

Underground pipes -general technical recommendations

Scope

Information within brackets ([...]) in this document refers to local regulations.

The objective of this standard is to present the conditions for the design of underground pipelines and to provide general technical recommendations for the dimensioning and selection of suitable piping materials on the basis of prevailing process conditions.

The term underground pipelines refers to pipelines intended to carry both contaminated and non-contaminated water to and from buildings, regardless of whether the pipelines are underground (in ducting) or special structures (e.g. utility tunnels).

Changes since the previous edition

This edition differs from the previous edition in that:

- AFS 2023:5 is added as a related document.
- Other pipes have been added under 3.1 Dimensioning
- Section 4.14 "Extinguishing water management" has been added.
- References have been updated.

Contents

1	Terminology	2
2	Related documents	2
3	General requirements	3
	3.1 Codification and marking	3
	3.2 Designation to use	3
	3.3 Documentation	3
4	Design work	4
	4.1 Dimensioning	5
	4.2 Laying Instructions	5
	4.3 Reception and handling of pipes and pipe fittings	6
	4.4 Spare parts for old-manufacture pipes	6
	4.5 Jointing methods	6
	4.6 Vents	6
	4.7 Cross-connections between pipes during downtime	6
	4.8 Prefab parts	6
	4.9 Renovation methods	6
	4.10 Underwater inlet and outlet pipes	7
	4.11 Chamber designs	7
	4.12 Inverted siphons	7
	4.13 Flow measurements	7
	4.14 Hydraulic models/profiles	7
	4.15 Extinguishing water management	7
5	Material	7
	5.1 Concrete pipe characteristics	9
	5.2 Plastic pipe characteristics	9
	5.2.1 GRP pipes	9
	5.2.2 PVC, PE and PP pipes	12
	5.3 Wooden pipe characteristics	15
	5.4 Stainless steel pipe characteristics	15
6	Inspection and maintenance	16