

ISO 11296-4:2018-02 (E)

Plastics piping systems for renovation of underground non-pressure drainage and sewerage networks - Part 4: Lining with cured-in-place pipes

Contents		Page
Foreword		v
Introduction		vii
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Symbols and abbreviated terms	4
4.1	Symbols	4
4.2	Abbreviated terms	6
5	Pipes at the "M" stage	6
5.1	Materials	6
5.2	General characteristics	8
5.3	Material characteristics	8
5.4	Geometric characteristics	8
5.5	Mechanical characteristics	8
5.6	Physical characteristics	8
5.7	Jointing	9
5.8	Marking	9
6	Fittings at the "M" stage	9
6.1	Materials	9
6.2	General characteristics	9
6.3	Material characteristics	9
6.4	Geometric characteristics	9
6.5	Mechanical characteristics	10
6.6	Physical characteristics	10
6.7	Jointing	10
6.8	Marking	10
7	Ancillary components	11
8	Fitness for purpose of the installed lining system at the "I" stage	11
8.1	Materials	11
8.2	General characteristics	11
8.3	Material characteristics	11
8.4	Geometric characteristics	11
8.4.1	General	11
8.4.2	CIPP wall structure	11
8.4.3	Wall thickness	12
8.5	Mechanical characteristics	12
8.5.1	Reference conditions for testing	12
8.5.2	Test requirements	12
8.6	Physical characteristics	15
8.7	Additional characteristics	15
8.8	Sampling	16

9	Installation practice	17
9.1	Preparatory work	17
9.2	Storage, handling and transport of pipe components	17
9.3	Equipment	17
9.4	Installation	17
9.4.1	Environmental precautions	17
9.4.2	Installation procedures	17
9.4.3	Simulated installations	18
9.5	Process-related inspection and testing	18
9.6	Lining termination	18
9.7	Reconnections to existing pipeline system	19
9.8	Final inspection and testing	19
9.9	Documentation	19
Annex A (informative) CIPP components and their functions		20
Annex B (normative)Cured-in-placepipes--Determinationofshort-termflexuralproperties		21
Annex C (normative)Cured-in-placepipes--Determinationoflong-termflexuralmodulus under dry or wet conditions		30
Annex D (normative)Cured-in-placepipes--Determinationoflong-termflexuralstrength under dry, wet or acidic conditions (stress corrosion test)		35
Bibliography		39