

RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD

2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8

**TECHNICAL SPECIFICATION
FOR
MODIFICATION WORK ON FOAM TENDER**

SPECIFICATION NO. : PE-TS-392-550-A001,R-02



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA (INDIA)**

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2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
MODIFICATION WORK ON FOAM TENDER
SPECIFIC TECHNICAL REQUIREMENTS

SPECIFICATION No: PE-TS-392-550 -A001

REV. 02

DATE: 23.05.2017

SHEET 1 OF 1

SECTION – I

INTENT OF SPECIFICATION



**2 X 660 MW SURATGARH STPS, STAGE-V,
UNIT-7 & 8**

**MODIFICATION WORK ON FOAM TENDER
INTENT OF SPECIFICATION**

SPEC NO.PE-TS-392-550-A001

REV.NO.02

DATE: 23.05.2017

SECTION - I

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1.0 INTENT OF SPECIFICATION

- 1.1 This specification covers the modification of water tank on two nos of foam tender complete in all respects, inspection and testing at manufacturer's work, suitable painting and performance requirement of Foam Tender (2 Nos.) complete with all accessories as specified, transportation to project site, freight and insurance including performance demonstration at site.

The bidder's scope shall also include any other services, etc. if called for in the succeeding sections of the specification.

- 1.2 It is not the intent to specify completely all details and construction of the equipment. However, all the equipment shall conform, in all respect, to high standard of engineering, design and workmanship and be capable of performing in continuous commercial operation up to desired period.
- 1.3 BIDDER's guarantee in a manner acceptable to the PURCHASER who will interpret the meaning of drawing and specification and shall have power to reject any work or material which, in his judgement, are not in full accordance with specified specification and technical parameter.
- 1.4 The extent of supply under the contract includes all items shown in the drawings, notwithstanding the fact that such items may have been omitted from the specification or schedules. Similarly, the extent of supply also includes all items mentioned in the specification and /or schedules, notwithstanding the fact that such items may have been omitted in the drawing.
- 1.5 Items though not specifically mentioned but needed to make the system complete as stipulated under these specifications are also to be furnished unless otherwise specifically excluded.
- 1.6 The general terms and conditions, instructions to tenderer and other attachment referred to elsewhere are hereby made part of the tender specifications. The equipment / material and works covered by this specification is subject to compliance to all the attachments referred in the specification. The tenderer shall be responsible for adherence to all requirements stipulated herein.
- 1.7 While all efforts have been made to make the specification requirement complete & unambiguous, it shall be bidders' responsibility to ask for missing information, ensure completeness of specification, to bring out any contradictory / conflicting requirement in different sections of the specification and within a section itself to the notice of BHEL and to seek any clarification on specification requirement in the format enclosed under Vol.-III of the specification within 10 days of receipt of tender documents. In absence of any such clarifications, in case of any contradictory requirement, the more stringent requirement as per interpretation of Purchaser/Customer shall prevail and shall be complied by the bidder without any commercial implication on account of the same. Further in case of any missing information in the specification not brought out by the prospective bidders as part of pre-bid clarification, the same shall be furnished by Purchaser/ Customer as and when brought to



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their notice either by the bidder or by purchaser/ customer themselves. However, such requirements shall be binding on the successful bidder without any commercial & delivery implication.

- 1.8 No deviation is permitted in normal case. Deviations, if any, should be very clearly brought out clause by clause in the enclosed schedule otherwise, it will be presumed that the vendor's offer is strictly in line with NIT specification.
- 1.9 In case all above requirements are not complied with, the offer may be considered as incomplete and would become liable for rejection.
- 1.10 Unless specified otherwise, all through the specification, the word contractor shall have same meaning as successful bidder/vendor and Customer/Purchaser/Employer will mean BHEL and/or Customer (RVUNL) as interpreted by BHEL in the relevant context. Please refer GCC/SCC for better clarity.
- 1.11 In the event of conflict between requirements of two clauses of this specification/ documents or requirements of different codes/standard specified, the more stringent requirement as per interpretation of owner shall apply.
- 1.12 The equipment covered under this specification shall not be dispatched unless the same have been finally inspected, accepted and dispatch release issued by BHEL/Customer.
- 1.13 BHEL's Customer's representative shall be given full access to the shop in which the equipment's are being manufactured or tested and all test records shall be made available to him.
- 1.14 Various codes and standards to be used shall be as indicated in various parts of the specification. In case bidder uses any standard other than those indicated in the specification, the onus of establishing equivalence of the same with the specified standards will rest with the bidder and acceptance of the same shall be sole prerogative of customer. The bidder will also arrange for BHEL a copy of the standards in ENGLISH language. The cost of such service will be deemed to have been included by the bidder in the total cost of the package. BHEL will not entertain any additional cost on account of the same.
- 1.15 All text/ numeric in the document / drawings to be generated by the successful bidder will be in English language only.
- 1.16 The bidder's offer shall not carry any sections like clarification, interpretations and /or assumptions.
- 1.17 The inspection and testing of all the equipment shall be as per approved quality Plan/Inspection checklist.

Note:

Bidder to note that BHEL reserves the right for drawing/document submission through web based Document. Management System. Bidder would be provided access to the DMS for drawing/document approval and adequate training for the same. Detailed methodology would be finalized during the kick-off meeting. Bidder to ensure following at their end.

- Internet explorer version – Minimum Internet Explorer 7.



