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| TTTD-106-1<br>Rev No. 5<br><br>Form No.                                                                                                                                                                                                                                                          |  | PROJECT ENGINEERING & SYSTEM DIVISION<br>BHEL, HYDERABAD –32. |  |  | PY51394     |        |              |             |              |      |
|                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                               |  |  | Rev No. 00  |        |              |             |              |      |
|                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                               |  |  | Page 1 of 6 |        |              |             |              |      |
| <div>COPYRIGHT AND CONFIDENTIAL</div> <div>The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED,<br/>It must not be used directly or indirectly in any way detrimental to the interest of the company.</div> <div>TECHNICAL SPECIFICATION<br/>FOR HOSE BOX</div> |                                                                                   |                                                               |  |  |             |        |              |             |              |      |
|                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                               |  |  | Revisions : |        | Prepared by: | Checked by: | Approved By: | Date |
|                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                               |  |  |             |        | -SD-         | -SD-        | -SD-         |      |
|                                                                                                                                                                                                                                                                                                  |                                                                                   |                                                               |  |  | 00          | Sumant | Amit/PCS     | MNSR        | 26.07.18     |      |

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| TD-106-2<br>Rev No. 5<br><br>Form No. |  | <b>PROJECT ENGINEERING &amp; SYSTEM DIVISION</b><br><b>BHEL, HYDERABAD –32.</b> | <b>PY51394</b> |
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**1. SCOPE/INTENT:**

**1.1.** This specification covers the technical requirements of constructional features, accessories, inspection, tests, test certificates, documentation, preservation, packing and forwarding of Hose Box.

**1.2.** Scope of supply shall include design, manufacture, inspection, shop testing, shop painting, packing and delivery.

**1.3.** The supplier shall strictly comply with this standard in all respects. No deviation shall be allowed. However, bidder can raise technical queries on the specification during pre-bid stage and clarifications may be sought from BHEL before the bid submission.

**APPLICATION:**  
 These items suitable for fire protection systems (Water & Foam based protection system).

**2. VARIANT TABLE:**

| Var. No. | Description                | Material Code |
|----------|----------------------------|---------------|
| 01       | MS Hose Box (900x600x250)  | PY9751394015  |
| 02       | MS Hose Box (750x600x250)  | PY9751394023  |
| 03       | MS Hose Box (450x600x250)  | PY9751394031  |
| 04       | FRP Hose Box (750x600x250) | PY9751394040  |
| 05       | FRP Hose Box (450x600x250) | PY9751394058  |

Note: Bidder to quote as per Material Code as mentioned in the Enquiry.

**3. TECHNICAL REQUIREMENTS:**

**3.1. MS Hose Box:**

| Sl. No. | Requirements           | Compliance                                                                                           |
|---------|------------------------|------------------------------------------------------------------------------------------------------|
| 5.1     | Size*                  | 900 mm x 600mm x 250mm or<br>750 mm x 600mm x 250mm or<br>450 mm x 600mm x 250mm                     |
| 5.2     | MOC                    | MS 16 SWG & 3 mm thick glass panel in front door with lock & two keys.                               |
| 5.3     | Mounting Arrangement : | Option for Wall Mounted and Pedestal mounted shall be envisaged in each Hose Box                     |
| 5.4     | Special requirements   | (i) <u>For Hose Box Size 900 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 25 m |

