

CHT-VT PREMIUM CONNECTION

TENSILE LOAD SAFETY FACTOR FOR ChT-VT T&C TUBING
IN DIRECTIONAL AND DEVIATED WELLS

Outside Diameter, mm	Deviation Rate	Safety Factor				Deviation Rate	Safety Factor			
		D, Dcr (J55; K55) 379 MPa 55 psi	K (K72) 491 MPa 71 psi	E, Ecr (L80; N80) 552 MPa 80 psi	L (T95; C95) 654 MPa 95 psi		D, Dcr (J55; K55) 379 MPa 55 psi	K (K72) 491 MPa 71 psi	E, Ecr (L80; N80) 552 MPa 80 psi	L (T95; C95) 654 MPa 95 psi
60,3		1,33	1,32	1,32	1,31		1,50	1,45	1,43	1,41
73	1°/10 m	1,33	1,32	1,32	1,32	7°/10 m	1,55	1,48	1,46	1,43
88,9		1,34	1,33	1,33	1,32		1,62	1,53	1,50	1,47
114,3		1,35	1,34	1,33	1,33		1,74	1,61	1,57	1,52
60,3		1,35	1,34	1,33	1,33		1,53	1,47	1,45	1,43
73	2°/10 m	1,36	1,35	1,34	1,34	8°/10 m	1,59	1,52	1,49	1,45
88,9		1,38	1,36	1,35	1,34		1,67	1,57	1,54	1,49
114,3		1,40	1,38	1,37	1,36		1,82	1,67	1,62	1,56
60,3		1,38	1,36	1,35	1,34		1,57	1,50	1,47	1,44
73	3°/10 m	1,40	1,37	1,36	1,35	9°/10 m	1,64	1,55	1,51	1,48
88,9		1,42	1,39	1,38	1,37		1,74	1,61	1,57	1,52
114,3		1,46	1,42	1,40	1,39		1,92	1,73	1,67	1,60
60,3		1,41	1,38	1,37	1,36		1,60	1,52	1,49	1,46
73	4°/10 m	1,43	1,40	1,39	1,37	10°/10 m	1,69	1,58	1,54	1,50
88,9		1,46	1,42	1,41	1,39		1,80	1,66	1,61	1,55
114,3		1,52	1,46	1,44	1,42		2,03	1,80	1,73	1,64
60,3		1,44	1,40	1,39	1,38		1,64	1,55	1,52	1,48
73	5°/10 m	1,47	1,43	1,41	1,39	11°/10 m	1,74	1,62	1,57	1,52
88,9		1,51	1,46	1,44	1,41		1,88	1,71	1,65	1,58
114,3		1,58	1,51	1,48	1,45		2,15	1,87	1,78	1,69
60,3		1,47	1,43	1,41	1,39		1,68	1,58	1,54	1,50
73	6°/10 m	1,51	1,45	1,44	1,41	12°/10 m	1,79	1,65	1,60	1,55
88,9		1,56	1,49	1,47	1,44		1,96	1,76	1,69	1,61
114,3		1,66	1,56	1,53	1,49		2,29	1,95	1,85	1,73

