



**10.750” 85.30 lb/ft (0.797 wt) Q125HC  
Wedge-Lock SF  
Connection Brief**  
Industry Standard Connection Qualification Testing  
API RP 5C5:2017 4<sup>th</sup> ed. CAL IV

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A deep water Gulf of Mexico Operator requested qualification testing for the 10.750 85.30 (0.797 wall) Wedge-Lock SF connection on USS Q125HC casing for High Pressure High Temperature well applications.

Qualification tests were conducted in accordance with API RP 5C5 CAL IV: 2017 test protocol. The qualification testing was conducted at Hunting Energy Services R&D laboratory located in Baytown, Texas. The manufacturing and testing of the specimens was conducted from November 2018 until January 2019.

The product was qualified using combined load testing under ambient temperatures, which includes tension, compression, internal pressure, external pressure and applied bending. Combined loads varied from 2,411 kips tension to 2,500 kips of compression with over 20,000 psi of internal pressure and 17,605 psi of external pressure for the various defined API load points. Bending of 10°/100ft was also tested in conjunction with the combined loads.

All required specimen geometries successfully passed the CAL IV protocol.

Specimen Geometry	MBG	FMU	Bake	TS-B	TS- C	TS-A 90%	TS-A 95%	LL
SP2 (XH-XL)	-	X	X	X	-	X	X	-

**Physical Testing Summary**

The deviations from the API RP 5C5 protocol were limited during the Cal IV qualification testing. The deviations included, limiting the minimum and average walls of the CEE to nominal casing wall, no elevated test and limiting the bending during Series B testing to 10°/100ft.

The 10.750 85.30 (0.797 wall) Wedge-Lock SF connection for High Pressure High Temperature well applications displayed a robust connection design which was successfully qualified to API RP 5C5:2017 CAL IV Sample 2 requirements.



# WEDGE-LOCK SF

10.750" 84.8 LB/FT (.797" Wall)  
USS Q125 HC

## Pipe Body Data

Nominal OD:	10.750	in
Nominal Wall:	.797	in
Nominal Weight:	84.80	lb/ft
Plain End Weight:	84.80	lb/ft
Material Grade:	Q125 HC	
Mill/Specification:	USS	
Yield Strength:	125,000	psi
Tensile Strength:	135,000	psi
Nominal ID:	9.156	in
API Drift Diameter:	9.000	in
Special Drift Diameter:	None	in
RBW:	87.5 %	
Body Yield:	3,115,000	lbf
Burst:	16,210	psi
Collapse:	15,350	psi

## Connection Data

Standard OD:	11.000	in
Pin Bored ID:	9.110	in
Critical Section Area:	17.961	in <sup>2</sup>
Tensile Efficiency:	72.1 %	
Compressive Efficiency:	76.6 %	
Longitudinal Yield Strength:	2,245,000	lbf
Compressive Limit:	2,454,000	lbf
Internal Pressure Rating:	16,210	psi
External Pressure Rating:	15,350	psi
Maximum Bend:	38.4	°/100ft

## Operational Data

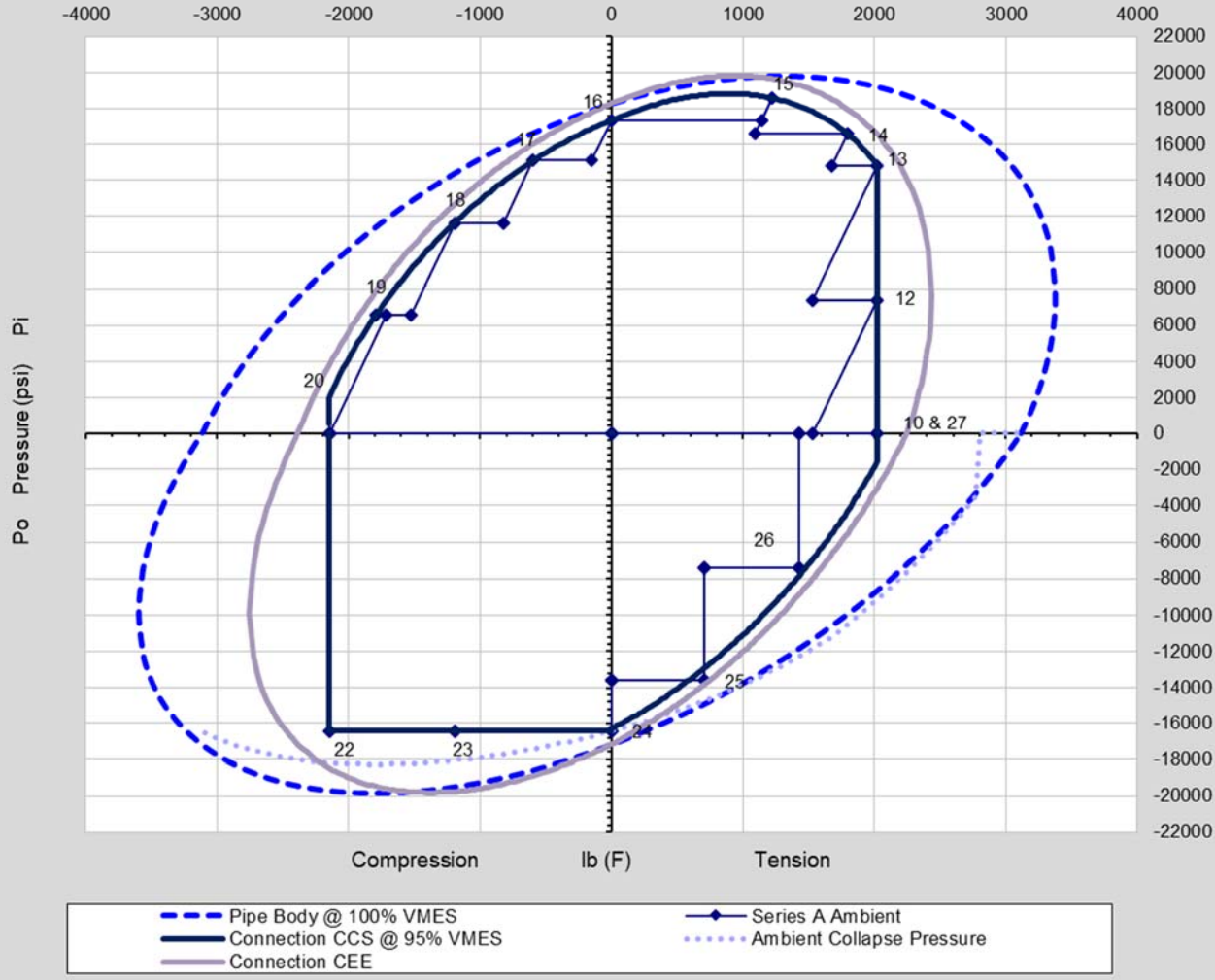
Minimum Makeup Torque:	60,000	ft*lbf
Optimum Makeup Torque:	75,600	ft*lbf
Maximum Makeup Torque:	122,500	ft*lbf
Minimum Yield:	185,000	ft*lbf
Makeup Loss:	8.31	in

## Notes

### WLSF 10.75" 85.3# Q125HC: Specimen SP2

Connection Test Load Envelope  
API RP 5C5 4ed 2017

95% VME Test Series A - Ambient Temperature



10.750" 85.30 lb/ft WLSF TLE