| TD-106-2<br>Rev No. 5<br><br>Form No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | <b>PROJECT ENGINEERING &amp; SYSTEM DIVISION</b><br><b>BHEL, HYDERABAD –32.</b>                                                                                                                                                                                                                                                                   |  | <b>PY51394</b> |         |              |                                                                                                                                                                                                                                                                                                                                                   |     |        |                                                                                                                                        |     |     |                                                                                                         |     |                        |                                                                                                      |     |                      |                                                                                                                                                                                                                                                                                                     |     |             |                                                                                             |
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| <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p style="text-align: center;"><b>COPYRIGHT AND CONFIDENTIAL</b></p> <p style="text-align: center;">The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.<br/>It must not be used directly or indirectly in any way detrimental to the interest of the company.</p> </div> <div style="width: 65%;"> <table border="1" style="width: 100%;"> <tr> <td style="width: 10%;"></td> <td style="width: 15%;"></td> <td style="width: 75%;">           long hoses and 1 no. branch pipe &amp; nozzle.<br/><br/> <u>For Hose Box Size 750 mm x 600mm x 250mm</u><br/>           Each cabinet shall accommodate 2 nos. of 15 m long hoses and 1 no. branch pipe &amp; nozzle.<br/><br/> <u>For Hose Box Size 450 mm x 600mm x 250mm</u><br/>           Each cabinet shall accommodate 2 nos. of 7.5 m long hoses and 1 no. branch pipe &amp; nozzle.         </td> </tr> <tr> <td></td> <td></td> <td>(ii) Cabinet to have double door having toughened glass panel (3 mm) with rubber lining and marked 'Fire' on it in 80 mm size letters.</td> </tr> <tr> <td></td> <td></td> <td>(iii) Approved lock with duplicate keys kept wired in a break glass key cabinet in the hose box itself.</td> </tr> <tr> <td></td> <td></td> <td>(iv) A spanner and a set of spare rubber rings packed in fresh chalk to be kept inside the hose box.</td> </tr> <tr> <td></td> <td></td> <td>(v) Clamp for holding branch pipe to be provided.</td> </tr> <tr> <td>5.5</td> <td>Accessories</td> <td>           -Fastening nuts, bolts and hardware<br/>           - Hammer for breaking the glass to take out the keys         </td> </tr> </table> </div> </div> |                                                                                   |                                                                                                                                                                                                                                                                                                                                                   |  |                |         |              | long hoses and 1 no. branch pipe & nozzle.<br><br><u>For Hose Box Size 750 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 15 m long hoses and 1 no. branch pipe & nozzle.<br><br><u>For Hose Box Size 450 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 7.5 m long hoses and 1 no. branch pipe & nozzle. |     |        | (ii) Cabinet to have double door having toughened glass panel (3 mm) with rubber lining and marked 'Fire' on it in 80 mm size letters. |     |     | (iii) Approved lock with duplicate keys kept wired in a break glass key cabinet in the hose box itself. |     |                        | (iv) A spanner and a set of spare rubber rings packed in fresh chalk to be kept inside the hose box. |     |                      | (v) Clamp for holding branch pipe to be provided.                                                                                                                                                                                                                                                   | 5.5 | Accessories | -Fastening nuts, bolts and hardware<br>- Hammer for breaking the glass to take out the keys |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                   | long hoses and 1 no. branch pipe & nozzle.<br><br><u>For Hose Box Size 750 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 15 m long hoses and 1 no. branch pipe & nozzle.<br><br><u>For Hose Box Size 450 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 7.5 m long hoses and 1 no. branch pipe & nozzle. |  |                |         |              |                                                                                                                                                                                                                                                                                                                                                   |     |        |                                                                                                                                        |     |     |                                                                                                         |     |                        |                                                                                                      |     |                      |                                                                                                                                                                                                                                                                                                     |     |             |                                                                                             |
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| 5.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Accessories                                                                       | -Fastening nuts, bolts and hardware<br>- Hammer for breaking the glass to take out the keys                                                                                                                                                                                                                                                       |  |                |         |              |                                                                                                                                                                                                                                                                                                                                                   |     |        |                                                                                                                                        |     |     |                                                                                                         |     |                        |                                                                                                      |     |                      |                                                                                                                                                                                                                                                                                                     |     |             |                                                                                             |
| <b>3.2. FRP Hose Box:</b> <table border="1" style="width: 100%;"> <thead> <tr> <th>Sl. No.</th> <th>Requirements</th> <th>Compliance</th> </tr> </thead> <tbody> <tr> <td>5.1</td> <td>Size *</td> <td>750 mm x 600mm x 250mm or<br/>450 mm x 600mm x 250mm</td> </tr> <tr> <td>5.2</td> <td>MOC</td> <td>Material of construction: 3 mm thick FRP &amp; 3 mm thick glass panel in front door with lock &amp; two keys.</td> </tr> <tr> <td>5.3</td> <td>Mounting Arrangement :</td> <td>Option for Wall Mounted and Pedestal mounted shall be envisaged in each Hose Box</td> </tr> <tr> <td>5.4</td> <td>Special requirements</td> <td>           (i) <u>For Hose Box Size 750 mm x 600mm x 250mm</u><br/>           Each cabinet shall accommodate 2 nos. of 15 m long hoses and 1 no. branch pipe &amp; nozzle.<br/><br/> <u>For Hose Box Size 450 mm x 600mm x 250mm</u><br/>           Each cabinet shall accommodate 2 nos. of 7.5 m long hoses and 1 no. branch pipe &amp; nozzle.         </td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                   |                                                                                                                                                                                                                                                                                                                                                   |  |                | Sl. No. | Requirements | Compliance                                                                                                                                                                                                                                                                                                                                        | 5.1 | Size * | 750 mm x 600mm x 250mm or<br>450 mm x 600mm x 250mm                                                                                    | 5.2 | MOC | Material of construction: 3 mm thick FRP & 3 mm thick glass panel in front door with lock & two keys.   | 5.3 | Mounting Arrangement : | Option for Wall Mounted and Pedestal mounted shall be envisaged in each Hose Box                     | 5.4 | Special requirements | (i) <u>For Hose Box Size 750 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 15 m long hoses and 1 no. branch pipe & nozzle.<br><br><u>For Hose Box Size 450 mm x 600mm x 250mm</u><br>Each cabinet shall accommodate 2 nos. of 7.5 m long hoses and 1 no. branch pipe & nozzle. |     |             |                                                                                             |