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SECTION - I

SHEET 3 OF 3

- Internet speed – 2 mbps (Minimum preferred).
- Pop ups from our external DMS IP (124.124.36.198) should not be blocked.
- Vendor's internal proxy setting should not block DMS application's link (<http://dmsserver.bhelpem.com/Wrench%20Web%20Access/Login.aspx>).



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
MODIFICATION WORK ON FOAM TENDER
SPECIFIC TECHNICAL REQUIREMENTS

SPECIFICATION No: PE-TS-392-550 -A001

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SECTION – IA
SPECIFIC TECHNICAL REQUIREMENTS
(MECHANICAL)



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
MODIFICATION WORK ON FOAM TENDER
SPECIFIC TECHNICAL REQUIREMENTS

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SCOPE OF SUPPLY AND SERVICES:

This specification covers the requirements regarding the modification of water tank on two nos of foam tender complete in all respects, to be used for fire-fighting at 2 X 660 MW Suratgarh STPS. The scope of supply and services shall include the following:

- 1) Transport of two nos. foam tenders and its in transit insurance from BHEL's Suratgarh Site to bidder's work.
- 2) Replacement of 2000 Ltrs. water tank with 4500 Ltrs. water tank, associated dismantling of the body work, rearrangement of equipments / piping (if any) to accommodate the higher capacity water tank, reconstruction of the body work & acceptance test of both the foam tenders and performance demonstration at site.
- 3) Carrying out the inspection of foam tender at bidder's works as per the attached QAP (refer Annexure-I)
- 4) Delivery of the foam tenders and its in transit insurance to BHEL's Suratgarh Site and handing over to customer.
- 5) Training of Customer/Client's O&M staff.
- 6) Permanent registration with valid insurance of the vehicles in the name of RRVUNL Suratgarh (customer). Presently both the vehicles are temporarily registered in the name of "CONSTRUCTION MANAGER, M/s BHARAT HEAVY ELECTRICALS LIMITED, SURATGARH STPS, STAGE-V, UNIT # 7 & 8 (RRVUNL), PRABHAT NAGAR, SURATGARH, DIST. SRI GANGANAGAR".

GENERAL:

- 1) Foam tender built on ASHOK LEYLAND CHASSIS (ECOMET 1212 STRONG) complete with 2000 ltrs water tank, 500 ltrs. foam tank, fire pump, pump primer, Power Take Off units, water monitor, bodywork, lockers, cooling system, cabin/ structure, structure/framework, accessories etc. in line with the **tender drawings (Refer Annexure-I)**, shall be provided to the successful bidder by BHEL. **The successful bidder to check the same before taking handover of the vehicles.** Complete foam tenders including the requirements mentioned in this part of specification along with



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MODIFICATION WORK ON FOAM TENDER
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the requirements specified in the **tender drawings (Refer Annexure-I)** shall be offered for inspection and handed over to customer.

- 2) **Water Tank:** - A water tank of 4500 litres capacity shall be mounted on the chassis replacing the 2000 Litres water tank already mounted on the Vehicle. It shall be fabricated out of mild steel sheet of minimum 3.0 mm thickness. The tank shall be treated for anti-corrosion with epoxy paint consisting of one coat of primer and two coats of finish paint after clean blasting of inside surface and shall be suitably baffled to prevent surge when the vehicle is braking, accelerating or concerning. The baffle shall be arranged in a manner to facilitate the passage of a man throughout the tank for cleaning purposes. Minimum thickness of baffle plate shall be 3.0 mm. It shall be mounted on the chassis in a manner keeping in view the proper load distribution on the axles and shall be so designed as to bring the centre of gravity as low as possible in the chassis. It shall be rectangular in shape and the mounting of the tank shall be flexible type to prevent the tank's distortion due to the chassis flexion. The mounting shall permit full contents of the tank to flow into the pump. The tank with its fitments shall withstand hydrostatic pressure of 0.3 bar.

3) **Other General requirements: -**

- a) Gross vehicle weight- shall not be more than 11900 Kg including crew, water and equipments.
- b) Maximum speed on level road fully laden 72 Km / h.
- c) Acceleration from a standing start through the gears, 64 Km/h in 55 seconds fully laden.
- d) The appliance shall be capable of being started from rest on a gradient of 1 in 4.
- e) When travelling at 48 km / h on a level dry surface the foot brake shall be capable of stopping the vehicle within a distance of 15 m from the point at which the brake is applied. The hand brake shall be capable of holding the fully laden appliance on a dry surface gradient of 1 in 4 when in neutral gear.



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FOAM TENDER
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SHEET 1 OF 1

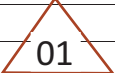
ANNEXURE-I

Tender Drawings

BHEL to ensure that Foam tender shall comply with IS 10460 and TAC regulation.

C,G,H
Refer transmittal no. TCE.5750A-ME-610-VDT-352 dated 08-09-2016.

