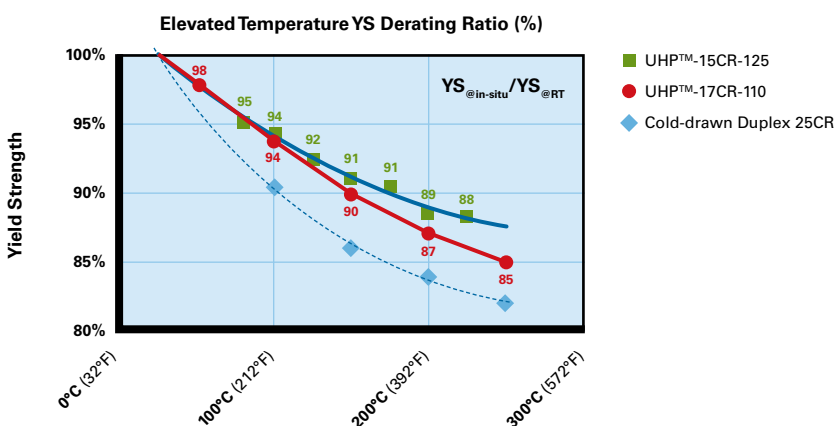
Heat Treatment: Quenched and Tempered

b) Chemical Composition

Grade	C	Mn	Mo	Cr	Ni	Cu	P	S	Si	Nb	W
JFE-UHP™-15CR-125 (UNS No. S42625)	Max 0.05	Max 1.8	1.5 - 3.5	14.0 - 16.0	5.0 - 7.0	0.5 - 1.5	Max 0.03	Max 0.005	Max 0.50	Max 0.20	-
JFE-UHP™-17CR-110 (UNS No. S42825)	Max 0.05	Max 1.8	1.5 - 3.5	16.0 - 18.0	3.0 - 5.0	Max 3.0	Max 0.03	Max 0.005	Max 0.50	Max 0.20	Max 1.5

b) Specified Physical Properties (at ambient temperature)

Grade	Yield Strength		Tensile Strength	Elongation (%)	Hardness Max Avg. HRC
	Min ksi (MPa)	Max. ksi (MPa)	Min ksi (MPa)		
JFE-UHP™-15CR-125	125 (862)	150 (1,034)	135 (931)	API Formula	37
JFE-UHP™-17CR-110	110 (758)	130 (896)	120 (828)		34



JFE OCTG Series

Sour Service

JFE Series

Sour
JFE-80S
JFE-85S, 85SS
JFE-90S, 90SS
JFE-95S, 95SS
JFE-110S, 110SS

Mild Sour
JFE-125S

API 5CT Enhanced

Extreme Sour
C110-XS

Mild Sour
P110-MS

OCTG for sour wells must have improved resistance to sulfide stress cracking (SSC) in fluids containing H₂S. Extensive research has led to the development of modified Cr-Mo steels for OCTG for sour wells. These steels feature both excellent hardenability and good temper resistance. Consequently, fine and homogenous tempered martensitic structure is obtained after tempering at higher tempering temperature. As a result, these enhanced grades have obtained excellent resistance to SSC with higher strength grades. These OCTG grades are subjected to stringent manufacturing and quality control.

a) Manufacturing Process

Process: Hot Rolled Seamless

Heat Treatment: Quenched and Tempered

The SSC-resistance of these grades has been thoroughly tested and qualified by major oil companies and is now widely used for sour gas and oil wells all over the world.

