

TTTD-106-1 Rev No. 5	Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.		PY51393
					Rev No. 01
					Page 1 of 7
<u>TECHNICAL SPECIFICATION</u> <u>FOR FIRE HOSE WITH COUPLING</u>					
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.					
Revisions :		Prepared by:	Checked by:	Approved By:	Date
		-SD-	-SD-	-SD-	
00		Anupam	Amit/PCS	MNSR	27.07.18



PROJECT ENGINEERING & SYSTEM DIVISION

BHEL, HYDERABAD –32.

PY51393

Rev No. 01

Page 2 of 7

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 Fire Hose with coupling.
- 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	25M FIRE HOSE WITH COUPLING (UL LISTED)	PY9751393019
02	15M FIRE HOSE WITH COUPLING (UL LISTED)	PY9751393027
03	7.5M FIRE HOSE WITH COUPLING (UL LISTED)	PY9751393035
04	15M FIRE HOSE WITH COUPLING (IS636-A-II)	PY9751393043
05	7.5M FIRE HOSE WITH COUPLING (IS636-A-II)	PY9751393051
06	15M FIRE HOSE WITH COUPLING (IS 636-B)	PY9751393060
07	7.5M FIRE HOSE WITH COUPLING (IS 636-B)	PY9751393078

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

3. TECHNICAL REQUIREMENTS:

3.1. FIRE HOSE WITH COUPLING (UL LISTED):

Sl. No.	Requirements	Compliance
	FIRE HOSE	
3.1	Application	Hydrant System
3.2	Code/Standard	BS 6391:2009 Type I
3.3	Size & Length*	
3.3.1		63 mm x 25 Meter length
3.3.2		63 mm x 15 Meter length
3.3.3		63 mm x 7.5 Meter length
3.4	Type of Hose	RRL flexible hose
3.5	Working Pressure	15 kg/cm ² (g)