00	ORIGINAL RELEASE	02.05.16	SURESH	HIMANSU	HIMANSU	
REV.	DESCRIPTION	DATE	PREPARED	CHECKED	APPROVED	REMARKS
CUSTOMER	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD.					
CUSTOMER'S CONSULTANT	 TATA CONSULTING ENGINEERS LIMITED BANGALORE					
	BHARAT HEAVY ELECTRICALS LTD POWER SECTOR, PROJECT ENGINEERING MANAGEMENT, NOIDA					
PROJECT	2 X 660 MW SUPER CRITICAL TPS (SURATGARH ,STAGE-V, UNIT # 7 & 8)					
BHEL DOC.NO.	PE-V0-392-550-A001				REV	01
VENDOR	ENSOL MULTICLEAN EQUIPMENTS PVT LTD 401, NEELKANTH, BHAWANI SINGH ROAD, JAIPUR					
TITLE :	TDS AND GA OF FOAM TENDER					

	TITLE : TDS FOR FOAM TENDER PROJECT : 2 X 660 MW Suratgarh stage V	BHEL Doc no. PE–TS-392-550-A001
TECHNICAL DATA SHEET		
S.No.	Component Detail	Technical Data
1.0	Vehicle Details/ Applicable STD	
1.1	Chassis Make & Model	ASHOK LEYLAND ECOMET 1212 BS-III 
1.2	Gross weight/ Total pay load [kg]	11900 kg
1.3	Wheel Base [mm]	3970mm
1.4	Overall width / overall length / overall height [mm]	L-6988 mm, W -2207 mm, H -2780 mm
2.0	Water tank Details	
2.1	Capacity [liters]	2000 liters
2.2	Size [mm]	L-1500 mm, W -1800 mm, H -800 mm
2.3	Shape	Rectangular type
2.4	MOC / Thickness of plate	Mild Steel / 3mm thickness, 5 mm thk of Bottom
2.5	Baffle [Nos.]	02 nos. / 3mm thickness
2.6	Manhole / Filling Orifice	450mm / 250 mm
2.7	Cleaning / Drain sump	250mm
2.8	Draw of Connection	100mm
2.9	Filling Connection [Hydrant]	2 no. ,63mm
2.10	Overflow pipe	100mm
2.11	Level Indicator	1 no. glass tube type
3.0	Foam tank Details	
3.1	Capacity [Liters]	500 liters
3.2	Size [mm]	L-500 mm, W -1250 mm, H -825 mm
3.3	Shape	Rectangular
3.4	MOC / Thk.	Stainless Steel SS304, 2.5 mm
3.5	Manhole / Filling Orifice	150mm , 1 no.
3.6	Level Indicator	1 no. glass tube type
4.0	PTO	
4.1	Make	VAS
4.2	Step-up ratio	1.1:27
5.0	Cooling System	
5.1	Type	Indirect open circuit
5.2	MOC	Brass sheet (Heat Exchanger)
6.0	Pump	
6.1	Type	Single Stage
6.2	Capacity	1800 LPM @ 8.5 kg/cm ²
6.3	Location	Rear
6.4	Make	Geeta Commercial (CE certified)
6.5	M.O.C.	
6.6	Casing	GM-IS 318



TITLE : **TDS FOR FOAM TENDER**
PROJECT : 2 X 660 MW Suratgarh
stage V

BHEL Doc no. PE--TS-392-550-A001

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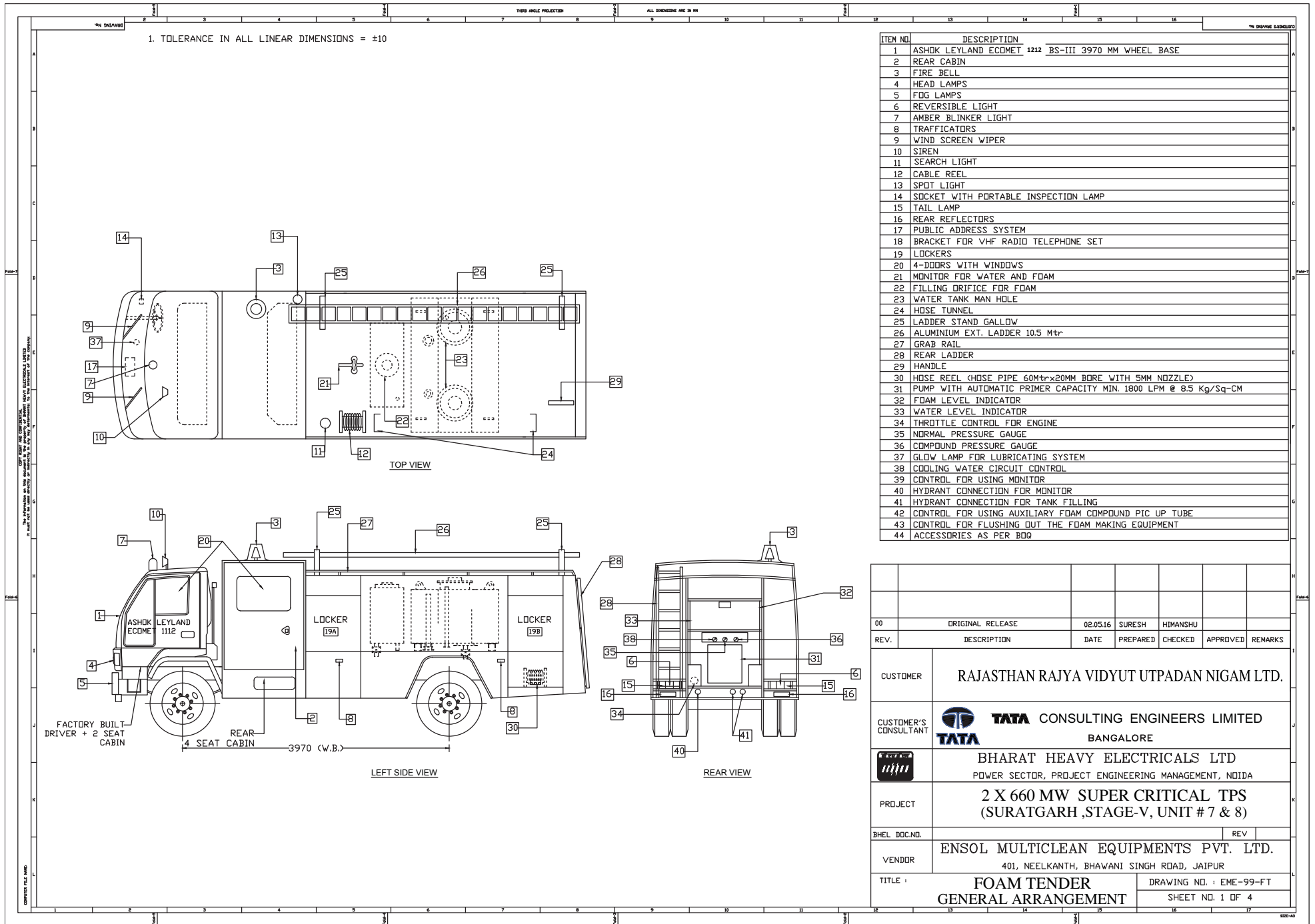
6.7	Impeller	GM
6.8	Delivery valve	63 mm
6.9	Shaft	SS 304
6.10	Bearing Housing	CI
6.11	Radial Seal Housing	GM
6.12	Suction tee	GM
6.13	Pump Cover	GM
6.14	Delivery valve	2 nos. 63 mm
6.15	Suction inlet	100 mm
7.0	Primer	
7.1	Type & make	Horizontal Reciprocating type, Geeta Commercial
7.2	Material Of Body	SS
7.3	Capacity	7 mtrs /24 sec.
8.0	Hose Reel	
8.1	Hose reel	Length – 60 m, Bore – 20 mm Connected by Screw ‘C’ type coupling terminating with control branch & 5 mm nozzle
9.0	Monitor	
9.1	Material / Capacity	Gun Metal / 700 LPM
10.0	Body Work	
10.1	Driver cum crew cabin	Enclosed for 6 Persons
10.2	Super structure	M.S . 2mm thick
10.3	Paneling	Aluminum sheet
10.3.1	External	1.6 mm
10.3.2	Internal	1.2 mm
10.4	Flooring	1.6 mm Alu. Cheq. plate
10.4.1	Cabin	1.2 mm Alu. Cheq. plate
10.4.2	Top Deck	1.6 mm Alu. Cheq. plate
10.4.3	No. of locker, Size & Thk	3 nos. / as per GA drawing
11.0	Piping & Valves	
11.1	Water Tank to pump line	100 mm
11.2	Hydrant to tank	75 mm
11.3	Cooling line	12 mm
11.4	Suction line [outside]	100 mm
11.5	Priming line	20 mm
11.6	Delivery Manifold	2x63 mm
11.7	Pump to hose reel line	25 mm
11.8	Hydrant to hose reel line	25 mm
11.9	Pump to delivery	63 mm
11.10	Delivery line	63 mm
11.11	Drain valve [water tank]	50 mm
11.12	Water tank to pump valve	100 mm
11.13	Hose reel valve	25 mm
11.14	Pump drain valve	12mm