b) Chemical Composition

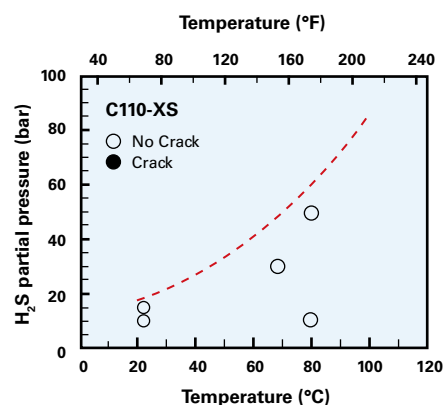
Grade	C	Mn	Mo	Cr	Ni	Cu	P	S	Si
JFE-80S JFE-85S JFE-85SS JFE-90S JFE-90SS	0.15 - 0.35	Max 1.35	0.05 - 1.10	Max 1.60	Max 0.10	Max 0.30	Max 0.020	Max 0.010	Max 0.35
JFE-95S* JFE-95SS*	Max 0.35	Max 1.20	0.25 - 0.85	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.010	Max 0.35
JFE-110S** JFE-110SS**	Max 0.35	Max 1.20	0.25 - 1.00	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.010	Max 0.35
C110-XS	Max 0.35	Max 1.20	0.25 - 1.00	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.005	-
P110-MS	Max 0.35	Max 1.00	0.15 - 1.10	0.80 - 1.60	Max 0.10	Max 0.30	Max 0.020	Max 0.010	Max 0.35
JFE-125S	Max 0.35	Max 1.20	0.25 - 1.90	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.005	-

Chemical composition and mechanical properties comply with API requirements: *5CTT95; **API 5CT C110

c) Mechanical Properties

Grade	Yield Str.		Tensile Str.	Elongation	Hardness
	Min KSI (MPa)	Max KSI (MPa)	Min KSI (MPa)	Min (%)	Max Avg. HRC
JFE-80S	80 (552)	95 (655)	95 (655)	API Formula	22
JFE-85S, 85SS	85 (586)	100 (689)	95 (655)		23
JFE-90S, 90SS	90 (621)	105 (724)	100 (689)		24
JFE-95S, 95SS	95 (655)	110 (758)	105 (724)		25.4
JFE-110S, 110SS	110 (758)	120 (828)	115 (793)		29
C110-XS	110 (758)	120 (828)	115 (793)		28
P110-MS	110 (758)	125 (862)	125 (862)		31
JFE-125S	125 (862)	140 (965)	130 (896)		36

The mechanical properties (Strength, Hardness) of JFE-Series are more strictly controlled than API 5CT grade to achieve the greater sour resistance.



High Collapse

API 5CT Enhanced

P110-HC, HCX
Q125-HC, HCX

API 5CT Enhanced & Sour Service

T95-HC, HCX
C110-HC, HCX
C110-XSHC, XSHCX

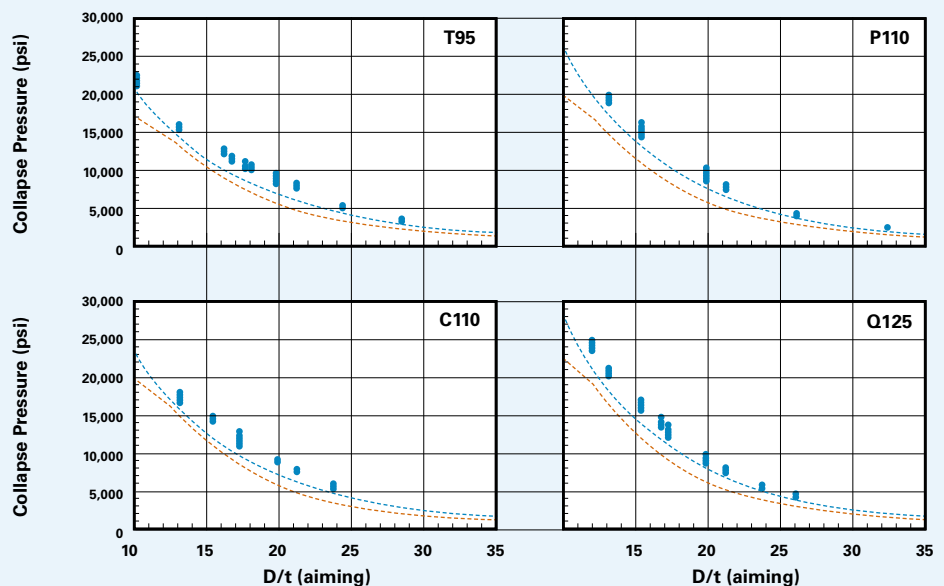
HC (High Collapse) Series and HCX (Extreme High Collapse) Series are seamless casing designed for oil and gas wells where high pressure is anticipated, such as deep wells, high pressure high temperature wells or formations. HC-Series guarantee higher collapse resistance than the value determined by API TR 5C3, and HCX-Series guarantee the first-class collapse resistance which is even higher than HC-Series. To achieve high collapse resistance, chemical composition, mechanical properties (yield strength, residual stress) and dimension (Diameter-to-thickness ratio (D/t), ovality, eccentricity) are strictly controlled throughout the manufacturing process.

