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1 Tubular Members Check : Frame Code Check

Description : Capacity Manager

1.1 ver_tubi_HC.run(1) : Frame Code Check

Description : ISO19902 2007

General options

Code	ISO 19902
CapendIncluded	true
UseCommentaryA13	true
Resistance Factor, Tension	1.05
Resistance Factor, Compression	1.18
Resistance Factor, Bending	1.05
Resistance Factor, Shear	1.05
Resistance Factor, Pipe Exposed To External Pressure	1.25
Resistance Factor, Joint, Yield Stress	1.05
Resistance Factor, Joint	1.05
Resistance Factor, Joint, Brace utilization	1.17
Y-Joint Axial Force Factor C1	25
X-Joint Axial Force Factor C1	20
K-Joint Axial Force Factor C1	14
All Joints Moment Factor C1	25
Y-Joint Axial Force Factor C2	11
X-Joint Axial Force Factor C2	22
K-Joint Axial Force Factor C2	43
All Joints Moment Factor C2	43
Brace Utilization, Cut-off value	0
X-Joint in Tension, Qu formula	ISO 19902
Azimuthal Tolerance Angle	5
Ind. Brace Can Distance	false
Joint Geometric Limits	Not checked

General options

Code	EN 1993-1-1
GammaM0	1
GammaM1	1
Method1	true
NationalAnnex	Standard

1.1.1 ver_tubi_HC.run(1) : Member Result Full

1.1.1.1 ver_tubi_HC.run(1) : EN199311 Member Result

Empty table - no objects of this type



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1.1.1.2 ver_tubi_HC.run(1) : ISO 19902 Member Result

ver_tubi_HC.run(1) : ISO 19902 Member Result

- Sorted by Member (Ascending)
- Then sorted by LoadCase (Ascending)

- Run : ver_tubi_HC.run(1)
- Selected LoadCase per Member
- Selected SubCheck per Member
- All Positions along Member

Member	LoadCase	Phase	Position	Status	Uftot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
Bm153	LC1_HIGH	0.0	0.00	OK	0.00	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.002	0.000	0.000	0.000	0.000	0.000
	0.002	-0.000	0.002	0.002	-0.000	0.002	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	1e-05	1.5	0.03	345000	2.1e+08	0	34.0089	0
	2.54916	1.80926e-20	0	0	345000	-0	300968	345000	2.52e+06
	681.303	0	-246277	-2.04368e-32	411395	36.7993	1.81225e-19	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.25	OK	0.14	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.136	0.058	0.000	0.000	0.000	0.000
	0.136	-0.000	0.136	0.136	-0.000	0.136	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.25	1.5	0.03	345000	2.1e+08	0	2658.21	0
	758.57	1.80926e-20	0	0	345000	-0	300968	345000	2.52e+06
	53252	0	-246277	-2.04368e-32	411395	10950.6	1.81225e-19	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.32	OK	0.22	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.222	0.074	0.000	0.000	0.000	0.000
	0.222	-0.000	0.222	0.222	-0.000	0.222	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.322334	1.5	0.03	345000	2.1e+08	0	4345.18	0
	977.324	1.80926e-20	0	0	345000	-0	300968	345000	2.52e+06
	87047.3	0	-246277	-2.04368e-32	411395	14108.5	1.81225e-19	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.32	OK	0.21	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.211	0.148	0.000	0.000	0.000	0.000
	0.211	-0.000	0.211	0.211	-0.000	0.211	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.322354	1.5	0.03	345000	2.1e+08	0	4133.47	-1.02015e-33
	1943.16	1.80926e-19	0	0	345000	-0	300968	345000	2.52e+06
	82806	-2.04368e-32	-246277	-2.04368e-32	411395	28051	1.81225e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.43	OK	0.12	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.061	0.123	0.000	0.000	0.000	0.000
	0.061	-0.000	0.061	0.061	-0.000	0.061	0.000	0.000	0.000



