ROADS AND MARITIME SERVICES

TRAFFIC SYSTEMS

SPECIFICATION NO. TSI-SP-055

PIT COVERS LIDS AND FRAMES

Version: 2.0
Dated: 31/01/2019
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RECORD OF AMENDMENTS

<table>
<thead>
<tr>
<th>Version</th>
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<th>Date</th>
<th>Approved by</th>
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</thead>
<tbody>
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<td>Mgr TSI</td>
</tr>
</tbody>
</table>
CONTENTS
1 SCOPE ................................................................................................................................................. 5
2 REFERENCE DOCUMENTS ............................................................................................................... 5
   2.1 AUSTRALIAN STANDARDS ............................................................................................................. 5
   2.2 RMS DOCUMENTS ....................................................................................................................... 5
   2.3 RMS DRAWINGS .......................................................................................................................... 5
   2.4 COMPLIANCE WITH STANDARDS .................................................................................................... 5
3 DEFINITIONS AND GLOSSARY OF TERMS ..................................................................................... 5
4 TECHNICAL REQUIREMENTS .......................................................................................................... 6
   4.1 LOAD CLASSIFICATIONS RATING ................................................................................................... 6
   4.2 SLIP RESISTANCE ........................................................................................................................ 6
   4.3 SERVICE LIFE .............................................................................................................................. 6
5 LIDS AND FRAMES ............................................................................................................................ 6
   5.1 SEALED AND RECESSED PIT COVER LIDS AND FRAMES SPECIFIC REQUIREMENT .............. 6
   5.2 PAVEMENT JUNCTION LIDS AND FRAMES SPECIFIC REQUIREMENT .................................... 7
6 PACKING ............................................................................................................................................. 8
7 QUALITY ASSURANCE ...................................................................................................................... 8
   7.1 GENERAL ..................................................................................................................................... 8
   7.2 THIRD PARTY CERTIFICATION .................................................................................................... 8
   7.3 QUALITY PLAN ............................................................................................................................. 8
   7.4 QUALITY AUDITS ........................................................................................................................ 8
8 PRE-DELIVERY INSPECTION ............................................................................................................ 8
9 WARRANTY ........................................................................................................................................ 8
10 APPROVAL ......................................................................................................................................... 9
1 SCOPE

This Specification covers the requirements for all pit cover lids and frames for the protection of access to underground electrical cables in footways, driveways and roadways for use in New South Wales for traffic control signals.

Note: This Specification supersedes Specification PCF/2 issued May 1993.

2 REFERENCE DOCUMENTS

2.1 Australian Standards

[1] AS 3996 Access Covers Grates
[3] AS/NZS/ISO 9001 Quality management systems- requirements

2.2 RMS Documents

[4] TS201 Approval of ITS Field Equipment

2.3 RMS Drawings

[6] VM016-10 Pavement Junction Box Casting
[7] VM016-11 Pavement Junction Box Casting, Large Type
[8] VM016-12 Pavement Junction Box Casting, Extra Large Type

2.4 Compliance with Standards

All equipment and material, where not otherwise specified, shall be in accordance with the relevant Australian Standards where such exist, or otherwise with the appropriate international/ISO specifications.

3 DEFINITIONS AND GLOSSARY OF TERMS

Manufacturer – The manufacturer of pit covers and frames covered by this Specification
RMS – Roads and Maritime Services, a New South Wales government agency
Supplier – The supplier of pit covers and frames covered by this Specification
4 TECHNICAL REQUIREMENTS

4.1 Load Classifications Rating

Pit cover lids and frames shall be categorised into 3 grades corresponding to classifications in AS 3996 [1], as shown in table below:

<table>
<thead>
<tr>
<th>AS3996 CLASS [1]</th>
<th>RMS Typical Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Footpaths</td>
</tr>
<tr>
<td>C</td>
<td>Driveways</td>
</tr>
<tr>
<td>D</td>
<td>Roadways</td>
</tr>
</tbody>
</table>

4.2 Slip Resistance

All pit cover lids and frames shall comply with AS 4586 [2] with minimum slip resistance rating of P4 wet pendulum test.

4.3 Service Life

All pit cover lids and frames shall be designed for a service life of at least 20 years.

5 LIDS AND FRAMES

This specification covers the Sealed and Recessed Pit Cover Lids and Frames and Pavement Junction Lids and Frames

5.1 Sealed and Recessed Pit Cover Lids and Frames Specific Requirement

Following are specific requirements for the sealed and recessed pit cover lids and frames

5.1.1 Compliance

They shall comply with AS 3996 [1].

5.1.2 Type

The type shall be of the Sealed (Watertight) and Recessed Cover type as defined in AS 3996 [1].

5.1.3 Size

The sizes commonly used by the RMS are:

- 450mm x 450mm clear opening.
- 450mm x 600mm clear opening.

RMS could specify other sizes when requires.