*- Dcr/Ecr = D/E Low temperature service



CHELPIPE
GROUP

SALES DEPARTMENT

5 Lesnaya St. bld B, Moscow, Russia, 125047; tel: +7 495 775 35 55

21 Mashinostroiteley St., Chelyabinsk, Russia, 454129; tel: +7 351 255 73 33

1 Torgovaya St., Pervouralsk, Sverdlovsk region, Russia, 623112; tel: +7 3439 27 77 77

www.chelpipe.ru

PREMIUM CONNECTIONS ChT-VT

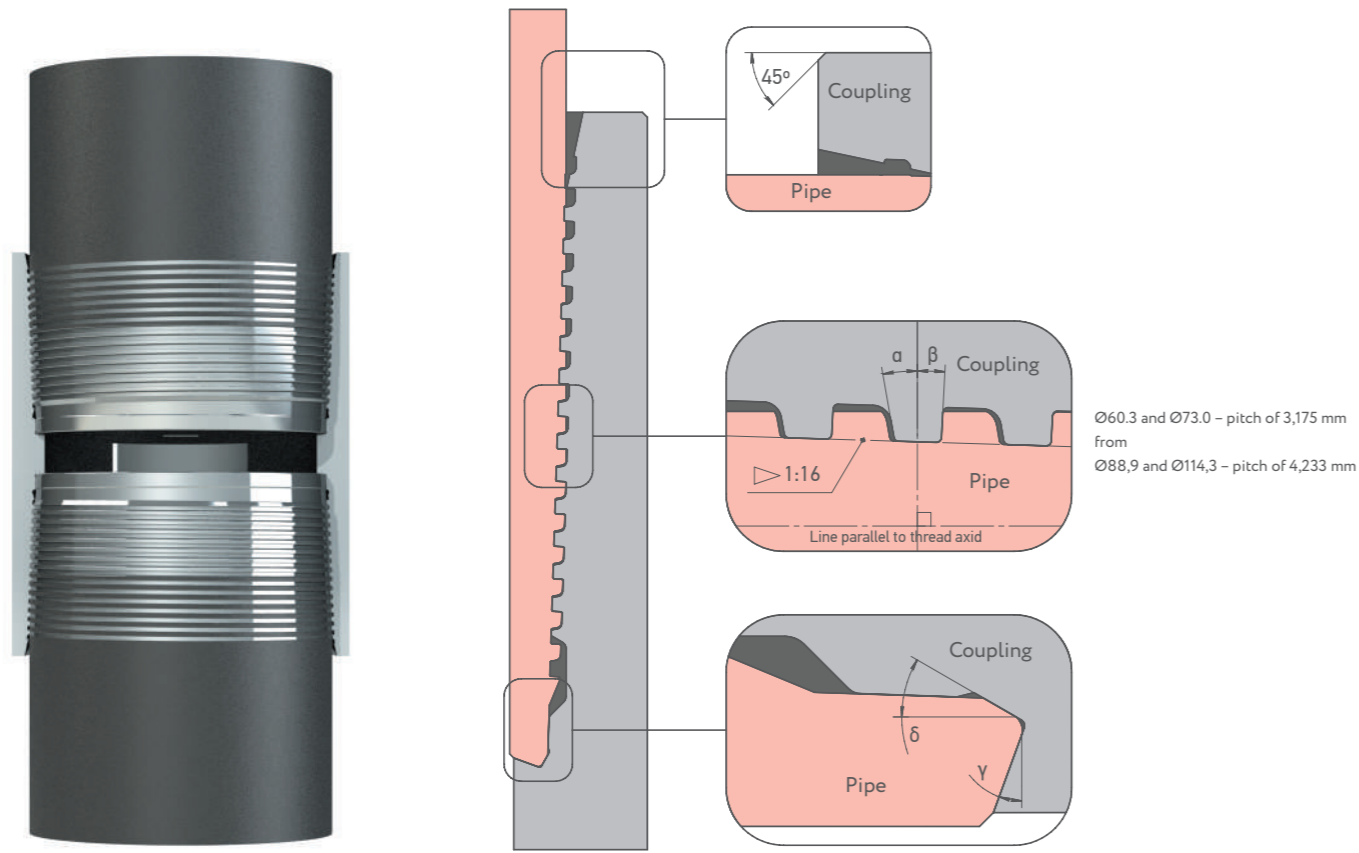


CHELPIPE
GROUP

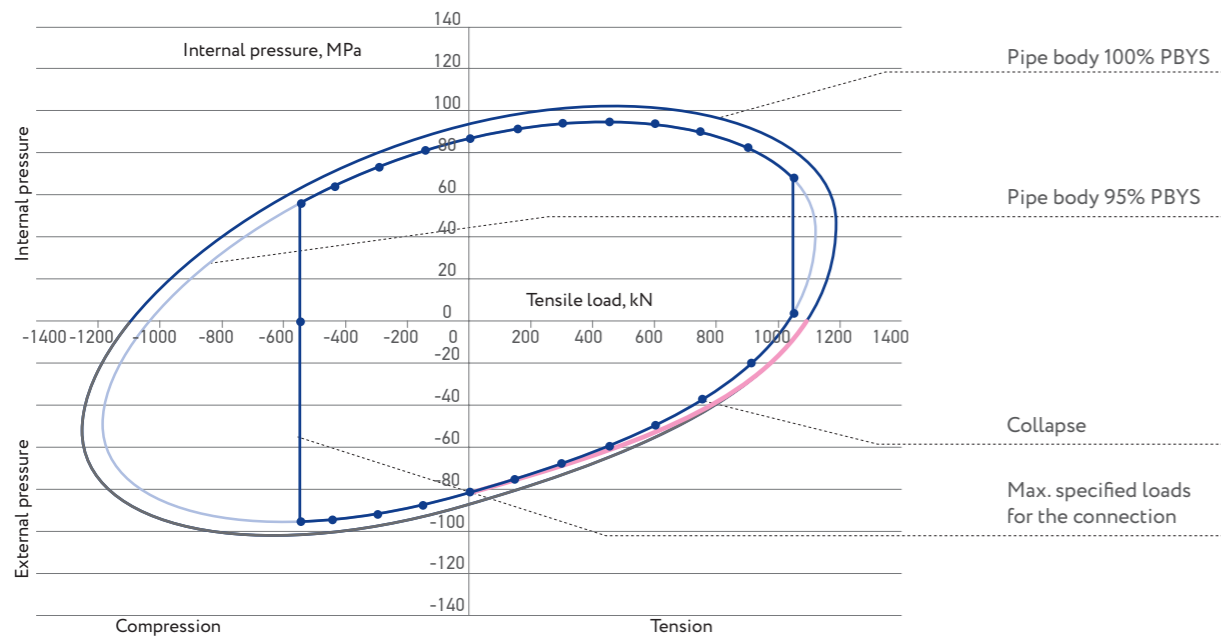


FIELD EXPERIENCE

1. OOO GAZPROM DOBYCHA NADYM
2. OAO LUKOIL
3. OOO VOLGODEMINOIL
4. OOO GAZPROM DOBYCHA ORENBURG (sour service of 6% H2S and CO2)