b) Chemical Composition

Grade	C	Mn	Mo	Cr	Ni	Cu	P	S	Si
T95-HC, HCX	Max 0.35	Max 1.20	0.25 - 0.85	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.010	-
P110-HC, HCX	-	-	-	-	-	-	Max 0.030	Max 0.030	-
C110-HC, HCX	Max 0.35	Max 1.20	0.25 - 1.00	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.010	-
C110-XSHC, XSHCX	Max 0.35	Max 1.20	0.25 - 1.00	0.40 - 1.50	Max 0.99	-	Max 0.020	Max 0.010	-
Q125-HC, HCX	Max 0.35	Max 1.35	Max 0.85	Max 1.50	Max 0.99	-	Max 0.020	Max 0.010	-

Guaranteed Collapse Value by Grade

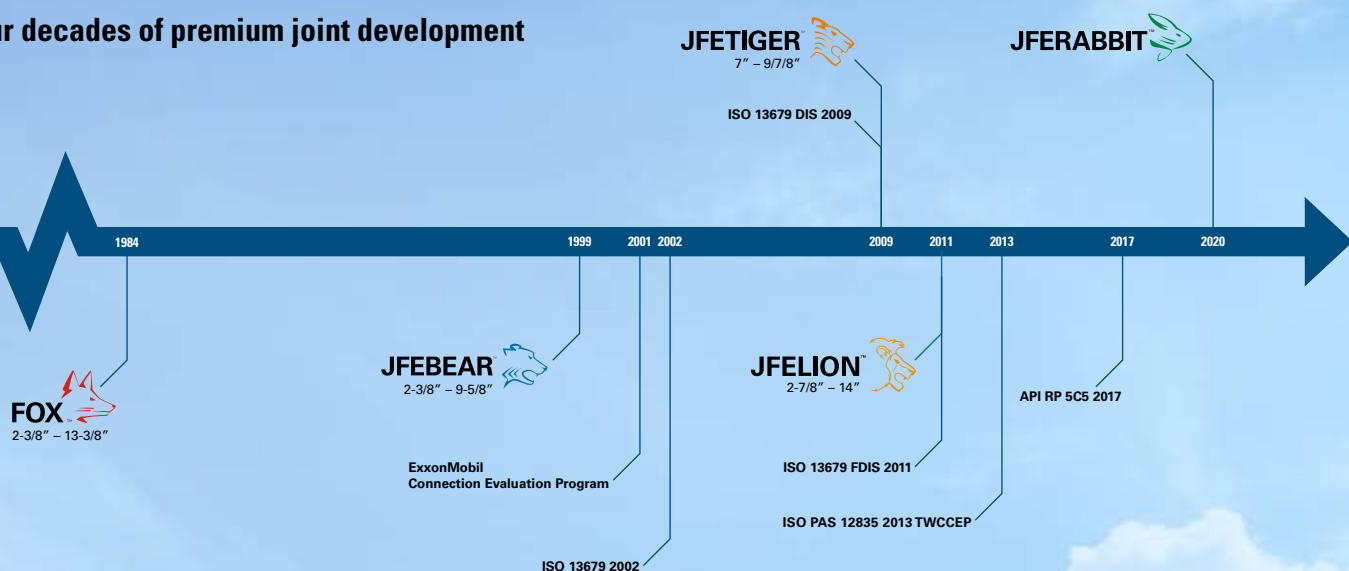
- API Collapse Value
- Actual Collapse Pressure
- Guaranteed Min. Collapse Pressure for HC grade



JFE Premium Connections

Our History

Four decades of premium joint development



Connection	Premium Threaded & Coupled				Semi-Premium Threaded & Coupled
	JFELION™	JFEBEAR™	JFETIGER™	FOX™	JFERABBIT™
Sizes Available	2-7/8" – 14"	2-3/8" – 9-5/8"	7" – 9-7/8"	2-3/8" – 13-3/8"	4-1/2" – 7"
Test Protocol	API RP 5C5:2017 TWCCEP	ISO13679:2002	ISO13679:DIS2009	Customer	API TR-5SF(draft) ISO13679:2002
Tension/Compression	100%/100%	100%/80%	100%/95%	–	100%/60%

