

TRANSPORT FOR NSW (TfNSW)

QA SPECIFICATION 3555

SUBSURFACE DRAINAGE PIPE (SLOTTED AND UNSLOTTED FIBRE-REINFORCED CONCRETE)

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REVISION REGISTER

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 1		First issued	GM, CMS	10.10.91
Ed 2	4 6 Annexures	Specification Title changed Converted to MS Word 6.0c. Document reformatted. References updated. Complete revision of requirements. Time limit on testing. Annexures deleted. Figure 1 transferred to Clause 4.	GM, RNIC (W Ho)	13.03.97
Ed 3/Rev 0	“Notice” Spec Ref No Foreword Global 6 Annexure C Annexure M	RTA PO Box and Fax numbers updated. Revision No added. Foreword added. Text revised to direct imperative style. “shall” replaced by “must”. Reformatting and minor editing. Clauses rearranged and renumbered. Reworded slightly to clarify “top” side. Schedule of Identified Records added. Reference documents updated.	GM, IC	27.04.09
Ed 4/Rev 0	1 2.3	Specification title changed to include unslotted fibre-reinforced concrete pipes. Previous Clause 3 “(Not Used)” deleted. Some clauses renumbered. Scope expanded to include unslotted fibre-reinforced concrete pipe. New clause titled “Frequency of Testing” added.	GM, IC	08.04.11

Ed/Rev Number	Clause Number	Description of Revision	Authorised By	Date
Ed 4/Rev 0 (cont'd)	4 Annex C Annex L	Previously clause 5. Requirements expanded to cover unslotted fibre-reinforced concrete pipes and fittings. Clause reference updated. New annexure.		
Ed 4/Rev 1	Global	References to “Roads and Maritime Services” or “RMS” changed to “Transport for NSW” or “TfNSW” respectively.	DCS	22.06.20



SUBSURFACE DRAINAGE PIPE (SLOTTED AND UNSLOTTED FIBRE- REINFORCED CONCRETE)

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VERSION FOR: DATE:

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FOREWORD

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REVISIONS TO PREVIOUS VERSION

This document has been revised from Specification TfNSW 3555 Edition 4 Revision 0.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Any project specific changes are indicated in the following manner:

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. ***Additional Text***.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

TfNSW QA SPECIFICATION 3555

SUBSURFACE DRAINAGE PIPE

(SLOTTED AND UNSLOTTED FIBRE-REINFORCED CONCRETE)

1 SCOPE

This Specification sets out the requirements for slotted and unslotted fibre-reinforced concrete pipes for use in subsurface drainage.

2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

2.1 (NOT USED)

2.2 SCHEDULE OF IDENTIFIED RECORDS

The records listed in Annexure 3555/C are **Identified Records** for the purposes of Specification TfNSW Q Annexure Q/E.

2.3 FREQUENCY OF TESTING

The minimum frequency of testing is shown in Annexure 3555/L.

2.4 REFERENCED DOCUMENTS AND DEFINITIONS

Unless specified otherwise, the applicable issue of a referenced document, other than a TfNSW Specification, must be the issue current at the date one week before the closing date for tenders, or where no issue is current at that date, the most recent issue.

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 1234). For convenience, the full titles are given in Annexure 3555/M.

The term “the Supplier” means the supplier of the product covered by the scope of this Specification.

3 SUPPLIER’S QUALITY MANAGEMENT SYSTEM

The Supplier must establish and maintain a Quality Management System complying with AZ/NZS ISO 9001 as a means of ensuring that the product conforms to this Specification.

Provide evidence verifying compliance with this Clause.

4 MATERIAL AND PHYSICAL REQUIREMENTS

Fibre-reinforced concrete pipes and fittings must comply with AS 4139. The pipes must be Class 4, size DN 100.

Slotting for slotted fibre-reinforced concrete pipes must be in accordance with Figure 3555.1.

