



**BHARAT HEAVY ELECTRICALS
LIMITED**
PROJECT ENGINEERING MANAGEMENT

**BHEL PEM,PPEI
PLOT No.25, SECTOR-16A,
NOIDA-201301 (U.P.)
PHONE: 0120-4368761**

Ref. No: PE/PG/BIF/E-6284/2019/CORRIGENDA/07

Date: 15.10.2019

FIRE TENDERS FOR 2 X 660 MW BIFPCL MAITREE KHULNA STPP-BANGLADESH.

CORRIGENDA/ADDENDA-07

Tender Enquiry No: PE/PG/BIF/E-6284/2019, DTD. 07.08.2019

DUE DATE
25.10.2019
BY 02:00 PM (IST)

With reference to subject tender, please find attached amendment no. 01 to Technical Specification no. PE-TS-421-550-A001 attached as Annexure B & Annexure C. Also, please find attached pre-bid clarifications (against queries raised by bidder) as Annexure A.

Further, please note that delivery schedule for subject tender has been revised & same is attached as Annexure I.

Accordingly, the bid submission date of tender for **FIRE TENDERS invited** vide Enquiry No. PE/PG/BIF/E-6284/2019, DTD. 07.08.2019 is **extended up to 25.10.2019 at 02:00 PM (IST)**.

Bidders are requested to submit their offer/ submit revised offer accordingly, on or before due date & time.

Thanking You.

For & on Behalf of BHEL,

**DEVENDRA SINGH
SR. ENGR/PG1**

BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049

Annexure I

BHEL Drawing No	Drawing Title	Primary/ Secondary	Drg Sch for Vendors	Standard Delivery Terms for Supply Portion	Scope of Services, (if any, as per Indent) and corresponding schedule for rendering the services
PE-V0-421-550-A001	TDS & GA Drawing of Foam Cum Water Tender	Primary	R-0 within 28 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	Within Eight (08) months from date of CAT-1 approval of Primary drawing/documents or BHEL manufacturing clearance whichever is later. In case date of CAT-1 approval of Primary drawing/documents is later than the date of BHEL manufacturing clearance then for delay analysis, any delay in submission/re-submission of Primary drawing/documents shall be reduced from the given delivery period of 08 months. Delay in BHEL's comments/approval beyond 18 days shall also be considered for delay analysis. In case BHEL manufacturing clearance date is later than date of cat-1 approval of Primary drawing/documents, then for delay analysis submission/re-submission time of Primary drawing/document shall not be considered.	Demonstration & Handing over at site: Vendor to depute its service engineer for demonstration and handing over at site within 30 days from BHEL's intimation (for deputing service engineer). For delay in deputing service engineer, LD on demonstration and handing over activities shall be applicable @ ½% of the total demonstration and handing over portion contract value (excluding element of taxes) per week or part thereof, with applicable GST. However, total LD (supply + demonstration and handing over) shall be limited to 10% of cumulative total contract value excluding taxes and freight (supply + demonstration and handing over).
PE-V0-421-550-A002	TDS & GA Drawing of Ambulance CAR	Primary			
PE-V0-421-550-A003	TDS for Safety Equipments	Primary			
PE-V0-421-550-A004	MQP for Foam Cum Water Tender	Primary			
PE-V0-421-550-A005	MQP for Ambulance CAR	Primary			
PE-V0-421-550-A006	Subvendor list with Inspection Category	Primary			
Note:Separate document for each fire tender, fire jeep, fire safety equipments etc.			within 30 days of issuance of MDCC		
PE-V0-421-550-A007	O&M manual	Secondary			
Note:Separate document for each fire tender, fire jeep, fire safety equipments etc.					


DEVENDRA SINGH
 SR. ENGR/PG1



**BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LTD.
BIFPCL**

**2X660 MW MAITREE SUPER THERMAL POWER PROJECT
AT RAMPAL, BANGLADESH**

AMENDMENT - 01

**TECHNICAL SPECIFICATION
FOR
FIRE TENDER AND AMBULANCE CAR**

SPECIFICATION NO.: PE-TS-421-550-A001



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



**2 X 660 MW MW MAITREE STPP
FIRE TENDER PACKAGE**

SPECIFICATION NO. PE-TS-421-550-A001

AMENDMENT IS ATTACHED AS ANNEXURE-B & ANNEXURE-C. THIS AMENDMENT SHALL BE BINDING ON BIDDERS AND SAME SHALL ☐ SUPERCEDE ☐ THE CORRESPONDING CLAUSE OF TECHNICAL SPECIFICAITON.

