Static

Static calculation of pipes

English

This tool calculates static loads and deformations on smooth pipes, according to **UNE 53331 IN**. Pipelife recommends using the last version of EasyPipe98 from IngSoft GmbH for calculations according the latest version of ATV-DVWK-A 127.

Vertical pressure caused by soil load		Short term	Long term	
Soil load	qv	21.1	20.0	[kN/m²]
Concentrated surcharges	Pvc	1.76	1.76	[kN/m²]

Deformation		Short term	Long term	
Displacement	ΔDv	0.466	0.504	[mm]
Deformation	δv	0.192	0.208	[%]
	δv	<5%	<5%	
		OK	OK	

Maximum tangential stress		Short term	Long term	
Top	σ	1.59	1.40	[MPa]
Side	σ	1.13	0.990	[MPa]
Base	σ	2.21	1.99	[MPa]
Material strength	σ	50.0	25.0	[MPa]
		OK	OK	

Crack safety coefficient		Short term	Long term	
Top	η_1	31.4	17.9	
Side	η_1	44.1	25.3	
Base	η_1	22.7	12.6	
Material safety coefficient	η_1	2.00	2.00	
		OK	OK	

Change input