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Member	LoadCase	Phase	Position	Status	Uftot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.432224	1.5	0.03	345000	2.1e+08	0	-1196.62	-9.24749e-34
	1610.89	1.80926e-19	0	0	345000	-0	300968	345000	2.52e+06
	-23972	-1.85255e-32	-246277	-2.04368e-32	411395	23254.5	1.81225e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.43	OK	0.12	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.075	0.118	0.000	0.000	0.000	0.000
	0.075	-0.000	0.075	0.075	-0.000	0.075	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.432244	1.5	0.03	345000	2.1e+08	0	-1473.94	-9.19014e-34
	1553.08	1.26648e-19	0	0	345000	-0	300968	345000	2.52e+06
	-29527.6	-1.84107e-32	-246277	-2.04368e-32	411395	22420	1.26858e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.50	OK	0.21	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.209	0.103	0.000	0.000	0.000	0.000
	0.209	-0.000	0.209	0.209	-0.000	0.209	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.5	1.5	0.03	345000	2.1e+08	0	-4082.7	-8.5509e-34
	1348.17	1.26648e-19	0	0	345000	-0	300968	345000	2.52e+06
	-81788.9	-1.71301e-32	-246277	-2.04368e-32	411395	19462	1.26858e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.75	OK	0.55	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.547	0.045	0.000	0.000	0.000	0.000
	0.547	-0.000	0.547	0.547	-0.000	0.547	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.75	1.5	0.03	345000	2.1e+08	0	-10693.5	-6.19228e-34
	592.124	1.26648e-19	0	0	345000	-0	300968	345000	2.52e+06
	-214224	-1.2405e-32	-246277	-2.04368e-32	411395	8547.79	1.26858e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	0.91	OK	0.63	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.629	0.009	0.000	0.000	0.000	0.000
	0.629	-0.000	0.629	0.629	-0.000	0.629	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.905372	1.5	0.03	345000	2.1e+08	0	-12293.5	-4.72643e-34
	122.245	1.26648e-19	0	0	345000	-0	300968	345000	2.52e+06
	-246277	-9.46848e-33	-246277	-2.04368e-32	411395	1764.71	1.26858e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153	LC1_HIGH	0.0	1.00	OK	0.63	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.626	0.012	0.000	0.000	0.000	0.000
	0.626	-0.000	0.626	0.626	-0.000	0.626	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	50
	0.03	0.99999	1.5	0.03	345000	2.1e+08	0	-12239.7	-3.83376e-34
	163.898	1.26648e-19	0	0	345000	-0	300968	345000	2.52e+06
	-245199	-7.68019e-33	-246277	-2.04368e-32	411395	2366	1.26858e-18	0	0
	73920	73920	27.3	27.3	1	1	27.3	751483	751483
	0	0	0	345000	411395	300968			
Bm153_Inner	LC1_HIGH	0.0	0.00	OK	0.01	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)