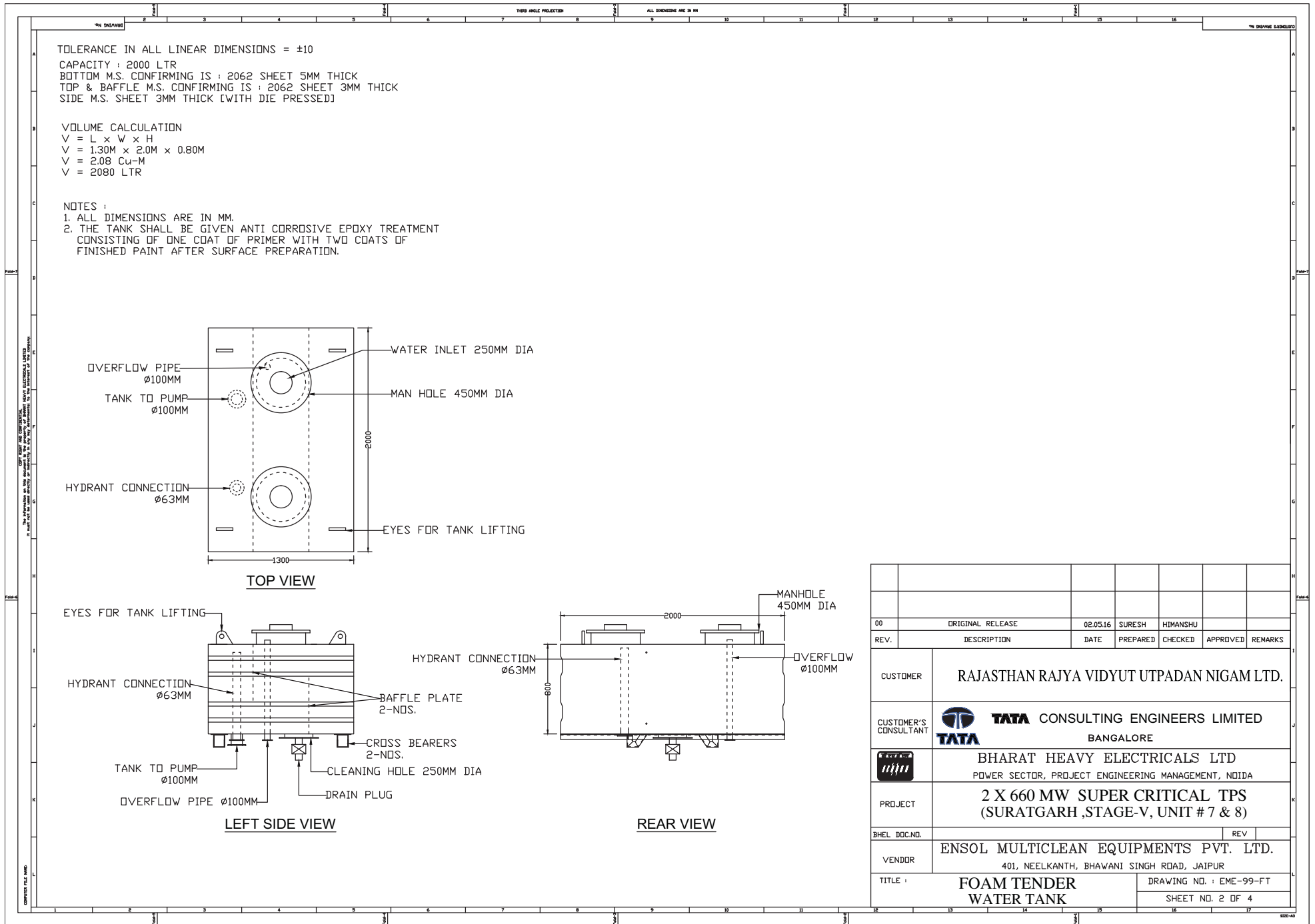
	TITLE : TDS FOR FOAM TENDER PROJECT : 2 X 660 MW Suratgarh stage V	BHEL Doc no. PE–TS-392-550-A001
11.15	Cooling line valve	12 mm
11.16	Hydrant to tank valve	75 mm
11.17	Pump to monitor	50 mm
12.0	Fitted Accessories	
12.1	Fire bell [250mm]	1 no. 250 mm
12.2	Head lamp	2 nos.
12.3	Fog lamp	2 nos.
12.4	Reversing lights	2 nos.
12.5	Twin Amber Blinker Light	2 nos.
12.6	Trafficators	2 nos.
12.7	Wind screen wipers	2 nos.
12.8	Spot light	2 nos.
12.9	Search light	1 no.
12.10	P A system	1 no.
12.11	Battery Operated Siren	1 no.
12.12	Inspection Lamp	1 no.
12.13	Tail lamp	2 nos.
12.14	Rear Reflectors	2 nos.
12.15	VHF system	1 nos.
13.0	D.C.P. Extinguisher	
13.1	Capacity	75kg
13.2	No. of extinguisher	2 nos.
14.0	Cab, Instrument panel & locker light	01 no.
15.0	Control panel	
a)		Panel light
b)		Throttle wheel
c)		Compound gauge
d)		Inter cooling valve
e)		Pump to monitor valve
f)		Water level indicator
g)		Hydrant connections
h)		Foam pick up valve
i)		Flushing valve
j)		Pressure Gauge
16.0	List of equipments	Appendix- A