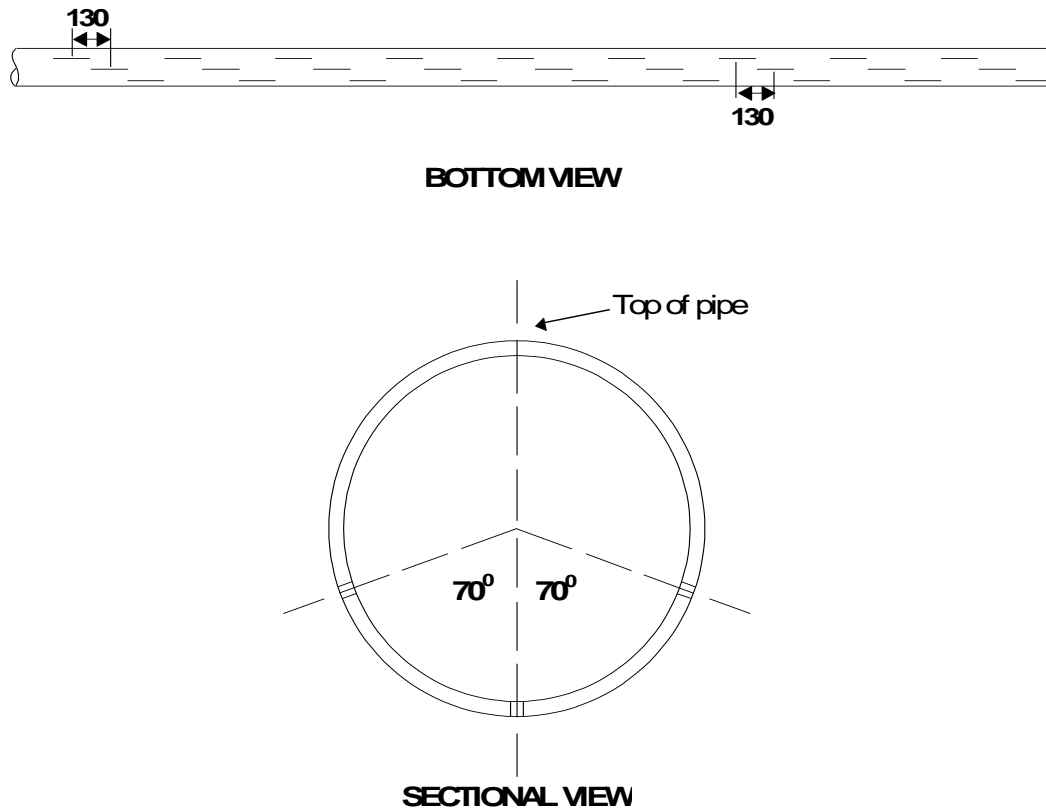


Figure 3555.1 - Slotting Details

Slot dimensions and spacing must be in accordance with the following requirements:

- | | | |
|-----|----------------------------|--------------------|
| (a) | Maximum slot width | 3 mm |
| (b) | Minimum slot width | 2 mm |
| (c) | Internal length of slot | 80 ± 8 mm |
| (d) | Number of rows of slots | 3 |
| (e) | Angular separation of rows | 70 ± 5 degrees |
| (f) | Pitch of centres of slots | 130 ± 5 mm |

The spacing of slots and rows of slots are shown in Figure 3555.1.

5 IDENTIFICATION

Indelibly mark the top of the pipes (as shown in Figure 3555.1) with the word “TOP”.

6 PRODUCT CERTIFICATION

Provide a certificate of compliance verifying that the fibre-reinforced concrete pipes comply with all the requirements of this Specification together with test results reported on NATA endorsed test documents.

The certificates must be for tests not more than six (6) months old.

ANNEXURES 3555/A TO 3555/B - (NOT USED)

ANNEXURE 3555/C - SCHEDULE OF IDENTIFIED RECORDS

Refer to Clause 2.2.

The records listed below are Identified Records for the purposes of TfNSW Q Annexure Q/E.

Clause	Description of Identified Record
6	Certificate of compliance

ANNEXURES 3555/D TO 3555/K - (NOT USED)

ANNEXURE 3555/L - MINIMUM FREQUENCY OF TESTING

Clause	Characteristics Tested	Test Method	Minimum Frequency of Testing
4	Flexural strength	Appendix I of AS 4139	One per 2,000 m or part thereof
4	Crush strength	Appendix E of AS 4139	One per 2,000 m or part thereof

ANNEXURE 3555/M – REFERENCED DOCUMENTS

Refer to Clause 2.4.

TfNSW Specifications

TfNSW Q Quality Management System

Australian Standards

AS 4139 Fibre-reinforced concrete pipes and fittings

AS/NZS ISO 9001 Quality management systems – Requirements