ANNEXURE-B

2*660 MW BIFPCL MAITREE TPP-FIRE TENDER PACKAGE

S.NO.	SECTION CLAUSE /PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CHANGE IN TECHNICAL SPECIFICATION
1	Section I, sub section IC, 3.7.0	The diesel engine shall be with manual transmission synchromesh forward and reverse speed gear box.	The following clause may be read as" The Diesel engine shall be either manual transmission or with a provision of automatic chassis with feature of manual gear transmission but without clutch and with synchromesh forward and reverse speed gear box".
2	Section I, sub section IC, 5.1.2 b)	Underground reservoir through flexible suction hose up to suction lift of 7.5 m with the help of automatic water ring type primer.	The following clause may be read as"Underground reservoir through flexible suction hose up to suction lift of 7.5 m with the help of automatic water ring type primer/reciprocating Piston primer".
3	Section I, sub section IC, 5.2.0 e)	Water tank shall have convex shape for bottom & top plates for lowest center of gravity.	The following clause may be read as " Water tank shape to be so designed to best meet the axle loading and center of gravity requirements".
4	Section I, sub section IC, 5.3.0 f)	Foam tank shall have convex shape for bottom & top plates for lowest center of gravity.	The following clause may be read as " Foam tank shape to be so designed to best meet the axle loading and center of gravity requirements".
5	Section I, sub section IC, 5.4.0	Around the pump foam proportioning system in line with Chapter 20 of NFPA 1901 and details mentioned below shall be provided	The following clause may be read as " Foam pump and balanced foam proportioning system in line with Chapter 20 of NFPA 1901 and details mentioned below shall be provided".

Review
 14.10.2019

2*660 MW BIFPCL MAITREE TPP-FIRE TENDER PACKAGE

S.NO.	SECTION CLAUSE /PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CHANGE IN TECHNICAL SPECIFICATION
6	Section I, sub section IC, 5.7.0 f)	Foam expansion: 1:7 to 1:8	The following clause may be read as " foam expansion: 1:3 to 1:4 ".
7	Section I, sub section IC, 5.9.0	An auxiliary heat exchanger shall be provided to maintain the temperature in the engine at or below the engine manufacturer's maximum temperature rating under all conditions for which the apparatus is designed.	The following clause may be read as "The engine cooling system shall maintain a temperature in the engine at or below the engine manufacturer's maximum temperature rating under all conditions for which the apparatus is designed. An auxiliary heat exchanger, if required, shall be provided to maintain the temperature in the engine at or below the engine manufacturer's maximum temperature rating under all conditions for which the apparatus is designed".
8	Section I, sub section IC, 3.3.0	Engine system shall meet latest EURO norms prevailing at Bangladesh (Minimum Euro-IV).	The following clause may be read as: "Engine system shall meet latest EURO norms prevailing at Bangladesh (Euro-III)". This will be applicable for Ambulance Car also.
9	Painting Specification		Painting Specification applicable for the package is attached herewith(Annexure-c).

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PAINTING SPECIFICATION

Index

1. Scope & Philosophy
2. General Requirements
3. Codes & Standards
4. Surface Preparation and Cleaning of Surfaces in the Shop
5. Cleaning to be performed on site
6. Cleaning of prime and intermediate coats (if required)
7. Application procedure
8. Galvanizing
9. Appendix-A

The painting requirements given in this chapter are minimum requirement. Bidder to note that the fire-fighting vehicle's painting shall be equivalent or superior than the painting requirements specified herein.

1. Scope & Philosophy

This document covers the Painting Scheme including Corrosion Protection, Coating and Galvanizing requirements applicable for the entire power plant packages, equipment, structures, piping etc. and any other surfaces.

Corrosion Protection, Coating and Galvanizing requirements shall conform to Contractual requirement stipulated in B0.6.5.

This documents contains list of annexure (mentioned at appendix-A) for Painting Scheme to be followed for various packages, equipment, items and structures.

Painting scheme shall be approved item/ equipment wise and not package wise i.e Painting scheme once approved for any equipment, items and structures etc shall be applicable for all similar equipment, items and structures in entire power plant.

2. General Requirement

Coating material shall only be supplied by manufacturers with international experience and their products can be obtained internationally.