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Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	0.000	-0.000	-0.000	0.009	0.002	0.000	0.000	0.000	0.000
	0.009	-0.000	0.009	0.009	-0.000	0.009	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	1e-05	0.762	0.0254	265000	2.1e+08	0	-30.1401	0
	7.14939	2.26158e-21	0	0	265000	-0	161616	265000	4.2e+06
	-2877.17	0	-126908	-1.0845e-32	348767	243.267	1.07945e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.25	OK	0.09	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.087	0.021	0.000	0.000	0.000	0.000
	0.087	-0.000	0.087	0.087	-0.000	0.087	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.25	0.762	0.0254	265000	2.1e+08	0	302.952	0
	89.6016	2.26158e-21	0	0	265000	-0	161616	265000	4.2e+06
	28919.7	0	-126908	-1.0845e-32	348767	3048.81	1.07945e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.32	OK	0.14	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.144	0.026	0.000	0.000	0.000	0.000
	0.144	-0.000	0.144	0.144	-0.000	0.144	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.322334	0.762	0.0254	265000	2.1e+08	0	500.504	0
	113.459	2.26158e-21	0	0	265000	-0	161616	265000	4.2e+06
	47778	0	-126908	-1.0845e-32	348767	3860.59	1.07945e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.32	OK	0.20	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.205	0.091	0.000	0.000	0.000	0.000
	0.205	-0.000	0.205	0.205	-0.000	0.205	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.322354	0.762	0.0254	265000	2.1e+08	0	711.88	-1.13608e-34
	388.273	2.26158e-20	0	0	265000	-0	161616	265000	4.2e+06
	67955.9	-1.0845e-32	-126908	-1.0845e-32	348767	13211.5	1.07945e-18	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.43	OK	0.11	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.114	0.082	0.000	0.000	0.000	0.000
	0.114	-0.000	0.114	0.114	-0.000	0.114	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.432224	0.762	0.0254	265000	2.1e+08	0	-398.381	-9.37349e-35
	352.036	2.26158e-20	0	0	265000	-0	161616	265000	4.2e+06
	-38029.3	-8.9479e-33	-126908	-1.0845e-32	348767	11978.5	1.07945e-18	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.43	OK	0.04	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.035	0.040	0.000	0.000	0.000	0.000
	0.035	-0.000	0.035	0.035	-0.000	0.035	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.432244	0.762	0.0254	265000	2.1e+08	0	-122.066	-9.94487e-35
	171.5	1.24387e-20	0	0	265000	-0	161616	265000	4.2e+06
	-11652.3	-9.49334e-33	-126908	-1.0845e-32	348767	5835.52	5.93696e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835



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Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.50	OK	0.12	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.118	0.035	0.000	0.000	0.000	0.000
	0.118	-0.000	0.118	0.118	-0.000	0.118	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.5	0.762	0.0254	265000	2.1e+08	0	-410.499	-9.2282e-35
	149.153	1.24387e-20	0	0	265000	-0	161616	265000	4.2e+06
	-39186.1	-8.80921e-33	-126908	-1.0845e-32	348767	5075.12	5.93696e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.75	OK	0.33	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.329	0.016	0.000	0.000	0.000	0.000
	0.329	-0.000	0.329	0.329	-0.000	0.329	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.75	0.762	0.0254	265000	2.1e+08	0	-1145.95	-6.58389e-35
	66.6974	1.24387e-20	0	0	265000	-0	161616	265000	4.2e+06
	-109392	-6.28496e-33	-126908	-1.0845e-32	348767	2269.47	5.93696e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	0.91	OK	0.38	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.382	0.004	0.000	0.000	0.000	0.000
	0.382	-0.000	0.382	0.382	-0.000	0.382	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.905372	0.762	0.0254	265000	2.1e+08	0	-1329.44	-4.94048e-35
	15.4522	1.24387e-20	0	0	265000	-0	161616	265000	4.2e+06
	-126908	-4.71616e-33	-126908	-1.0845e-32	348767	525.78	5.93696e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm153_Inner	LC1_HIGH	0.0	1.00	OK	0.38	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.382	0.004	0.000	0.000	0.000	0.000
	0.382	-0.000	0.382	0.382	-0.000	0.382	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.99999	0.762	0.0254	265000	2.1e+08	0	-1329.05	-3.93968e-35
	15.7548	1.24387e-20	0	0	265000	-0	161616	265000	4.2e+06
	-126871	-3.76081e-33	-126908	-1.0845e-32	348767	536.078	5.93696e-19	0	0
	167506	205333	27.3	27.3	1	1	27.3	188835	188835
	0	0	0	265000	348767	161616			
Bm155	LC1_HIGH	0.0	0.00	OK	0.46	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.460	0.008	0.000	0.000	0.000	0.000
	0.460	-0.000	0.460	0.460	-0.000	0.460	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.5
	0.04	1e-05	1.5	0.04	345000	2.1e+08	0	-12513.4	-3.87246e-34
	134.339	1.44741e-19	0	0	345000	-0	337756	345000	3.36e+06
	-191836	-5.93669e-33	-191836	-5.93669e-33	438020	1464.43	1.10948e-18	0	0
	131413	131413	11	11	1	1	11	4.56747e+06	4.56747e+06
	0	0	0	345000	438020	337756			
Bm155	LC1_HIGH	0.0	0.18	OK	0.44	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.439	0.025	0.000	0.000	0.000	0.000
	0.439	-0.000	0.439	0.439	-0.000	0.439	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.5
	0.04	0.181808	1.5	0.04	345000	2.1e+08	0	-11951.4	-3.23433e-34
	427.702	1.44741e-19	0	0	345000	-0	337756	345000	3.36e+06



