TYPE I TAG

PLAN VIEW

션 (ANCHOR BOLT NOT SHOWN FOR CLARITY)

50-60

DSD LOGO (NON-RETROREFLECTIVE) PRINTED ON THE WHITE GRAPHIC FILM BY SILK SCREEN PRINTING (SEE DSD STANDARD ORG. NO. DSN057 FOR DETAILS)

WHITE NON-RETROREFLECTIVE BACKGROUND

RETRORREFLECTIVE MANHOLE NUMBER (SEE NOTES 3 TO 5)

IDENTIFICATION MARKINGS (FOR INDICATION ONLY, SEE NOTE 11)

ELEVATION

450

SMH 4004522

DS1075A Type VS, PQR Co: MM/YYYY

DRAINAGE SERVICES DEPARTMENT

REFERENCE

DRAWING No.

SCALE

DIAGRAMMATIC

A GENERAL REVIEW AND TITLE AMENDED

ORIGINAL SIGNED 23.01.2006

NEW ISSUE

ORIGINAL SIGNED 07.01.2006

REV. DESCRIPTION SIGNATURE DATE

RETROREFLECTIVE MANHOLE IDENTIFICATION TAG

( SHEET 1 OF 5 )
TYPE II TAG

PLAN VIEW

SMH 4004522

ELEVATION

DETAILS OF LAMINATION

DRAINAGE SERVICES DEPARTMENT

REFERENCE

DRAWING No.

SCALE

DIAGRAMMATIC

DS 1075A

( SHEET 2 OF 5 )
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES.

2. THE TYPE OF TAG TO BE USED SHALL BE AS FOLLOWS:
   TYPE I - MANHOLES WITH PLANE WALLS OF WIDTH GREATER THAN OR EQUAL TO 550mm AT POSITION OF INSTALLATION OF TAG
   TYPE II - MANHOLES WITH PLANE WALLS OF WIDTH LESS THAN 550mm AT POSITION OF INSTALLATION OF TAG
   TYPE III - MANHOLES WITH CIRCULAR WALLS

3. RETROREFLECTIVE SHEETINGS SHALL COMPLY WITH BS EN 12899-1. THE COLOUR (CHROMATICITY) AND BRIGHTNESS (LUMINANCE FACTOR) SHALL CONFORM TO TABLE 5 OF THIS STANDARD (GRADED CLASS R1), AND THE COEFFICIENT OF RETROREFLECTION SHALL CONFORM TO TABLE 8 (GRADED CLASS REF 1), WHEN ILLUMINATED AND MEASURED IN ACCORDANCE WITH THIS STANDARD. THE COLOUR OF THE SHEETING (THE COLOUR OF THE MANHOLE NUMBER) SHALL BE:

<table>
<thead>
<tr>
<th>COLOUR IN BS EN 12899-1</th>
<th>APPROX EQUIVALENT COLOUR IN OTHER COLOUR MATCHING SYSTEMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEWAGE MANHOLE</td>
<td>RED 1797C PANTONE BS 381C:1996 NO. 537 SIGNAL RED</td>
</tr>
<tr>
<td>STORMWATER MANHOLE</td>
<td>BLUE 294C PANTONE BS 381C:1996 NO. 108 AIRCRAFT BLUE</td>
</tr>
</tbody>
</table>

4. THE MANHOLE NUMBER SHALL BE OF TIMES NEW ROMAN FONT.

5. THE MANHOLE NUMBER SHOWN IN THIS DRAWING IS FOR INDICATION ONLY. THE ACTUAL NUMBER SHALL BE SPECIFIED BY THE ENGINEER.

6. ACRYLIC PLATES SHALL SATISFY THE FOLLOWING REQUIREMENTS WHEN TESTED IN ACCORDANCE WITH ANY ONE OF THE STANDARDS SPECIFIED BELOW:

