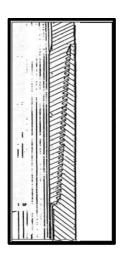


SPECIAL FEATURES

Hook thread prevents jump out and hoop loading caused by tension loads. The elimination of hoop loading improves pressure seal under both tension and compression loading of the joint.

If you want a FLUSH-FLUSH O.D. JOINT, this is the best joint for you. It is economical, dependable, and fast running.



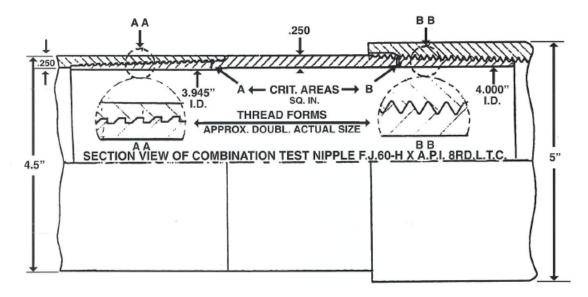
WOOLLEY FLUSH JOINT LINER TECHNICAL DATA

4"	12.93 lbs/ft	FJ-HS	J55	N80	P110
PIPE BODY D	<u>IMENSIONS</u>				
Nominal Pipe Body O.D. (in)			-	4.000	4.000
Nominal Pipe Body I.D. (in)			-	3.340	3.340
Nominal Wall Thickness (in)			-	0.330	0.330
Nominal Weight (lbs/ft)			-	13.400	13.400
Plain End Weight (lbs/ft)			-	12.930	12.930
Drift I.D. (in)			-	3.215	3.215
PIPE BODY PERFORMANCE DATA					
Minimum Pipe Body Yield Strength (lbs)			-	304,000	419,000
Minimum Collapse Pressure (psi)			-	12,110	16,650
Minimum Interal Yield Pressure (psi)			-	11,550	15,881
CONNECTION	I DIMENSIONS AND	PERE DATA			
Connection O.D. (in)			_	4.000	4.000
Pin Connection I.D. (in)			_	3.340	3.340
Make-up Loss (in)			_	3.100	3.100
Critical Area (sq in)			_	2.205	2.205
Joint Efficiency (%)			_	58	58
Reference Minimum Parting Load (lbs)			_	220,000	275,000
Reference String Length (ft)			_	10,031	13,323
Collapse Pressure Rating (psi)			_	12,110	16,650
Internal Pressure Rating (psi)			-	11,550	15,881
RECOMMENDED MAKE-UP TORQUE					
Minimum Final Torque (ft/lbs)			-	1,600	1,600
Maximum Final Torques (ft/lbs)			-	2,800	2,800

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SKETCH TO ILLUSTRATE THE SET UP FOR TENSILE TESTING, PARTING LOAD CAPACITY OF WOOLLEY F.J.60-H FLUSH JOINT THREAD VS. A.P.I., 8RD, L.T.C. THREADS CUT ON OPPOSITE ENDS OF EACH J OR K-55 4 1/2" O.D., 11.60# CASING TEST NIPPLE



Repeated tests with above setup established two things. the A.P.I. 8rd thread always jumped out at approximately 160,000# tension, leaving the flush joint F.J.60-H undamaged and not tested near to its limit.

The setup was then changed to F.J.60-H thread on both ends of the same test nipples in order to determine parting load of the flush joint thread.

On this setup we had repeated parting loads of 196,000# with one test going to 220,000#.

On all tests to ultimate tensile on the F.J.60-H flush joint, there were no jump outs. All pins parted in critical root of the last effective pin thread.

All tension testing started at 100,000#, then increased in tensile steps of 15,000# with Hydrotest to 6,000 psi betwen tensile steps. There were no leaks prior to parting.