It is the responsibility of the Contractor to ensure that, for all supplied equipment (including that from sub suppliers):

- The protection system is perfectly suitable for the Site conditions and for the specific purpose.
- The shop paints provide a sufficient protection during transport, storage and erection.
- The shop paints are suitable for handling and erection conditions (slinging, Site welding works etc.) and are compatible with the Site finishing coats
- All necessary precautions are taken in order to prevent damage to paints during storage, handling, welding.
- The necessary repairs are carefully executed as soon as possible.
- The colour RAL number of the finishing coat has been approved by the Employer, including identification code for piping.
- All items/equipment shall be painted as per the specification.

3. Codes and standards

Corrosion Protection, Coating and Galvanizing requirements will conform to the below mentioned applicable standards or equivalent:

- Product data of coating manufacturer
- DIN 2403 Indication of pipe-lines according to flowing material
- DIN 4762 Surface roughness
- ISO 8503 Surface roughness
- DIN 8201 Part 1-9 tight blasting agents

- DIN 50976 Corrosion protection, hot dip batch galvanizing of single parts, requirements and testing
- DIN 55928 Part 1-9 corrosion protection of structural steel work through protective coatings and topcoats
- ISO 8501 Preparation of steel substrates before application of paints and associated products
- ISO 12944 Paints and varnishes corrosion protection of steel structures by protective paint systems
- RAL Colour card
- ISO 8501-1 Preparation of steel substrates before application of paints and related products
- SSPC Vol. 1 and 2 Steel structure painting council

4. Surface Preparation and Cleaning of Surfaces in the Shop

All surfaces to be painted will be thoroughly cleaned of all grease, oil, paint residues, welding splashes, loose mill scale, dust, rust and any other foreign matter. Mechanical cleaning by power tool and scrapping with steel wire brushes will be adopted to clear the surfaces. However, in certain locations where power tool cleaning cannot be carried out, sand scrapping may be permitted with steel wire brushes and/or abrasive paper. Cleaning with solvents will be resorted to only in such areas where other methods specified above have not achieved the desired results. Cleaning with solvents will be adopted only after written approval of the Purchaser/Consultant.

Sharp edges have to be rounded off. Contaminations caused by salts, acids and alkali solutions shall be eliminated by rinsing with water up to a pH value of 6-8. Soluble salt contamination is to be tested using the Weber Reilly test method (or similar approved) and pH is to be tested using universal indicator paper strips prior to continuation with the blasting.

The preparation of substrates shall be carried out on the basis of the specifications of ISO 12944 part 4 and ISO 8501. The preparation of steel before application of paint and related products shall be in line with ISO 11124 for metallic blast cleaning abrasives and ISO 11126 for non-metallic blast cleaning abrasives. No recycled blast grit may be utilised.

After blasting, an anchor profile of 25 - 50 μm shall be achieved. Blasted surfaces have to be provided with a prime coat of the approved coating system immediately within 4 hours of blasting. All blasting and priming must take place outside of the high humidity periods of the day (i.e. maximum relative humidity of 80%).

5. Cleaning to be performed on site

Steel work protected by shop primer after arrival on site must be cleaned of salt, sand, oil, etc. before the first coat of paint is applied on site. Shop primer damaged during transport must be rectified by blast-cleaning and coating before application of the site coats. Wood surfaces shall be sanded clean. All nail holes shall be puttied and sanded before priming, unless the specific coating system allows for coating onto damp concrete, in which case only with approval from the Employer.

If a protective coating of concrete is required, concrete shall be allowed to cure before painting. Transport and erection damages, as well as damages which result out of additional welding have to be repaired as soon as possible. The damaged areas have to be derusted with rotating or steel brushes, abrasive wheels, and abrasive blasting according to DIN ISO 8501-1.

6. Cleaning of prime and intermediate coats (as required)

To prevent contamination by mineral oil products, areas with prime and intermediate coat have to be treated with suitable cleaning agent. Cleaning has to be done free of residues, e.g. with alkaline detergents and thorough washing done with fresh water. Rusty spots have to be removed according to required purity. Metallic areas which are provided with temporary corrosion protection have to be cleaned. No oxidation products shall remain on the surface. Further care shall be taken that on hot components, no destructive or reaction products will be released when heating which could injure insulation.

7. Application procedure

When using the provided coating material, strict adherence to all application instructions given in product data of coating manufacturer is necessary. To obtain the maximum performance, technical data as well as application instructions for the individual coating material have to be strictly followed.

