

TTTD-106-1 Rev No. 5 Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.			PY51395					
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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 WATER MONITOR										
					Revisions :		Prepared by:	Checked by:	Approved By:	Date
							-SD-	-SD-	-SD-	
					00	Sumant	Amit/PCS	MNSR	25.07.18	

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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 Water Monitor.

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 based protection system).

2. VARIANT TABLE:

Var. No.	Description	Material Code
01	75mm Water Monitor (ISI Approved)	PY9751395011
02	75mm Water Monitor (FM Approved)	PY9751395020

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

3. TECHNICAL REQUIREMENTS:

Sl. No.	Requirements	Compliance
3.1	Material of construction	
3.1.1	Base Flange	CS Seamless
3.1.2	Reducer	CS Seamless
3.1.3	Water Barrel	Hot Dip Galvanized CS
3.1.4	Water Nozzle	SS 304
3.2	End connection	4 " Flanged (FF) and drilled to ANSI 150# B 13.5
3.3	Size	75 mm
3.4	Approval	FM approved / ISI Approved
3.5	Code/Standard	FM 1421 for FM approved / IS 8442 for ISI approved (as per applicable variant mentioned in Enquiry)
3.6	Type	Fixed Type
3.7	Flow	2500-2700 litre/min at 7 Kg/Sq.cm
3.8	Rotation of body	

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3.8.1	Horizontal	360°
3.8.2	Vertical	+ 90° above horizontal, - 45° below horizontal
3.9	Throw of Monitors	
3.9.1	Horizontal	60 M
3.9.2	Vertical	25 - 30 M
3.10	Pressure	
3.10.1	Working Pressure	9 kg/cm ²
3.10.2	Design Pressure	10.5 kg/cm ²
3.10.3	Hydro test Pressure	23 kg/cm ²
3.11	Marking on Equipment	Mfg. Trade Name, Year of Mfg., Size & Model, Flow & Pressure

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.

Paint Scheme	Total DFT
Primer: Zinc filled Epoxy	Minimum 200 Microns
Intermediate: Epoxy MIO	
Final: Aliphatic Polyurethane	

Final shade of the paints shall be informed after post order.

5. INSPECTION AND TESTING

As per BHEL QAP (Refer attached Annexure)

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.

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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. 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" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S.no</th> <th style="width: 60%;">Description</th> <th style="width: 30%;">Schedule</th> </tr> </thead> <tbody> <tr> <td align="center">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 align="center">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. 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 packings (h) Arrow indicating top of the packing case.					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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			Rev. No.	Date	Revision Details	Revised By	Checked By	Approved By
			00	25.07.2018	First Issue	-SD-	-SD-	-SD-
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