SUPPLY OF STEEL VENT TUBE BASES AND VENT BASE HOLDING DOWN BOLTS
(TS 84 accompanies this TS)
This document is copyright and all rights are reserved by SA Water. No part may be reproduced, copied or transmitted in any form or by any means without the express written permission of SA Water.

The information contained in these Standards is strictly for the private use of the intended recipient in relation to works or projects of SA Water.

These Standards have been prepared for SA Water's own internal use and SA Water makes no representation as to the quality, accuracy or suitability of the information for any other purpose.

It is the responsibility of the users of these Standards to ensure that the application of information is appropriate and that any designs based on these Standards are fit for SA Water’s purposes and comply with all relevant Australian Standards, Acts and regulations. Users of these Standards accept sole responsibility for interpretation and use of the information contained in these Standards.

SA Water and its officers accept no liability for any loss or damage caused by reliance on these Standards whether caused by error, omission, misdirection, misstatement, misinterpretation or negligence of SA Water. Users should independently verify the accuracy, fitness for purpose and application of information contained in these Standards.

APPROVAL TO DEVIATE FROM THIS STANDARD

Approval may be granted by the Asset Owner to deviate from the requirements as stipulated in this Standard if the functional requirements (e.g. Asset Life) for the asset differs from those stated in the Standard, but is assessed as still being acceptable by the Asset Owner’s nominated representative.

Any approval to deviate from the stated requirements of this Standard will not be seen as creating a precedent for future like project. Any request to deviate from this Standard must be carried out on a project by project basis where each alternate proposal will be individually assessed on its own merit.

The currency of these Standards should be checked prior to use.

NO CHANGES REQUIRED IN THE JANUARY 2007 EDITION

The following lists the major changes to the August 2000 edition and published in the September 2004 edition of TS 54:

1. Reformatted from DS to TS (Departmental Standard to Technical Standard), and updated referenced Australian Standards.
CONTENTS

© SA WATER 2007 ................................................................................................................................. 2
APPROVAL TO DEVIATE FROM THIS STANDARD ........................................................................... 2
NO CHANGES REQUIRED IN THE JANUARY 2007 EDITION .......................................................... 2
CONTENTS ............................................................................................................................................ 3
REFERENCED DOCUMENTS ............................................................................................................. 3
SECTION 1: GENERAL ......................................................................................................................... 4
SECTION 2: MATERIALS ....................................................................................................................... 4
2.1 Steel ................................................................................................................................................ 4
2.2 Coating Materials .......................................................................................................................... 4
SECTION 3: MANUFACTURE ............................................................................................................... 4
3.1 Vent Base Tube ............................................................................................................................ 4
3.2 Base Plate and Gussets .................................................................................................................. 4
3.3 Bottom Locating Ring ................................................................................................................... 4
3.4 Top Support and Sealing Ring ....................................................................................................... 5
3.5 Vent Base Holding Down Bolts ..................................................................................................... 5
3.6 Welding .......................................................................................................................................... 5
SECTION 4: COATING ........................................................................................................................ 5
4.1 Coating Inspection .......................................................................................................................... 5
SECTION 5: QUALITY CONTROL AND ASSURANCE ..................................................................... 6
APPENDIX A: MANUFACTURING DRAWINGS .................................................................................. 7

REFERENCED DOCUMENTS

AS/NZS 1554: Structural Steel Welding
AS 1579: Arc-welded steel pipes and fittings for water and waste-water
AS 2700: Colour Standards for general purposes
AS 3768: Guide to the effects of temperature on electrical equipment
AS 3894: Site testing of protective coatings
AS/NZS 4791: Hot-dip galvanized (zinc) coatings on ferrous open sections, applied by an in-line process
AS/NZS ISO 9001: Quality management systems – Requirements

Drawing No. 94-0168-03A: Drawing J3 in the Sewer Construction Manual Drawings
Drawing No. 96-0009-01A: DN 300 Educt Vent Holding Down Bolts Manufacturing Detail
TS 55: The Supply of 350 mm Diameter Welded Steel Vent Tubes (TS12 & TS97 accompany this TS)
TS 84: Surface Preparation and Protection of Steelwork Using Mineral Flake Filled Epoxy High Build, 2-Pack
SECTION 1: GENERAL

This Technical Standard covers the fabrication of the steel vent tube base, which supports the 15 metre vent tube (installed in-location). It includes manufacture and welding of the vent base tube, base plate, gussets, bottom locating ring, top support sealing ring plus surface preparation and epoxy coating of the completed vent tube base ready for installation and assembly in accordance with Appendix A - Manufacturing Drawings (4) SA Water Drawing 94-0168-03A. Details of the 15 m vent tube are given in TS 55.