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| 5.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MOC                                                                               | Material of construction: 3 mm thick FRP & 3 mm thick glass panel in front door with lock & two keys.                                                                                                                                                                                                                                             |  |                |         |              |                                                                                                                                                                                                                                                                                                                                                   |     |        |                                                                                                                                        |     |     |                                                                                                         |     |                        |                                                                                                      |     |                      |                                                                                                                                                                                                                                                                                                     |     |             |                                                                                             |
| 5.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Mounting Arrangement :                                                            | Option for Wall Mounted and Pedestal mounted shall be envisaged in each Hose Box                                                                                                                                                                                                                                                                  |  |                |         |              |                                                                                                                                                                                                                                                                                                                                                   |     |        |                                                                                                                                        |     |     |                                                                                                         |     |                        |                                                                                                      |     |                      |                                                                                                                                                                                                                                                                                                     |     |             |                                                                                             |
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| TD-106-2<br>Rev No. 5<br><br>Form No.                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>PROJECT ENGINEERING &amp; SYSTEM DIVISION</b><br><b>BHEL, HYDERABAD –32.</b> |                                                                                                                                        | <b>PY51394</b> |  |  |                                                                                                                                        |  |  |                                                                                                         |  |  |                                                                                                      |  |  |                                                   |     |             |                                                                                             |              |           |                           |                     |                         |                               |
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|                                                                                                                                                                                                                                 | Paint Scheme                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Total DFT                                                                       |                                                                                                                                        |                |  |  |                                                                                                                                        |  |  |                                                                                                         |  |  |                                                                                                      |  |  |                                                   |     |             |                                                                                             |              |           |                           |                     |                         |                               |
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|                                                                                                                                                                                                                                 | Intermediate: Epoxy MIO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                 |                                                                                                                                        |                |  |  |                                                                                                                                        |  |  |                                                                                                         |  |  |                                                                                                      |  |  |                                                   |     |             |                                                                                             |              |           |                           |                     |                         |                               |
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| TD-106-2<br>Rev No. 5<br><br>Form No.                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>PROJECT ENGINEERING &amp; SYSTEM DIVISION</b><br><b>BHEL, HYDERABAD –32.</b> | <b>PY51394</b> |      |             |          |   |                                                          |                              |   |                                                   |                                       |
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| <b>COPYRIGHT AND CONFIDENTIAL</b><br>The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.<br>It must not be used directly or indirectly in any way detrimental to the interest of the company. | <ul style="list-style-type: none"> <li>• Tests to be conducted</li> <li>• O&amp;M manuals</li> <li>• Storage/Preservation instructions for at least three years.</li> </ul> <p>Final documentation consisting of above documents shall be submitted in requisite sets (to be decided post order) of hard and soft copies.</p> <p>Schedule for document submissions:</p> <table border="1"> <thead> <tr> <th>S.no</th> <th>Description</th> <th>Schedule</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Submission of GA drawing &amp; Technical Datasheet by vendor</td> <td>7 days from the date of P.O.</td> </tr> <tr> <td>2</td> <td>Approval GA drawing &amp; Technical Datasheet by BHEL</td> <td>14 days from receipt of the document*</td> </tr> </tbody> </table> <p>* The GA drawing &amp; Technical Datasheet submitted by vendor shall be strictly in compliance to all applicable standards and specification.</p> <p><b>7. PRESERVATION, PACKING &amp; MARKING OR PACKING CASE:</b></p> <p><b>7.1.</b> A suitable temporary rust preventive with minimum life of two years shall be applied inside the item/equipment body in order to prevent corrosion.</p> <p><b>7.2.</b> All the item / equipment shall be packed suitably in closed wooden cases in order to avoid damage during transit and storage at BHEL. Suitable supports shall be provided inside the cases in order to avoid internal movement. In case of exported consignments, the packing shall be seaworthy (Refer enclosed Annexure for Export Packing guidelines, AA 0490009, Rev-01).</p> <p>Each item / equipment after end protection should be wrapped in polythene sheet before packing in the cases.</p> <p>Each packing case must contain two copies of the shipping list giving details of all the contents of the case.</p> <p><b>7.3.</b> The following marking shall be done on each packing case minimum on two sides and at the top.</p> <ul style="list-style-type: none"> <li>(a) Complete address of the consignee and destination as per BHEL Purchase Order.</li> <li>(b) BHEL Purchase order Number</li> <li>(c) BHEL item Material Code</li> <li>(d) Number of pieces in each packing case</li> <li>(e) Net Weight</li> <li>(f) Gross Weight</li> <li>(g) Packing case number and total number of packing</li> <li>(h) Arrow indicating top of the packing case.</li> </ul> |                                                                                 |                | S.no | Description | Schedule | 1 | Submission of GA drawing & Technical Datasheet by vendor | 7 days from the date of P.O. | 2 | Approval GA drawing & Technical Datasheet by BHEL | 14 days from receipt of the document* |
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| TD-106-3                                                                                                                                                                                                                                 | Rev No. 5 | Form No. |  | PRODUCT STANDARD<br>BHEL, HYDERABAD –32.<br>PROJECT ENGINEERING & SYSTEM DIVISION |                  |            | PY51394     |             |
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|                                                                                                                                                                                                                                          |           |          | Rev. No.                                                                          | Date                                                                              | Revision Details | Revised By | Checked By  | Approved By |
|                                                                                                                                                                                                                                          |           |          | 00                                                                                | 26.07.2018                                                                        | First Issue      | -SD-       | -SD-        | -SD-        |
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