

Customer specification sheet



COMPOTECH+
Composite Structural Tubes

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Tube Name : **vodici_trubka V.1 R.0 CR.20c.xls**

Filename: vodici_trubka V.1 R.0 CR.20c.xls Designer : **O.Uher**
Date : 4.8.2018
Associated drawings : - Approved by : **O.Uher**

Parallel Tube			
Tube Weight :	0,22 Kg	Tube Length :	1160 mm
Left Internal Diameter :	26,0 mm	Right Internal Diameter :	26,0 mm
Left Outer Diameter :	29,0 mm	Right Outer Diameter :	29,0 mm
Left Wall Thickness :	1,5 mm	Right Wall Thickness :	1,5 mm

Loads and Mechanical Properties in Examined Cross Section			
Distance of Examined Cross Section from the Left Hand End:		600 mm	
Bending Moment :	40,1 Nm	Axial Young's Modulus of the Tube* :	107905 MPa
Internal Pressure :	0,0 MPa	Tangential Young's Modulus of the Tube* :	5414 MPa
		Shear Modulus of Elasticity of the Tube* :	9321 MPa
Axial Force :	0,0 N	Thermal Expansivity in Axial Direction* :	-1,5E-06 1/K
Torsional Moment :	0,0 Nm	Therm. Expans. in Tangenc. Direction* :	5,9E-05 1/K
		Bending Stiffness* :	1,3E+09 Nmm²
		Torsional Stiffness* :	2,3E+08 Nmm²

Laminate							
Layer Nr.	Fibre Volume Fraction %	Type of Fibre	Layer Thickness* mm	Winding Angle* °	Axial Stress* MPa	Tangential Stress* MPa	Torsion Shear* MPa
1	56	t700	0,991	3,12	55,85	0,00	0,00
2	56	t700	0,507	22,31	29,88	0,00	0,00

Bending - simply supported

Tube Length	1160 mm	Max. Bending Moment :	40,08 Nm
1st Support Dist. from the Left End :	0 mm	Max. Bending Deflection :	2,16 mm
2nd Support Dist. from the Left End :	1160 mm	Max. Def. with Shear :	2,28 mm

Isolated Forces

635 N at 600 mm from the left end.
-566,37 N at 670 mm from the left end.