SA Water Technical Standard (TS) 84 accompanies this Technical Standard.

SECTION 2: MATERIALS

2.1 Steel

All steel used in fabrication of items shall conform to AS 3678 Grade 250.

2.2 Coating Materials

Vent Tube Base is to be coated internally and externally with epoxy in accordance with TS 84.

SECTION 3: MANUFACTURE

3.1 Vent Base Tube

The vent base tube shall be fabricated from steel plate as shown in Appendix A - Manufacturing Drawings (1).

The vent base tube shall be rolled and welded to form a tube to the following dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside diameter</td>
<td>390 mm</td>
</tr>
<tr>
<td>Wall thickness</td>
<td>10 mm</td>
</tr>
<tr>
<td>Length</td>
<td>2100 mm</td>
</tr>
</tbody>
</table>

3.2 Base Plate and Gussets

Base plate and gussets shall be manufactured and drilled then welded to the vent base tube as shown in Appendix A - Manufacturing Drawings (1)

3.3 Bottom Locating Ring

The Bottom Locating Ring shall be fabricated from steel plate as shown in Section CC of Appendix A - Manufacturing Drawings (2). The locating ring is to
be continuously welded to the vent tube base at both upper and lower contact points

3.4 Top Support and Sealing Ring

The Top Support and Sealing Ring shall be fabricated from steel plate as shown in Section BB Appendix A - Manufacturing Drawings (2). Similar alternatives that meet the same requirements may be accepted with approval of SA Water Infrastructure Standards Unit. The adaptor is to be continuously welded to the vent tube base.

3.5 Vent Base Holding Down Bolts

Four (4) vent base holding down bolts and fixing plates are required for each vent base and are to be manufactured in accordance with Appendix A - Manufacturing Drawings (3) (SA Water Drawing 96-0009-01A) from steel conforming to AS 3678 Grade 250. All items to be hot dip galvanised to AS/NZS 4791 after manufacture.

3.6 Welding

The manufacture and welding of the vent base tube shall conform to the requirements of AS 1579 except that no hydrostatic testing is required. The outside welding of the pipe section shall be ground flush with the outer surface throughout its whole length. The inside weld of the pipe section shall be ground flush with the inner surface for a minimum of 100 mm from each end.

All other welding (vent tube base pipe section to base plate, gussets, locating ring and top support) shall conform to weld category GP of AS/NZS 1554.

SECTION 4: COATING

On completion of manufacture of the vent base, it is to be coated inside and out with Jotun Marathon applied in accordance with TS 84. The external finished colour shall be Mid Grey - N52 to AS 2700.

4.1 Coating Inspection.

The surface preparation and coating application shall be inspected by a third party coating inspector that is qualified in the inspection of high performance coatings. A qualified inspector shall have attained the Australasian Corrosion Association Coating Inspectors Certificate and shall be able to demonstrate that coating inspection duties have been carried out on a regular basis. Inspection reports shall comply with AS 3894.10, AS 3894.11 and AS 3894.12, ‘Site Testing of Protective Coatings’ equipment and inspection reports.

For the purposes of this Technical Standard, the term “SA Water’s Representative” referred to in TS 84 shall mean “The third party coating inspector”. At the completion of each production batch, the Inspection reports shall be forwarded to:

SA Water Infrastructure Standards Unit
PO Box 1751  ADELAIDE  SA  5001
SECTION 5: QUALITY CONTROL AND ASSURANCE

The manufacturer shall implement and maintain an approved quality control/quality assurance system covering all testing and manufacturing processes, hardware, materials and workmanship used in the manufacture of the vent tube bases.

Unless specified otherwise, the minimum quality control and assurance system shall be in accordance with AS/NZS ISO 9001 and shall comply with all standards relevant to the manufacture of the vent tube bases.