TD-106-2 Rev No. 5 Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.		PY51393																																																																											
				Rev No. 01																																																																											
				Page 3 of 7																																																																											
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%;"> <tr> <td style="width: 10%;">3.6</td> <td style="width: 40%;">Test Pressure</td> <td style="width: 50%;">23 kg/cm²(g)</td> </tr> <tr> <td>3.7</td> <td>Burst Pressure</td> <td>38 kg/cm²(g)</td> </tr> <tr> <td>3.8</td> <td>End Fitting / Material</td> <td>Instantaneous spring lock type male / female coupling of SS 304 construction at both sides confirming to BS 336</td> </tr> <tr> <td>3.9</td> <td>Type of Coupling</td> <td>SS (304) Instantaneous Spring type BS 336 Marked Coupling</td> </tr> <tr> <td>3.10</td> <td>Approval</td> <td>UL Listed</td> </tr> <tr> <td>3.11</td> <td>Marking</td> <td> a) Type of the hose b) Size of the hose c) Length of the hose d) Manufacturer's name or trade-mark or both e) Month and year of manufacture. </td> </tr> <tr> <td colspan="3" style="text-align: center;">COUPLING</td> </tr> <tr> <td>3.12</td> <td>Type</td> <td>Instantaneous Spring lock type male and female for 63 MM hose</td> </tr> <tr> <td>3.13</td> <td>Code/Standard</td> <td>BS 336 Marked Coupling</td> </tr> <tr> <td>3.14</td> <td>Material of Construction</td> <td>SS 304</td> </tr> </table> 3.2. FIRE HOSE WITH COUPLING AS PER IS 636 TYPE A <table border="1" style="width: 100%;"> <thead> <tr> <th>Sl. No.</th> <th>Requirements</th> <th>Compliance</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="text-align: center;">FIRE HOSE</td> </tr> <tr> <td>3.1</td> <td>Application</td> <td>Hydrant System</td> </tr> <tr> <td>3.2</td> <td>Code/Standard</td> <td>IS: 636, Type-A (Type-II)</td> </tr> <tr> <td>3.3</td> <td>Size & Length*</td> <td></td> </tr> <tr> <td>3.3.1</td> <td></td> <td>63 mm x 15 Meter length</td> </tr> <tr> <td>3.3.2</td> <td></td> <td>63 mm x 7.5 Meter length</td> </tr> <tr> <td>3.4</td> <td>Type of Hose</td> <td>RRL confirming to IS: 636, Type-A with elastomeric coating</td> </tr> <tr> <td>3.5</td> <td>Working Pressure</td> <td>15 kg/cm²(g)</td> </tr> <tr> <td>3.6</td> <td>Test Pressure</td> <td>23 kg/cm²(g)</td> </tr> <tr> <td>3.7</td> <td>Burst Pressure</td> <td>38 kg/cm²(g)</td> </tr> <tr> <td>3.8</td> <td>End Fitting / Material</td> <td>Instantaneous spring lock type male / female coupling of SS-304 construction at both sides confirming to IS: 903</td> </tr> <tr> <td>3.9</td> <td>Type of Coupling</td> <td>SS-304 instantaneous type IS: 903 marked coupling</td> </tr> <tr> <td>3.10</td> <td>Approval</td> <td>ISI Marked</td> </tr> <tr> <td>3.11</td> <td>Marking</td> <td> a) Type of the hose b) Size of the hose </td> </tr> </tbody> </table>					3.6	Test Pressure	23 kg/cm ² (g)	3.7	Burst Pressure	38 kg/cm ² (g)	3.8	End Fitting / Material	Instantaneous spring lock type male / female coupling of SS 304 construction at both sides confirming to BS 336	3.9	Type of Coupling	SS (304) Instantaneous Spring type BS 336 Marked Coupling	3.10	Approval	UL Listed	3.11	Marking	a) Type of the hose b) Size of the hose c) Length of the hose d) Manufacturer's name or trade-mark or both e) Month and year of manufacture.	COUPLING			3.12	Type	Instantaneous Spring lock type male and female for 63 MM hose	3.13	Code/Standard	BS 336 Marked Coupling	3.14	Material of Construction	SS 304	Sl. No.	Requirements	Compliance	FIRE HOSE			3.1	Application	Hydrant System	3.2	Code/Standard	IS: 636, Type-A (Type-II)	3.3	Size & Length*		3.3.1		63 mm x 15 Meter length	3.3.2		63 mm x 7.5 Meter length	3.4	Type of Hose	RRL confirming to IS: 636, Type-A with elastomeric coating	3.5	Working Pressure	15 kg/cm ² (g)	3.6	Test Pressure	23 kg/cm ² (g)	3.7	Burst Pressure	38 kg/cm ² (g)	3.8	End Fitting / Material	Instantaneous spring lock type male / female coupling of SS-304 construction at both sides confirming to IS: 903	3.9	Type of Coupling	SS-304 instantaneous type IS: 903 marked coupling	3.10	Approval	ISI Marked	3.11	Marking	a) Type of the hose b) Size of the hose
3.6	Test Pressure	23 kg/cm ² (g)																																																																													
3.7	Burst Pressure	38 kg/cm ² (g)																																																																													
3.8	End Fitting / Material	Instantaneous spring lock type male / female coupling of SS 304 construction at both sides confirming to BS 336																																																																													
3.9	Type of Coupling	SS (304) Instantaneous Spring type BS 336 Marked Coupling																																																																													
3.10	Approval	UL Listed																																																																													
3.11	Marking	a) Type of the hose b) Size of the hose c) Length of the hose d) Manufacturer's name or trade-mark or both e) Month and year of manufacture.																																																																													
COUPLING																																																																															
3.12	Type	Instantaneous Spring lock type male and female for 63 MM hose																																																																													
3.13	Code/Standard	BS 336 Marked Coupling																																																																													
3.14	Material of Construction	SS 304																																																																													
Sl. No.	Requirements	Compliance																																																																													
FIRE HOSE																																																																															
3.1	Application	Hydrant System																																																																													
3.2	Code/Standard	IS: 636, Type-A (Type-II)																																																																													
3.3	Size & Length*																																																																														
3.3.1		63 mm x 15 Meter length																																																																													
3.3.2		63 mm x 7.5 Meter length																																																																													
3.4	Type of Hose	RRL confirming to IS: 636, Type-A with elastomeric coating																																																																													
3.5	Working Pressure	15 kg/cm ² (g)																																																																													
3.6	Test Pressure	23 kg/cm ² (g)																																																																													
3.7	Burst Pressure	38 kg/cm ² (g)																																																																													
3.8	End Fitting / Material	Instantaneous spring lock type male / female coupling of SS-304 construction at both sides confirming to IS: 903																																																																													
3.9	Type of Coupling	SS-304 instantaneous type IS: 903 marked coupling																																																																													
3.10	Approval	ISI Marked																																																																													
3.11	Marking	a) Type of the hose b) Size of the hose																																																																													
Ref.	Doc.																																																																														