Appendix –A

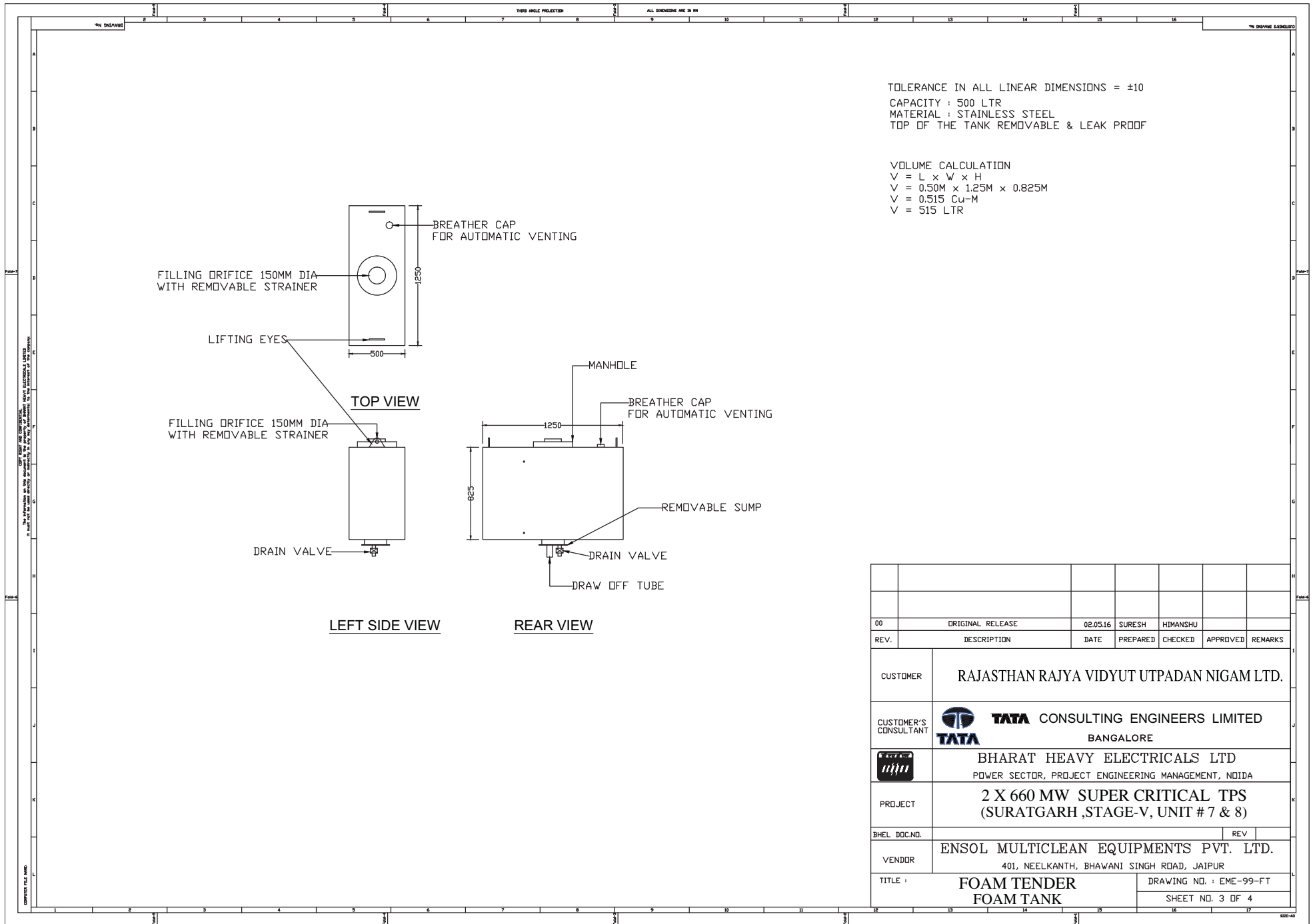
Sr.	Description	Qty.
1.	Alumnum Extension ladder -10.5 m (IS: 4571 or IS: 930)	1No.
2.	Armoured suction hose complete with round thread couplings (GM)to suit the pump inlet - 2.5m long (IS: 2410 and IS : 902)	4 length
3.	Delivery hose, 63mm , Rubber lined in 30 m lengths (type II of IS: 636) complete with couplings(IS: 903)	10 length