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Annex C: Structural Checks – Monopile – Horizontal Configuration – Tubular Members Check

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Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	-183221	-4.9584e-33	-191836	-5.93669e-33	438020	4662.39	1.10948e-18	0	0
	131413	131413	11	11	1	1	11	4.56747e+06	4.56747e+06
	0	0	0	345000	438020	337756			
Bm155	LC1_HIGH	0.0	0.73	OK	0.12	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.116	0.072	0.000	0.000	0.000	0.000
	0.116	-0.000	0.116	0.116	-0.000	0.116	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	83.3333
	0.03	0.727283	2.5	0.03	345000	2.1e+08	0	-5814.61	-1.08972e-34
	1589.84	2.89482e-19	0	0	345000	-0	266193	339646	1.512e+06
	-40935	-7.67166e-34	-88094.4	-2.72622e-33	371630	13658.9	1.01898e-18	0	0
	66064.8	66064.8	11	11	1	1	11	4.56747e+06	4.56747e+06
	0	0	0	345000	371630	332624			
Bm155	LC1_HIGH	0.0	1.00	OK	0.10	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.004	0.097	0.000	0.000	0.000	0.000
	0.004	-0.000	0.004	0.004	-0.000	0.004	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	83.3333
	0.03	0.99999	2.5	0.03	345000	2.1e+08	0	-207.95	-3.79186e-36
	2148.21	2.89482e-19	0	0	345000	-0	266193	339646	1.512e+06
	-1463.97	-2.66948e-35	-88094.4	-2.72622e-33	371630	18456	1.01898e-18	0	0
	66064.8	66064.8	11	11	1	1	11	4.56747e+06	4.56747e+06
	0	0	0	345000	371630	332624			
Bm155_Inner	LC1_HIGH	0.0	0.00	OK	0.30	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.303	0.011	0.000	0.000	0.000	0.000
	0.303	-0.000	0.303	0.303	-0.000	0.303	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	1e-05	0.762	0.0254	265000	2.1e+08	0	-1055.36	-3.55119e-35
	45.3647	1.80926e-20	0	0	265000	-0	248215	265000	4.2e+06
	-100744	-3.38996e-33	-100744	-3.38996e-33	348767	1543.59	8.63558e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.18	OK	0.27	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.270	0.016	0.000	0.000	0.000	0.000
	0.270	-0.000	0.270	0.270	-0.000	0.270	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.181808	0.762	0.0254	265000	2.1e+08	0	-940.48	-2.24676e-35
	69.5248	1.80926e-20	0	0	265000	-0	248215	265000	4.2e+06
	-89777.9	-2.14475e-33	-100744	-3.38996e-33	348767	2365.67	8.63558e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.18	OK	0.14	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.136	0.005	0.000	0.000	0.000	0.000
	0.136	-0.000	0.136	0.136	-0.000	0.136	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.181828	0.762	0.0254	265000	2.1e+08	0	-471.594	-1.3567e-35
	22.6801	6.78473e-21	0	0	265000	-0	248215	265000	4.2e+06
	-45018.2	-1.29511e-33	-100744	-3.38996e-33	348767	771.721	3.23834e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.25	OK	0.13	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.129	0.007	0.000	0.000	0.000	0.000
	0.129	-0.000	0.129	0.129	-0.000	0.129	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30



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Annex C: Structural Checks – Monopile – Horizontal Configuration – Tubular Members Check