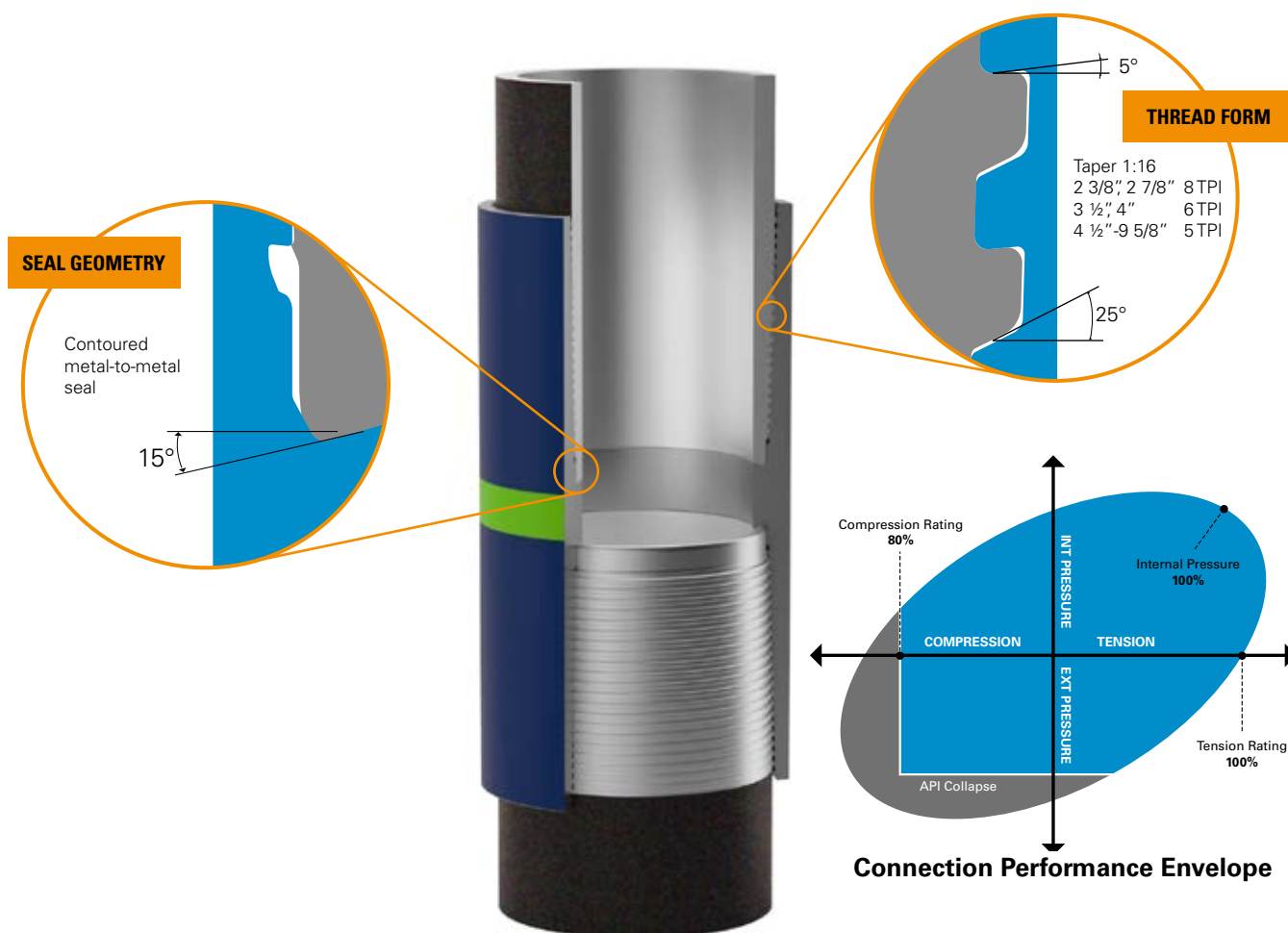
JFE Premium Connections



Size range: 2-3/8" – 9-5/8"

JFEBEAR™ has been designed and tested to meet the needs for critical well loads. The design incorporates metal-to-metal seals with a 15° internal torque shoulder to ensure sealing under extreme loads. The negative load flank thread form and coupled design provide 100% tensile efficiency for the standard coupling.