CRITICAL PERFORMANCE ENVELOPE (VON MISES EQUIVALENT) FOR FEM CALCULATION PURPOSES



SEAL: METAL-TO-METAL

CRITICAL LOADS

EXTERNAL PRESSURE – 100% PER API5C3
 INTERNAL PRESSURE – 100% OF PIPE BODY
 TENSION – 100% OF PIPE BODY

COMPRESSION – 60% OF PIPE BODY
 BENDING – 33°/100FT BASED ON FEM CALCULATION

SPECIFICATION (TU) 1327-340-00186619 AND SPECIFICATION (TU) 14-159-340 SEAMLESS STEEL T&C TUBING WITH ChT-VT GAS-TIGHT CONNECTION

1. BASIC DIMENSIONS AND PERFORMANCE

Outside Diameter	Wall Thickness	Nominal weight per Unit Length		Drift	Inside Coupling Diameter	Outside Coupling Diameter	Coupling Length	Coupling weight	Loss of Length at Make-up	Pipe cross-section area	Coupling cross-section area
		of plain-end pipe, kg/m	of string, kg/m								
60,3 (60,32)	5,0 (4,83)	6,82	6,99	47,9	50,00	73,0	128	1,9	56	868	1420
73,0 (73,02)	5,5 (5,51)	9,16	9,41	59,6	61,25	88,9	144	2,8	64	1166	2188
	7,0 (7,01)	11,40	11,64	56,6	61,25	88,9	144	2,8	64	1451	2188
88,9 (88,90)	6,5 (6,45)	13,21	13,63	72,7	76,50	108,0	168	4,6	76	1682	3252
	8,0 (8,00)	15,96	16,37	69,7	76,50	108,0	168	4,6	76	2033	3252
114,3 (114,30)	7,0 (6,88)	18,52	19,19	97,1	101,25	127	202	7,2	93	2359	2985

CRITICAL TENSILE LOAD

Sizes as per GOST 633 (API Spec 5CT)	Nominal Weight of String kg/m	Tensile load Qt, kN, for ChT-VT-equipped pipes and pipe body, depending of strength grade (yield strength)			
		D, Dcr (J55; K55) 379 MPa 55 psi	K (K72) 491 MPa 71 psi	E, Ecr (L80; N80) 552 MPa 80 psi	L (T95; C95) 654 MPa 95 psi
ChT-VT 60 x 5 (2 3/8" 4.6#)	6,99	329	426	480	569
ChT-VT 73 x 5,5 (2 7/8" 6.4#)	9,41	442	571	644	764
ChT-VT 89 x 5,5 (3 1/2" 7.7#)	11,74	546	706	795	944
ChT-VT 89 x 6,5 (3 1/2" 9.2#)	13,63	638	824	929	1102
ChT-VT 114 x 7 (4 1/2" 12.6#)	19,19	894	1156	1303	1546
ChT-VT 114 x 8,6 (4 1/2" 15.2#)	23,07	1082	1399	1576	1871

ULTIMATE SINGLE TUBING STRING RUNNING DEPTH IN A VERTICAL WELL (MAXIMUM RUNNING DEPTH IS CALCULATED WITH ACCOUNT TO SAFETY FACTOR N1=1.3)

Sizes as per GOST 633 (API Spec 5CT)	Nominal Weight of String kg/m	Ultimate single-step tubing string setting depth in a vertical well, m			
		D, Dcr (J55; K55) 379 MPa 55 psi	K (K72) 491 MPa 71 psi	E, Ecr (L80; N80) 552 MPa 80 psi	L (T95; C95) 654 MPa 95 psi
ChT-VT 60 x 5 (2 3/8" 4.6#)	6,99	3698	4781	5386	6391
ChT-VT 73 x 5,5 (2 7/8" 6.4#)	9,41	3687	4767	5370	6372
ChT-VT 89 x 5,5 (3 1/2" 7.7#)	11,74	3652	4721	5318	6311
ChT-VT 89 x 6,5 (3 1/2" 9.2#)	13,63	3673	4748	5349	6347
ChT-VT 114 x 7 (4 1/2" 12.6#)	19,19	3658	4729	5328	6322
ChT-VT 114 x 8,6 (4 1/2" 15.2#)	23,07	3683	4761	5363	6364

* - Dcr/Ecr = D/E Low temperature service