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Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	0.0254	0.25	0.762	0.0254	265000	2.1e+08	0	-450.066	-1.20566e-35
	31.7399	6.78473e-21	0	0	265000	-0	248215	265000	4.2e+06
	-42963.1	-1.15092e-33	-100744	-3.38996e-33	348767	1079.99	3.23834e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.50	OK	0.09	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.091	0.015	0.000	0.000	0.000	0.000
	0.091	-0.000	0.091	0.091	-0.000	0.091	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.5	0.762	0.0254	265000	2.1e+08	0	-316.712	-6.51748e-36
	64.9637	6.78473e-21	0	0	265000	-0	248215	265000	4.2e+06
	-30233.2	-6.22157e-34	-100744	-3.38996e-33	348767	2210.47	3.23834e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.73	OK	0.03	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.034	0.022	0.000	0.000	0.000	0.000
	0.034	-0.000	0.034	0.034	-0.000	0.034	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.727263	0.762	0.0254	265000	2.1e+08	0	-118.069	-1.48215e-36
	95.1658	6.78473e-21	0	0	265000	-0	248215	265000	4.2e+06
	-11270.8	-1.41486e-34	-100744	-3.38996e-33	348767	3238.14	3.23834e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	0.73	OK	0.10	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.095	0.038	0.000	0.000	0.000	0.000
	0.095	-0.000	0.095	0.095	-0.000	0.095	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.727283	0.762	0.0254	265000	2.1e+08	0	-331.227	-6.32241e-36
	161.532	9.04631e-21	0	0	265000	-0	248215	265000	4.2e+06
	-31618.8	-6.03536e-34	-100744	-3.38996e-33	348767	5496.33	4.31779e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm155_Inner	LC1_HIGH	0.0	1.00	OK	0.06	(13.2-12)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.060	0.046	0.000	0.000	0.000	0.000
	0.060	-0.000	0.060	0.060	-0.000	0.060	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.99999	0.762	0.0254	265000	2.1e+08	0	207.692	3.78764e-36
	197.773	9.04631e-21	0	0	265000	-0	248215	265000	4.2e+06
	19826.2	3.61567e-34	-100744	-3.38996e-33	348767	6729.5	4.31779e-19	0	0
	167506	205333	11	11	1	1	11	1.16312e+06	1.16312e+06
	0	0	0	265000	348767	248215			
Bm161	LC1_HIGH	0.0	0.00	OK	0.00	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.001	0.002	0.000	0.000	0.000	0.000
	0.001	-0.000	0.001	0.001	-0.000	0.001	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	1e-05	0.762	0.0254	265000	2.1e+08	0	3.86595	0
	9.665	0	0	0	265000	-0	264911	265000	4.2e+06
	369.043	0	369.043	0	348767	328.864	0	0	0
	265000	1.36603e+06	0.8	0.8	1	1	0.8	2.19902e+08	2.19902e+08
	0	0	0	265000	348767	264911			
Bm161	LC1_HIGH	0.0	0.25	OK	0.00	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.001	0.002	0.000	0.000	0.000	0.000




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Annex C: Structural Checks – Monopile – Horizontal Configuration – Tubular Members Check