Special clearance coupling OD's are available with full pipe body internal and external pressure ratings.



Design Advantage

Negative (-5°) load flank angle on threads ➡ Superior bending capability due to hook threads

25° angle for thread stabbing flank ➡ Excellent stabbing performance due to high stabbing flank angle

15° torque shoulder ➡ Reduced hoop stress

Reduced gap between stabbing flanks on pipe & coupling thread ➡ High compression rating & galling resistance due to optimum gap

Contour metal-to-metal seal between pin and coupling ➡ Galling resistance due to point seal type

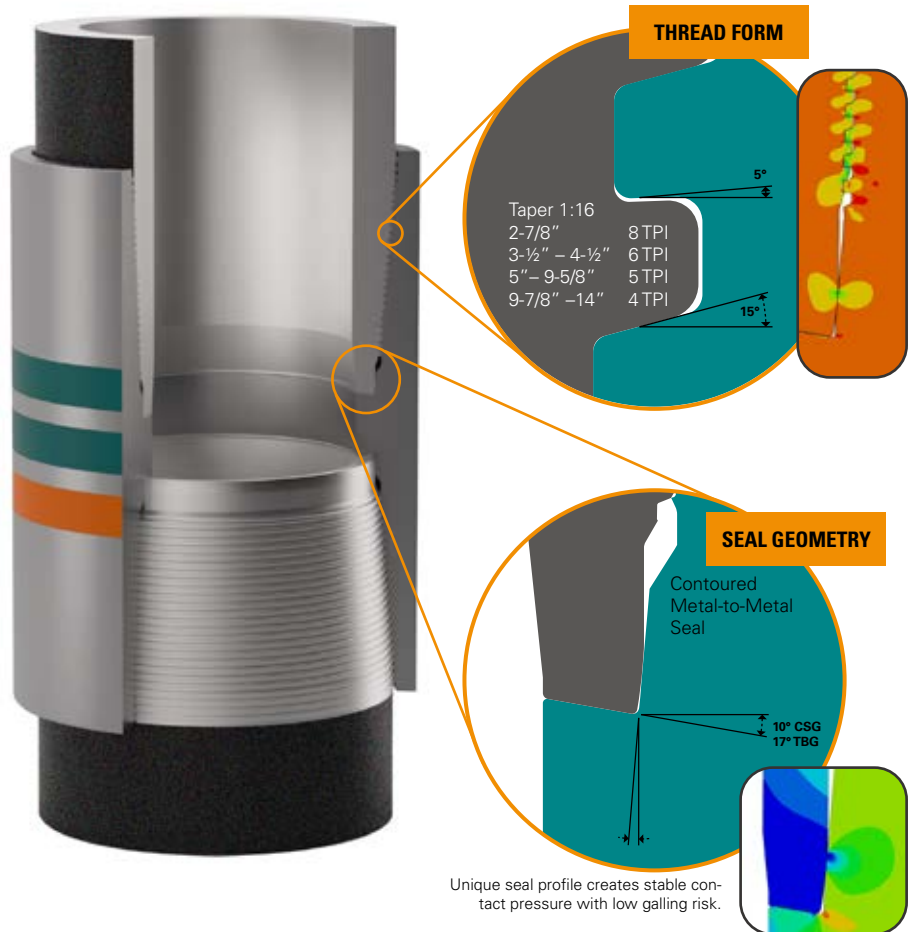
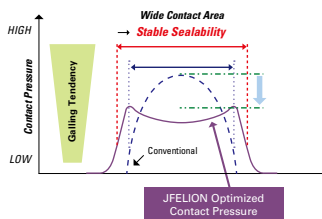
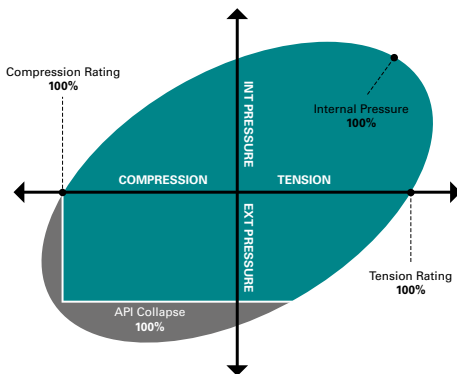
JFE Premium Connections

JFELION™



JFELION™ has been designed and validated to the latest industry standards to meet the need for critical well loads, including HPHT applications.

