

TTTD-106-1 Rev No. 5 Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.			PY51388					
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company. TECHNICAL SPECIFICATION FOR DELUGE VALVE										
					Revisions :		Prepared by:	Checked by:	Approved By:	Date
							-SD-	-SD-	-SD-	
					00	Sumant	Amit/PCS	MNSR	26.07.18	

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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.	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 Deluge Valve. 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 valves suitable for fire protection systems (Water based protection system).																													
2. VARIANT TABLE:		<table border="1"> <thead> <tr> <th>Var. No.</th> <th>Description</th> <th>Material Code</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>Cast Iron Deluge Valve - 150 NB</td> <td>PY9751388015</td> </tr> <tr> <td>02</td> <td>Cast Iron Deluge Valve - 100 NB</td> <td>PY9751388023</td> </tr> <tr> <td>03</td> <td>Cast Iron Deluge Valve - 80 NB</td> <td>PY9751388031</td> </tr> </tbody> </table> Note: Bidder to quote as per Material Code as mentioned in the Enquiry.		Var. No.	Description	Material Code	01	Cast Iron Deluge Valve - 150 NB	PY9751388015	02	Cast Iron Deluge Valve - 100 NB	PY9751388023	03	Cast Iron Deluge Valve - 80 NB	PY9751388031															
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">3.5</td> <td style="width: 30%;">Trim Description</td> <td style="width: 60%;"> (1) Wet pilot trim (2) Electrical release trim (3) Test & Alarm trim (4) Drain valve (5) Priming connection (6) Drip check valve (7) Emergency release valve </td> </tr> <tr> <td style="text-align: center;">3.6</td> <td>Working Pressure</td> <td>10.5 kg/cm² (g) to 12.5 kg/cm²(g)</td> </tr> <tr> <td style="text-align: center;">3.7</td> <td>Hydro Test Pressure</td> <td>25 kg/cm²(g)</td> </tr> <tr> <td style="text-align: center;">3.8</td> <td>Seat Pressure</td> <td>18 kg/cm²(g)</td> </tr> <tr> <td style="text-align: center;">3.9</td> <td>Accessories to be provided along with DV</td> <td> (1) Test Strainer, Drain Valve & NRV (2) Water Motor Gong (3) Instruments such as Pressure Gauge and Pressure Switch (4) Provision for Solenoid valve mounting (5) Globe valves (including instrument globe valves) (6) Ball valves (7) Emergency release (8) GI piping (9) Priming arrangement connection such GI pipe & fittings etc. between Deluge valve inlet line to deluge valve are included/ considered by bidder in their offer. (Apprx. pipe length shall be 2 meters) </td> </tr> <tr> <td style="text-align: center;">3.10</td> <td>Marking on Equipment</td> <td>Mfg. Trade Name, Year of Mfg., Serial No., Size & Model, 'UL' Listed Mark</td> </tr> </table> 4. PAINTING As per manufacturer Standard practice or as detailed below whichever is superior in quality. In such case, Purchaser's view shall be binding. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Paint Scheme</th> <th style="width: 50%;">Total DFT</th> </tr> <tr> <td>Primer: Zinc filled Epoxy</td> <td rowspan="3" style="text-align: center; vertical-align: middle;">Minimum 200 Microns</td> </tr> <tr> <td>Intermediate: Epoxy MIO</td> </tr> <tr> <td>Final: Aliphatic Polyurethane</td> </tr> </table> Final shade of the paints shall be informed after post order. 5. INSPECTION AND TESTING As per BHEL QAP (Refer attached Annexure)					3.5	Trim Description	(1) Wet pilot trim (2) Electrical release trim (3) Test & Alarm trim (4) Drain valve (5) Priming connection (6) Drip check valve (7) Emergency release valve	3.6	Working Pressure	10.5 kg/cm ² (g) to 12.5 kg/cm ² (g)	3.7	Hydro Test Pressure	25 kg/cm ² (g)	3.8	Seat Pressure	18 kg/cm ² (g)	3.9	Accessories to be provided along with DV	(1) Test Strainer, Drain Valve & NRV (2) Water Motor Gong (3) Instruments such as Pressure Gauge and Pressure Switch (4) Provision for Solenoid valve mounting (5) Globe valves (including instrument globe valves) (6) Ball valves (7) Emergency release (8) GI piping (9) Priming arrangement connection such GI pipe & fittings etc. between Deluge valve inlet line to deluge valve are included/ considered by bidder in their offer. (Apprx. pipe length shall be 2 meters)	3.10	Marking on Equipment	Mfg. Trade Name, Year of Mfg., Serial No., Size & Model, 'UL' Listed Mark	Paint Scheme	Total DFT	Primer: Zinc filled Epoxy	Minimum 200 Microns	Intermediate: Epoxy MIO	Final: Aliphatic Polyurethane
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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.	6. DOCUMENTATION: 6.1. Along with the offer: Signed and stamped copy of this specification as token of acceptance of the specification for execution in the event of Order. 6.2. After PO Placement: Two copies each of the following documents shall be submitted for approval. • G.A. Drawings with weights and dimensions • Technical Data sheets, Catalogue • Material specification details • Tests to be conducted • O&M manuals • Storage/Preservation instructions for at least three years. Final documentation consisting of above documents shall be submitted in requisite sets (to be decided post order) of hard and soft copies. Schedule for document submissions: <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 & Technical Datasheet by vendor</td> <td>7 days from the date of P.O.</td> </tr> <tr> <td>2</td> <td>Approval GA drawing & Technical Datasheet by BHEL</td> <td>14 days from receipt of the document*</td> </tr> </tbody> </table> * The GA drawing & Technical Datasheet submitted by vendor shall be strictly in compliance to all applicable standards and specification. 7. PRESERVATION, PACKING & MARKING OR PACKING CASE: 7.1. A suitable temporary rust preventive with minimum life of two years shall be applied inside the item/equipment body in order to prevent corrosion. 7.2. 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). Each item / equipment after end protection should be wrapped in polythene sheet before packing in the cases.			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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Ref. Doc.	COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company. Each packing case must contain two copies of the shipping list giving details of all the contents of the case. 7.3. The following marking shall be done on each packing case minimum on two sides and at the top. (a) Complete address of the consignee and destination as per BHEL Purchase Order. (b) BHEL Purchase order Number (c) BHEL item Material Code (d) Number of pieces in each packing case (e) Net Weight (f) Gross Weight (g) Packing case number and total number of packing (h) Arrow indicating top of the packing case.			

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	Rev. No.	Date	Revision Details	Revised By	Checked By	Approved By
	00	26.07.2018	First Issue	-SD-	-SD-	-SD-
	01	21.01.2020	Detailed elaboration of MOC are included	Anupam/ Sumant	Amit / Kamaluddin	PCS
	Ref. Doc.					