4.	Suction strainer for item No.2 (IS: 907)	1 No.
5.	Basket strainer for item No. 2 (IS :3582)	1 No.
6.	Dividing breaching made out of light alloy(IS: 5131)	2 Nos.
7.	Collecting breaching made out of light alloy (IS :905)	2 Nos.
8.	Suction wrenches(IS :4643)	1 Pair
9.	Long line 50mm circumference 30 M long (IS :1084)	2 length
10.	Short line 50mm circumference 15 M long (IS:1084)	2 length
11.	Hose bandages rubberized(IS: 5612)	12 Nos.
12.	Hose clamps(IS :5612)	6 Nos.
13.	Hydrant valve key & bar (IS :910)	1set.
14.	Fog nozzle with extension applicator to fog head (IS :952)	1 No.
15.	Hand controlled branch for 63mm size hose coupling	1 No.
16.	Branch pipe universal (IS:2871)	1 No.
17.	Branch pipe with revolving head (IS: 906)	1 No.
18.	Branch pipe (IS: 903)	4 Nos.
19.	Nozzle for branch pipe sizes 12mm, 16mm, 20mm, & 32mm (2 each) (IS: 903)	10 Nos.
a)	Adapter for 100mm suction female screw coupling & 63mm male inst.	2 Nos.
b)	Adapter double female instantaneous pattern 63 mm	2 Nos.
c)	Adapter double male instantaneous pattern 63 mm	2 Nos.
20.	Nozzle spanner (IS: 903)	2 Nos.
21.	Portable electric box lamp with rechargeable accumulator	2 Nos.
22.	Hand lamp (Torch – 4 cells)	2 Nos.
23.	Flame proof lamp (usable in the present of inflammable gases or vapours)	2 Nos.
24.	First Aid box for 10 persons	1 No.
25.	Rubber gloves (in case) (IS: 4770)	1 pair
26.	Asbestos Gauntlets (in case)	1Pair
27.	Axe large (IS: 703)	1 No.
28.	Spade	1 No
29.	Pick axe (IS: 273)	1 No
30.	Crowbar (Is: 704)	1 No
31.	Sledges hammer 6.5 kg (IS: 841)	1 No
32.	Carpenters Saw 60cm (IS: 5098)	1No
33.	Hydraulic Jack 7.5 tons	1 No
34.	Fire hook (IS :927)	1 No
35.	Tool kit	1 No
36.	Protective clothing for firemen complete with gloves, boots, & helmet with suitable face shield made out of materials capable of reflecting at least 95% of radiant heat temp. around 1500 to 2000°c & afford some protection against direct flame. The suit will be of sufficient to accommodate a B.A. to user.	2 Set
37.	Self contained BA set compressed air type complete with spare cylinder and tool kit.	1 set





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CUSTOMER		RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD.						
CUSTOMER'S CONSULTANT		 TATA CONSULTING ENGINEERS LIMITED BANGALORE						
		BHARAT HEAVY ELECTRICALS LTD POWER SECTOR, PROJECT ENGINEERING MANAGEMENT, NOIDA						
PROJECT		2 X 660 MW SUPER CRITICAL TPS (SURATGARH ,STAGE-V, UNIT # 7 & 8)						
BHEL DOC.NO.						REV		
VENDOR		ENSOL MULTICLEAN EQUIPMENTS PVT. LTD. 401, NEELKANTH, BHAWANI SINGH ROAD, JAIPUR						
TITLE :		FOAM TENDER WATER TANK			DRAWING NO. : EME-99-FT			
					SHEET NO. 2 OF 4			