SIZE RANGE: 2-7/8" – 14"
WALL THICKNESS: Up to .850"



Design Advantage

- Reduced gap between stabbing flanks ➡ Increased resistance to compressive loads
- Negative 5° load flank angle on threads ➡ Enhanced bending and tension capacity
- 15° stabbing flanks ➡ Ease of stabbing and running
- Multi-radius seal profile ➡ Stable seal contact with wide contact area
- Optimized for pipe d/t ratio ➡ Maximum performance for each size

JFE Premium Connections

JFELION™-HW

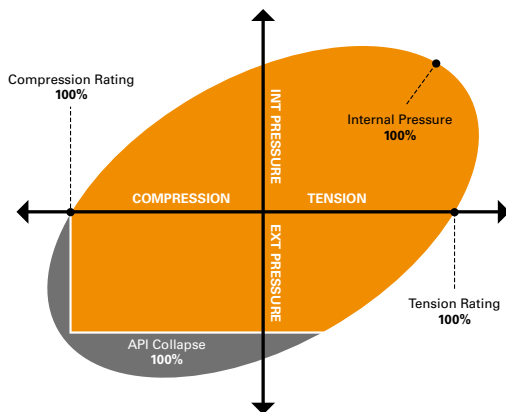


JFELION™-HW is specifically designed and tested for heavy wall casing up to 1.5" wall thickness.

Available in Carbon and JFE-Cr grades.

SIZE RANGE: 5" – 14"
WALL THICKNESS: Up to 1.5"

Connection Performance Envelope



THREAD FORM

Taper 1:16
7" – 9-5/8" 5 TPI
9-7/8" 4 TPI

2°

15°

SEAL GEOMETRY

30°

10°

Contoured metal-to-metal seal

Design Advantage

- Reduced gap between stabbing flanks on pipe & coupling thread ➡ Increased resistance to damage from compressive loads
- Negative load flank angle on threads ➡ Increased tensile & bending capacity while maintaining tight gas seal
- 25° angle for thread stabbing flank ➡ Quick make up and increased resistance to cross threading
- Different corner radius for load flanks for pipe & coupling threads ➡ Increased resistance to galling