TD-106-2 Rev No. 5	Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.	PY51393 Rev No. 01 Page 4 of 7
-----------------------	----------	---	---	---

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.

		c) Length of the hose d) Manufacturer's name or trade-mark or both e) Month and year of manufacture.
	COUPLING	
3.12	Type	Instantaneous Spring lock type male and female for 63 MM hose
3.13	Code/Standard	IS:903
3.14	Material of Construction	SS 304

3.3. FIRE HOSE WITH COUPLING AS PER IS 636 TYPE B

Sl. No.	Requirements	Compliance
	FIRE HOSE	
3.1	Application	Hydrant System
3.2	Code/Standard	IS: 636, Type-B (Type-III)
3.3	Size & Length*	
3.3.1		63 mm x 15 Meter length
3.3.2		63 mm x 7.5 Meter length
3.4	Type of Hose	RRL confirming to IS: 636, Type-B with elastomeric coating
3.5	Working Pressure	15 kg/cm ² (g)
3.6	Test Pressure	23 kg/cm ² (g)
3.7	Burst Pressure	38 kg/cm ² (g)
3.8	End Fitting / Material	Instantaneous spring lock type male / female coupling of SS-304 construction at both sides confirming to IS: 903
3.9	Type of Coupling	SS-304 instantaneous type IS: 903 marked coupling
3.10	Approval	ISI Marked
3.11	Marking	a) Type of the hose b) Size of the hose c) Length of the hose d) Manufacturer's name or trade-mark or both e) Month and year of manufacture.
	COUPLING	
3.12	Type	Instantaneous Spring lock type male and female for 63 MM hose
3.13	Code/Standard	IS:903
3.14	Material of Construction	SS 304

***Size & Length of Fire Hose shall be as per Description mentioned in the Enquiry.**

Ref.

Doc.

TD-106-2 Rev No. 5 Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.	PY51393									
			Rev No. 01									
			Page 5 of 7									
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.	4. PAINTING Color of the Hose 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. 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.			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*
	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*										
Ref. Doc.												

TD-106-2 Rev No. 5	Form No.		PROJECT ENGINEERING & SYSTEM DIVISION BHEL, HYDERABAD –32.	PY51393 Rev No. 01 Page 6 of 7
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.		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 packing (h) Arrow indicating top of the packing case.		
Ref. Doc.				

TD-106-3	Rev No. 5	Form No.		PRODUCT STANDARD BHEL, HYDERABAD –32. PROJECT ENGINEERING & SYSTEM DIVISION			PY51393
							Rev No. 01
							Page 7 of 7
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.		RECORD OF REVISIONS					
		Rev. No.	Date	Revision Details	Revised By	Checked By	Approved By
		00	27.07.2018	First Issue	-SD-	-SD-	-SD-
		01	07.02.2020	Revised Issue	-SD-	-SD-	-SD-
		Ref. Doc.					