00	ORIGINAL RELEASE	02.05.16	SURESH	HIMANSHU		
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CUSTOMER	RAJASTHAN RAJYA VIDYUT UTPADAN NIGAM LTD.					
CUSTOMER'S CONSULTANT	 TATA CONSULTING ENGINEERS LIMITED BANGALORE					
	 BHARAT HEAVY ELECTRICALS LTD POWER SECTOR, PROJECT ENGINEERING MANAGEMENT, NOIDA					
PROJECT	2 X 660 MW SUPER CRITICAL TPS (SURATGARH, STAGE-V, UNIT # 7 & 8)					
BHEL DOC.NO.					REV	
VENDOR	ENSOL MULTICLEAN EQUIPMENTS PVT. LTD. 401, NEELKANTH, BHAWANI SINGH ROAD, JAIPUR					
TITLE :	FOAM TENDER FOAM TANK				DRAWING NO. : EME-99-FT SHEET NO. 3 OF 4	

SR. NO		COMPONENTS & OPERATION		CHARACTERISTIC		MANUFACTURING QUALITY PLAN				CUSTOMER : RRVNL												
						ITEM		FOAM TENDER		BHEL DRG. NO : PE-VO-392-550-A003		CONSULTANT : TCE LTD.										
						FIRE FIGHTING VEHICLE		REV NO : 1		DATE : 06.06.2016		CONTRACTOR : BHEL										
						PAGE NO : 1 OF 1		SUPPLIER : ENSOL MULTICLEAN EQUIPMENTS PVT. LTD.														
				CLASSIFICATION		TYPE OF CHECK		QUANTUM OF CHECK		REFERENCE DOCUMENT		ACCEPTANCE NORMS		FORMAT OF RECORD		AGENCY			REMARKS			
														P W V								
1st INSPECTION																						
A		CHASSIS & ENGINE		MAKE, TYPE		MAJOR		CHASSIS DOCUMENT		LOT		APPROVED TDS		CHASSIS DOCUMENT		CHASSIS DOCUMENT		-			2 1/3	
B		RAW MATERIAL																				
B1		M.S. PLATE FOR WATER TANK		CHEMICAL PROPERTY		MINOR		CHEMICAL PROPERTY		LOT		IS:2062		IS:2062		T.C		-			2 1/3	
B2		S.S. PLATE FOR FOAM TANK		CHEMICAL PROPERTY		MINOR		CHEMICAL PROPERTY		LOT		SS 304		SS 304		T.C		-			2 1/3	
C		PUMP - CASING, SHAFT & IMPELLER		OVERALL PROPERTIES		MAJOR		OVERALL PROPERTIES		LOT		APPROVED DOCS / RELEVANT IS		APPROVED DOCS / RELEVANT IS		T.C		-			2 1/3	
2nd INSPECTION																						
D		IN PROCESS INSPECTION																				
D1		(STRUCTURAL) FABRICATION OF WATER TANK AND FOAM TANK		VISUAL & DIMENSION INCL. THICKNESS		MINOR		DIM. (VISUAL)		100%		AS PER APPROVED DOCUMENT		AS PER APPROVED DOCUMENT		AS PER APPROVED DOCUMENT		2			1 3	
D2		HYDRO TEST OF WATER TANK		HYDRO TEST		MAJOR		HYDRO TEST 0.3 BAR		100%		APPROVED DOCS		NO LEAKAGE		LR		2			1 3	
3rd INSPECTION																						
E		COMPLETE ASSEMBLY INSPECTION																				
E1		PUMP (PRIMER) ASSEMBLY		VISUAL CHECK		MAJOR		COMPLETENESS / VISUAL		100%		APPROVED DOCS		APPROVED TDS		LR		2			1/3	
E2		HOSE REEL ASSEMBLY		VISUAL CHECK		MINOR		DO		100%		APPROVED DOCS		APPROVED TDS		LR		2			1/3	
E3		FINAL INSPECTION OF COMPLETE WATER-FOAM TENDER		PERFORMANCE TEST OF PUMP FOR 4 HOURS & DEEPLIFT TEST OF PRIMER, STABILITY TEST, ROAD TEST, TILTING TEST/VISUAL		MAJOR		PERFORMANCE TEST AND VERIFICATION OF LIST OF EQUIPMENT AND ACCESSORIES AS PER DATA SHEET		100%		APPROVED DATA SHEET, APPROVED DRAWING AS PER IS: 10460		APPROVED DATA SHEET, APPROVED DRAWING AS PER IS: 10460		LR		2			1/3 -	
MANUFACTURER SIGNATURE FOR ENSOL MULTICLEAN EQUIPMENTS PVT. LTD.						LEGEND : ** 1 BHEL, 2 ENSOL MULTICLEAN EQUIPMENTS PVT. LTD, 3 CUSTOMER W : WITNESS P : PERFORMER V : VERIFIER						FOR BHEL USE										





2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
MODIFICATION WORK ON FOAM TENDER

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ANNEXURE-II

Master Drawing List with Schedule of submission



**2 X 660 MW SURATGARH STPS,
STAGEV,UNIT-7&8**

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**LIST OF DOCUMENTS TO BE SUBMITTED BY BIDDER DURING DETAIL
ENGINEERING**

S.No.	DRWG NO	DRWG TITLE	CATEGORY	SCHEDULED SUBMISSION (NO. OF WEEKS FROM LOA DATE / PO DATE) or AS SPECIFIED IN NIT, WHICHEVER EARLIER.	RESUBMISSION AFTER COMMENTS INCORPORATION
1	PE-V0-392-550-A001	TDS AND GA OF FOAM TENDER	A-CUST	4	WITHIN 1 WEEK
2	PE-V0-392-550-A002	FLOW DIAGRAM FOR FOAM TENDER	A-CUST	4	WITHIN 1 WEEK



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8

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ANNEXURE-III

COMPLIANCE CUM CONFIRMATION CERTIFICATE



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8

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COMPLIANCE CUM CONFIRMATION CERTIFICATE

The bidder shall confirm compliance with following by signing / stamping this compliance certificate (every sheet) and furnish same with the offer.