JFE Premium Connections

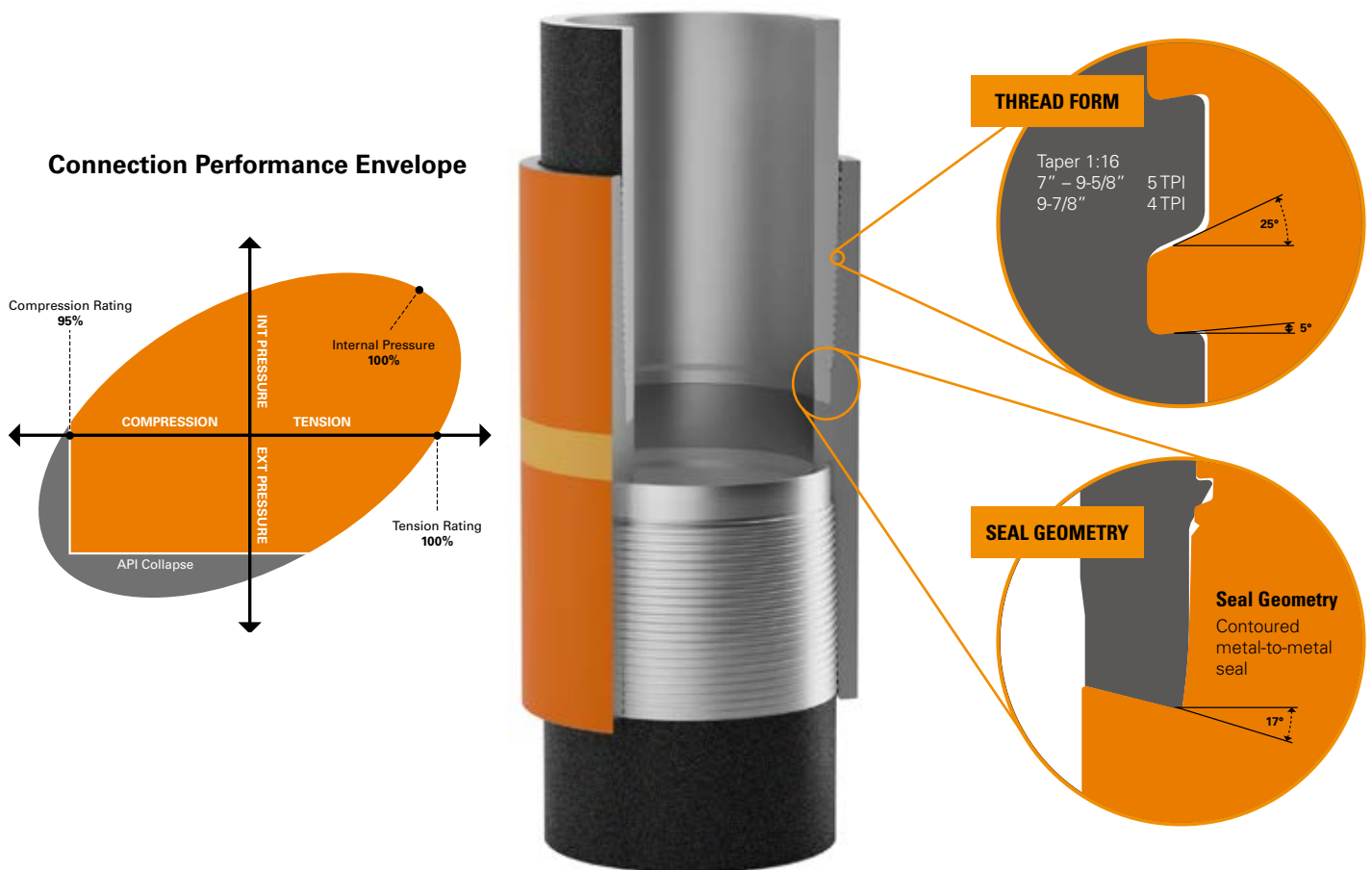


Size range: 7" – 9-7/8"

Wall thickness: Up to .700"

JFETIGER™ has been designed and tested to meet the needs for critical well loads. The design incorporates metal-to-metal seals with a 17° internal torque shoulder to ensure sealing under extreme loads. The negative load flank thread form and coupled design provide 100% tensile efficiency for the standard coupling.

Special clearance coupling OD's are available with full pipe body internal and external pressure ratings.



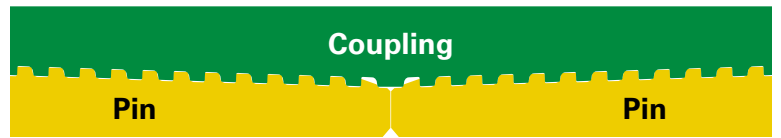
Design Advantage

- Reduced gap between stabbing flanks on pipe & coupling thread ➡ Increased resistance to damage from compressive loads
- Negative load flank angle on threads ➡ Increased tensile & bending capacity while maintaining tight gas seal
- 25° angle for thread stabbing flank ➡ Quick make up and increased resistance to cross threading
- Different corner radius for load flanks for pipe & coupling threads ➡ Increased resistance to galling

JFE Premium Connections



Size range: 4-1/2" – 7"



Pin-to-pin nose abutment



Design Advantage

API/BTC interchangeable ➡ • Cost savings as compared with premium joints
• Utilize existing BTC accessories

Pin-to-pin nose abutment ➡ • High over-torque resistance
• Enhanced leak resistance
• Enhanced fatigue strength

Low hoop stress with optimized thread interference ➡ • Helps prevent split coupling

Proper make up torque and position control on mill and field ends ➡ • Liquid & gas sealability testing

Modified "draft" API 5TR5SF testing ➡ • Includes fatigue testing

Standard usage of metal-free dope ➡ • Environmentally friendly

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