5.1.4 Lifting Keyholes

Lifting Keyholes shall be provided as per Clause 3.2.2.6 of AS 3996:2006 [1].
5.1.5 Covers
Covers shall be supplied as solid top type in accordance with Clause 3.2.2.1 of AS 3996:2006 [1].

5.1.6 Marking
Covers and frames shall be marked in accordance with Clause 1.6 of AS 3996 [1]. Additionally all pit covers shall be marked in a permanent manner with “TRAFFIC SIGNALS” on the top side of the cover, as follows:

(a) Text in capitals, with letters a minimum of 10mm high.
(b) Each word shall be on a separate line as below:

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TRAFFIC SIGNALS
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(c) The text shall be easily legible, using a nominally plain font with normal proportions and spacing. Examples include that in the text box above (Lucinda Console), or that shown in series D of AS1744. The actual font used may vary from these examples.
(d) Text may be part of the cover body (e.g. cast in), or on a separate attached plate.
(e) Text may be either raised or recessed.
(f) If a separate identification plate is used as per VM327-02 [5], it shall be permanently attached, and not adversely impact the functions of the cover in short or long term.
(g) Markings shall remain attached and legible after 20 years of use, including consideration of corrosion, wear and forces from surface traffic.

5.2 Pavement Junction Lids and Frames Specific Requirement
Following are specific requirements for the pavement junction pit cover lids and frames

5.2.1 Sizes
There are three sizes of the pavement junction lids and frames, namely normal type, large type and extra large type. The clear opening for the three sizes of the pavement junction lids and frames are as follows:

<table>
<thead>
<tr>
<th>Sizes of Pavement Junction Lids and Frames</th>
<th>Clear Opening</th>
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<tbody>
<tr>
<td>Normal</td>
<td>330mm x 270mm</td>
</tr>
<tr>
<td>Large</td>
<td>400mm x 300mm</td>
</tr>
<tr>
<td>Extra Large</td>
<td>400mm x 400mm</td>
</tr>
</tbody>
</table>

5.2.2 Construction
All cast iron pavement junction lids and frames shall comply with RMS drawings of either VM016-10 [6] (normal type), VM016-11 [7] (large type), or VM016-12 [8] (extra large type).
Alternative designs and materials are potentially acceptable, provided the requirements of this specification are met.

5.2.3 Marking

Covers and frames shall be marked in accordance with Clause 1.6 of AS 3996 [1]. Additionally all pit lids shall be marked in a permanent manner with "TRAFFIC SIGNALS" on the top side of the cover in accordance with RMS drawings VM016-10 [6], VM016-11 [7] or VM016-12 [8], or as per clause 5.3.6 if a separate identification plate is used.

6 PACKING

Covers and frames shall be marked, packed and delivered as an assembled unit. Any instructions for installation, maintenance etc. and other purposes, shall be enclosed in a transparent weatherproof bag attached to each assembled unit.

The packing shall be suitable for outdoor storage.

7 QUALITY ASSURANCE

7.1 General

The Supplier and the Manufacturer shall operate a quality management system complying with AS/NZS/ISO 9001[3].

7.2 Third Party Certification

The Supplier and the Manufacturer shall have obtained third-party certification under AS/NZS/ISO 9001[3] by an accredited independent organisation.

7.3 Quality Plan

The Manufacturer shall document a quality plan appropriate to the item detailing the quality control tests and assessments which the Manufacturer will conduct during manufacture prior to release. This shall include sampling plans and test frequency, and a description of the records to be made.

7.4 Quality Audits

RMS reserves the right to examine the Supplier’s and Manufacturer’s quality records. RMS also reserves the right to arrange for an independent quality audit.

8 PRE-DELIVERY INSPECTION

Tests and assessments related to the products shall be carried out by the Manufacturer as defined in the Manufacturer’s quality plan.

RMS reserves the right to carry out, or appoint a representative to carry out, a pre-delivery inspection at the Supplier's premises in the Sydney area prior to delivery.

9 WARRANTY
Purchase of any items under this Specification shall be subject to a warranty period, to be confirmed by the Supplier, of not less than 24 months following the date of despatch from the Supplier’s premises.

10 APPROVAL

To gain approval the Supplier shall follow the process defined in TS201 [4].

The Supplier shall submit the following documentation, as a minimum, in support of a submission for product approval via email to the ITS Help Desk: (ITSHelpDesk@rms.nsw.gov.au).

(a) A clause-by-clause statement of compliance, and associated evidence, referenced to each compliance item, with this Specification and applicable sections of referenced standards.

(b) Results of tests required in relevant Australian standards.

(c) Datasheet(s) of the equipment, which shall include parameters of physical characteristics.

(d) A copy of the Manufacturer’s quality plan for the equipment. Evidence of third party certification of the Supplier and Manufacturer’s quality systems.

(e) Any other documentation requested by RMS under the processes defined in TS201 [4].

(f) If subsequently requested by RMS, the Supplier shall provide samples of equipment for evaluation as part of the approval process.