- a) The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusions, other than those mentioned under "exclusion and those resolved as per 'Schedule of Deviations', with regard to same.
- b) There are no other deviations w.r.t. specifications other than those furnished in the 'Schedule of Deviations'. Any other deviation, stated or implied, taken elsewhere in the offer stands withdrawn unless specifically brought out in the 'Schedule of Deviations'
- c) Bidder shall submit QP in the event of order based on the guidelines given in the specification & QP enclosed therein. QP will be subject to BHEL / CUSTOMER approval & customer hold points for inspection / testing shall be marked in the QP at the contract stage. Inspection / testing shall be witnessed as per same apart from review of various test certificates/ Inspection records etc. This is within the contracted price without any extra implications to BHEL after award of the contract.
- d) All drawings/ data-sheets / calculations etc. submitted along with the offer shall not be taken cognizance off.
- e) The offered materials shall be either equivalent or superior to those specified in the specification & shall meet the specified / intended duty requirements. In case the material specified in the specifications is not compatible for intended duty requirements then same shall be resolved by the bidder with BHEL during the pre-bid discussions, otherwise BHEL / Customer's decision shall be binding on the bidder whenever the deficiency is pointed out.

For components where materials are not specified, same shall be suitable for intended duty, all materials shall be subject to approval in the event of order.

- f) The commissioning spares shall be supplied on 'As Required Basis' & prices for same included in the base price itself.
- g) All sub vendors shall be subject to BHEL / CUSTOMER approval in the event of order.
- h) Guarantee for plant/equipment shall be as per relevant clause of GCC / SCC / Other Commercial Terms & Conditions
- i) In the event of order, all the material required for completing the job at site shall be supplied by the bidder within the ordered price even if the same are additional to approved billing break up, approved drawing or approved Bill of quantities within the scope of work as tender specification. This clause will apply in case during site



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8

MODIFICATION WORK ON FOAM TENDER

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commissioning, additional requirements emerges due to customer and / or consultant's comments. No extra claims shall be put on this account

- j) Schedule of drawings submissions, comment incorporations & approval shall be as stipulated in the specifications. The successful bidder shall depute his design personnel to BHEL's / Customer's / Consultant's office for across the table resolution of issues and to get documents approved in the stipulated time.
- k) As built drawings shall be submitted as and when required during the project execution.
- l) The bidder has not tempered with this compliance cum confirmation certificate and if at any stage any tempering in the signed copy of this document is noticed then same shall be treated as breach of contract and suitable actions shall be taken against the bidder.
- m) Successful bidder shall furnish detailed erection manual for each of the equipment supplied under this contract at least 3 months before the scheduled erection of the concerned equipment / component or along with supply of concerned equipment / component whichever is earlier.
- n) Document approval by customer under Approval category or information category shall not absolve the vendor of their contractual obligations of completing the work as per specification requirement. Any deviation from specified requirement shall be reported by the vendor in writing and require written approval. Unless any change in specified requirement has been brought out by the vendor during detail engineering in writing while submitting the document to customer for approval, approved document (with implicit deviation) will not be cited as a reason for not following the specification requirement.
- o) In case vendor submits revised drawing after approval of the corresponding drawing, any delay in approval of revised drawing shall be to vendor's account and shall not be used as a reason for extension in contract completion.



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
MODIFICATION WORK ON FOAM TENDER

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ANNEXURE-IV

Pre-bid Clarification Schedule



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8

MODIFICATION WORK ON FOAM TENDER

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PRE-BID CLARIFICATION SCHEDULE

S. NO.	SECTION/CLAUSE/PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CLARIFICATION REQUIRED

The bidder hereby clarifies that above mentioned are the only clarifications required on the technical specification for the subject package.

Signature: _____

Name: _____

Designation: _____

Company: _____

Date: _____

Company Seal



2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8
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ANNEXURE-IV

Deviation Schedule

DEVIATION SHEET (COST OF WITHDRAWAL)**PROJECT:- 2 X 660 MW SURATGARH STPS, STAGE-V, UNIT-7&8****PACKAGE:- FOAM TENDER****TENDER ENQUIRY REFERENCE:-****NAME OF VENDOR:-**

SL NO	VOULME/ SECTION	PAGE NO.	CLAUSE NO.	TECHNICAL SPECIFICATION/ TENDER DOCUMENT	COMPLETE DESCRIPTION OF DEVIATION	COST OF WITHDRAWAL OF DEVIATION	REFERENCE OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWAL OF DEVIATION IS APPLICABLE	NATURE OF COST OF WITHDRAWAL OF DEVIATION (POSITIVE/ NEGATIVE)	REASON FOR QUOTING DEVIATION
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TECHNICAL DEVIATIONS

COMMERCIAL DEVIATIONS

PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

NAME	DESIGNATIONS	SIGN & DATE	

NOTES:

1. For self manufactured items of bidder, cost of withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
2. For directly dispatchable items, cost of withdrawal of deviation will be applicable on the basic price including taxes, duties & freight.
3. All the bidders have to list out all their Technical & Commercial Deviations (if any) in detail in the above format.
4. Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
5. Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable.
6. Bidder shall furnish price copy of above format along with price bid.
7. The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
8. Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
9. For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.
10. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
11. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
12. Cost of withdrawal is to be given separately for each deviation. In no event bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.
13. In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
14. In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.