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Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.2-2)	(13.2-4)	Euler	(13.2-12)	(13.2-17)	(13.2-19)	(13.3-2)	(13.3-2ax)	(13.3-2mo)
	(13.3-7)	(13.3-7ax)	(13.3-7mo)	(13.3-8)	(13.3-8ax)	(13.3-8mo)	(13.2-31)	(13.4-12)	(13.4-12ax)
	(13.4-12mo)	(13.4-19)	(13.4-19ax)	(13.4-19mo)	(13.4-20)	(13.4-20ax)	(13.4-20mo)	(13.4-21)	D/t
	thk(m)	relpos	D	t	fy	E	Nx	My	Mz
	V	Mv,t	oa	ot	ft	oc	fc	fyc	fxe
	ob,y	ob,z	ob,yS	ob,zS	fb	taub	taut	p	oh
	fh	fhe	KLy	KLz	Cm,y	Cm,z	Lr	fe,y	fe,z
	ot,c	oc,c	ox	ft,h	fb,h	fc,h			
	0.001	-0.000	0.001	0.001	-0.000	0.001	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.25	0.762	0.0254	265000	2.1e+08	0	2.20149	0
	7.24882	0	0	0	265000	-0	264911	265000	4.2e+06
	210.153	0	369.043	0	348767	246.65	0	0	0
	265000	1.36603e+06	0.8	0.8	1	1	0.8	2.19902e+08	2.19902e+08
	0	0	0	265000	348767	264911			
Bm161	LC1_HIGH	0.0	0.50	OK	0.00	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.000	0.001	0.000	0.000	0.000	0.000
	0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.5	0.762	0.0254	265000	2.1e+08	0	0.966505	0
	4.83254	0	0	0	265000	-0	264911	265000	4.2e+06
	92.2623	0	369.043	0	348767	164.433	0	0	0
	265000	1.36603e+06	0.8	0.8	1	1	0.8	2.19902e+08	2.19902e+08
	0	0	0	265000	348767	264911			
Bm161	LC1_HIGH	0.0	0.75	OK	0.00	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.000	0.001	0.000	0.000	0.000	0.000
	0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.75	0.762	0.0254	265000	2.1e+08	0	0.268472	0
	2.41626	0	0	0	265000	-0	264911	265000	4.2e+06
	25.6282	0	369.043	0	348767	82.2164	0	0	0
	265000	1.36603e+06	0.8	0.8	1	1	0.8	2.19902e+08	2.19902e+08
	0	0	0	265000	348767	264911			
Bm161	LC1_HIGH	0.0	1.00	OK	0.00	(13.2-17)	Geom OK	ISO19902 member	ver_tubi_HC.run(1)
	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30
	0.0254	0.99999	0.762	0.0254	265000	2.1e+08	0	-9.26887e-08	0
	7.90414e-05	0	0	0	265000	-0	264911	265000	4.2e+06
	-8.84804e-06	0	369.043	0	348767	0.00268949	0	0	0
	265000	1.36603e+06	0.8	0.8	1	1	0.8	2.19902e+08	2.19902e+08
	0	0	0	265000	348767	264911			

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1.1.1.3 ver_tubi_HC.run(1) : ISO 19902 Cone Result

ver_tubi_HC.run(1) : ISO 19902 Cone Result

- Sorted by Member (Ascending)
- Then sorted by LoadCase (Ascending)

- Run : ver_tubi_HC.run(1)
- Selected LoadCase per Member
- Selected SubCheck per Member
- All Positions along Member

Member	LoadCase	Phase	Position	Status	UfTot	Formula	GeomCheck	SubCheck	Run
	(13.6-10)	(13.6-13)	(13.6-14)	(13.6-18)	(13.6-21)	(13.6-22)	HoopBuckl	Alpha	relpos
	Ds	tc	fy_c	Dj	t	fy	Ps	Ms	oa,eq
	oa,c	ob,c	ob,jt	ob,jc	oa,t	ob,t	oh,t	oh,c	omaxt
	omaxc	oh,jt	oh,jc	fxc	fxe	fhe	fh	fyc	
Bm155	LC1_HIGH	0.0	0.18	OK	0.91	(13.6-21)	Geom OK	ISO19902 cone	ver_tubi_HC.run(1)
	0.636	0.752	0.000	0.000	0.908	0.152	0.000	4.76347	0.181828
	1.5	0.04	345000	1.5	0.04	345000	0	12420.2	-186077
	0	-185434	-79334.1	-79334.1	0	-183221	-42073.3	-42073.3	-262555
	-265411	0	0	345000	3.34839e+06	2.24e+06	345000	345000	
Bm155	LC1_HIGH	0.0	0.73	OK	0.24	(13.6-14)	Geom OK	ISO19902 cone	ver_tubi_HC.run(1)
	0.109	0.000	0.236	0.054	0.000	0.000	0.000	4.76347	0.727263
	2.5	0.04	345000	2.5	0.03	345000	0	6028.15	-31814
	0	-31704.1	-28539.5	-16053.5	0	-40935	14012.6	10509.5	-69474.5
	-47867.4	0	0	344982	2.00904e+06	1.344e+06	345000	344982	