<table>
<thead>
<tr>
<th>PHYSICAL PROPERTY</th>
<th>ISO (METHOD A OR C)</th>
<th>ASTM</th>
<th>JIS</th>
<th>DIN</th>
<th>REQUIREMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>1183</td>
<td>D792</td>
<td>K7112</td>
<td>53479</td>
<td>1.19 ± 0.01</td>
</tr>
<tr>
<td>LIGHT TRANSMITTANCE</td>
<td>13468-1</td>
<td>D1003</td>
<td>K7105</td>
<td></td>
<td>≥ 92 %</td>
</tr>
<tr>
<td>(TOTAL LUMINOUS TRANSMITTANCE, FOR TRANSPARENT PLATES)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TENSILE PROPERTIES</td>
<td>527-2 &amp; 527-1</td>
<td>D638</td>
<td>K7113</td>
<td>53455</td>
<td>≥ 65 MPa</td>
</tr>
<tr>
<td>MODULUS OF ELASTICITY</td>
<td>527-2 &amp; 527-1</td>
<td>D638</td>
<td>K7113</td>
<td>53457</td>
<td>≥ 2700 MPa</td>
</tr>
<tr>
<td>FLEXURAL PROPERTIES</td>
<td>178</td>
<td>D790</td>
<td>K7203</td>
<td>53454</td>
<td>≥ 100 MPa</td>
</tr>
<tr>
<td>MODULUS OF ELASTICITY</td>
<td>178</td>
<td>D790</td>
<td>K7203</td>
<td>53454</td>
<td>≥ 2700 MPa</td>
</tr>
<tr>
<td>TEMPERATURE OF DEFLECTION UNDER LOAD</td>
<td>75-2 &amp; 75-1</td>
<td>D648</td>
<td>K7207(A)</td>
<td>53461</td>
<td>≥ 95 °C</td>
</tr>
<tr>
<td>WATER ABSORPTION</td>
<td>62</td>
<td>D570</td>
<td>K7209</td>
<td></td>
<td>≤ 0.3 %</td>
</tr>
</tbody>
</table>

7. GRAPHIC FILM SHALL BE VINYL FILM SUITABLE FOR USE IN PERMANENT EXTERIOR SIGNS. IT SHALL:
   - BE OF THICKNESS 0.05mm
   - BE SUITABLE FOR CUTTING BY ELECTRONIC CUTTING MACHINE
   - BE SUITABLE FOR SILK SCREEN PRINTING BEFORE MOUNTING ON THE SUBSTRATE
   - HAVE A PRESSURE-SENSITIVE ADHESIVE
   - BE RESISTANT TO WEAK ACIDS AND ALKALIS, SALT AND WATER
   - BE ABLE TO WITHSTAND SERVICE TEMPERATURE UP TO 100 °C

8. DOUBLED-SIDED ADHESIVE FILM SHALL BE COLOURLESS TRANSPARENT PRESSURE-SENSITIVE ADHESIVE TRANSFER FILM WITH:
   - THICKNESS OF NOT MORE THAN 0.06mm
   - COAT WEIGHT (AMOUNT OF ADHESIVE SUPPLIED) 5.4 g/m² ± 12%
   - ADHESION OF 30 OUNCES/INCH MINIMUM (BOOTH SIDES, TO ASTM D3330, 15 MIN. DWELL ON STAINLESS STEEL)
   - ABILITY TO WITHSTAND SERVICE TEMPERATURE UP TO 100 °C
   - RESISTANCE TO ORGANIC SOLVENTS, WEAK ACIDS AND ALKALIS, SALT WATER, OILS, CLEANING SOLUTIONS, GERMIcIDALS AND DISINFECTANTS

9. ALL TAG FACE SHEETINGS AND ADHESIVE FILMS SHALL BE PROPRIETARY PRODUCTS APPROVED BY THE ENGINEER.
10. Tests shall be carried out to show that the material properties specified in this drawing are complied with.

11. Identification markings shall be printed at the bottom right hand corner of the tag as follows:

<table>
<thead>
<tr>
<th>MARKING</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD DRAWING NO.</td>
<td>DS1075A</td>
</tr>
<tr>
<td>TYPE OF TAG</td>
<td>TYPE - I / II / III , F - TAG FOR SEWAGE MANHOLE, S - TAG FOR STORMWATER MANHOLE</td>
</tr>
<tr>
<td>NAME AND/OR LOGO OF MANUFACTURER</td>
<td>TO BE APPROVED BY THE ENGINEER</td>
</tr>
<tr>
<td>OTHER MANUFACTURING MARKINGS SUCH AS MANUFACTURING PLANT, BATCH NO., ETC</td>
<td></td>
</tr>
<tr>
<td>MONTH &amp; YEAR OF MANUFACTURE</td>
<td>MM/YY</td>
</tr>
</tbody>
</table>

Letters and numbers shall be in size 12 font.

12. The Correctional Services Department (CSD) of the Government of HKSAR can manufacture these tags. Alternative manufacturers shall be approved by the Engineer.

13. The identification tag shall be fixed to an interior wall of the manhole with the top of the tag not more than 50 mm below the bottom of the access manhole cover such that the tag is clearly visible through the access manhole opening.


15. In case the space inside the manhole is too small for installation of anchor bolts, the anchor bolts shall be omitted and the tag shall be fixed to the manhole wall by epoxy resin adhesive approved by the Engineer. The adhesive shall show good adhesion to concrete (or the material of the manhole wall if it is not concrete) and acrylic, and good adhesion to wet surface if the situation requires.