For a multi-layer coating system each layer has to have a different colour shade in order to clearly identify number of coats applied. The last finish coat has to be applied in the specified colour shade.

All paintings shall be performed according to ISO 12944. The durability of all paintings shall be high which corresponds to 15 years.

The interval between applying the different coats has to follow according to suppliers specifications. Each layer shall be cleaned and released from spray dust before the next layer will be applied. Prior to applying a further layer, the last one has to be repaired. All coatings have to be applied without retarding.

Following application procedures are allowed:

- prime coats by airless spray
areas like disconnections, angles, corners, etc. which are difficult to be reached can be applied by brush or roller
- finish coats
 - at works by airless spray, roller or brush
 - at site by roller or brush or airless spray.

Control areas in accordance with the coating supplier's instructions have to be applied. For this procedure, a schedule for control areas has to be prepared by the Contractor and coating supplier which corresponds with the requirements of the warranty agreement.

Number and performance of the control areas have to be done in accordance with ISO 12944 part 7 and have to be documented in writing. No application shall take place either

in the condition of the relative humidity not within the given limit or in case of poor weather conditions such as fog, dust, rain, snow, hail or when it can be assumed that such conditions of poor weather will arise within 2 hours after application. Temperature of the coated parts has always to be above 5 °C and 3 K above dew point.

All specified dry film thicknesses (DFT) are minimum thicknesses. Welding seams executed at site have to be taped with an adhesive tape of about 30-50 mm after surface preparation (blasting or manual derusting) and prior to application in the manufacturing plant and to be coated with stripping coat.

Chequered plates, nap plates, etc. have not to be covered with adhesive tape, but have to be coated with stripping coat in a dry film thickness of at least 150 µm. Edging lines on steel structure have to be taped prior to application and after blasting in sufficient width or have to be protected with varnish before application. Thickness of prime coat may be 50 µm maximum. During repairing works at site on shop-primed structures, it is important that different coats will have different colour shades. Numbers of layers have to be the same as the original coating system to be used.

Application of temporary primer on structures which have to be insulated has to be in accordance with a sufficient corrosion protection for the period of storage respectively erection time.

8. Galvanizing

Galvanizing work shall conform in all respects to ISO 1461 or equivalent standards and shall be performed by the hot dip process unless otherwise specified.

It is essential that details of steel members and assemblies which are to be hot-dip galvanized should be designed to suit the requirements of the process. They should be in accordance with ISO 12944.

Vent holes and drain holes shall be provided to avoid high internal pressures and air locks during immersion and to ensure that molten zinc is not retained in pockets during withdrawal. Careful cleaning of welds is necessary before welded assemblies are dipped.

All defects of the steel surface including cracks, surface laminations, laps and folds shall be removed in accordance with BS 4360. All drilling, cutting, welding, forming and final fabrication of unit members and assemblies shall be completed, where feasible, before the structures are galvanized.

The minimum coating thickness shall be as specified in Table 1 of BS 729. Structural steel items shall be first grit-blasted to BS 4232, second quality, (Sa 2 1/2) or pickled in a bath, and the minimum average coating weight on steel Sections 5 mm thick and over shall be 900 g/m², on steel Sections 2 – 5 mm thick 600 g/m².

Galvanized contact surfaces to be joined by high-tensile friction-grip bolts shall be roughened before assembly so that the required slip factor is achieved. Care shall be taken to ensure that the roughening is confined to the area of the mating faces.

Protected slings must be used for off-loading and erection. Galvanized work, which is to be stored at the works or on site shall be stacked so as to provide adequate ventilation for all surfaces to avoid wet storage staining (white rust).

Small areas of the galvanized coating damaged in any way shall be restored

by:

- cleaning the area of any weld slag and thorough wire brushing to give a clean surface
- The application of two coats of zinc-rich paint, or the application of a low melting point zinc alloy repair rod or powder to the damaged area, which is heated to 300 °C or the treatment with suitable cold galvanizing paint, such as ORAPI n.z.a.b 706. All zinc rich paint used for such repairs must contain a minimum of 81% by mass of zinc in the dry film.

Connections between galvanized surfaces and copper, copper alloy or aluminium surfaces shall be protected by suitable tape wrapping.

Appendix-A

PAINTING SCHEME FOR

Item Description: FIRE FIGHTING VEHICLES

MPS-9

Coating System (refer Contract Book No.3 Clause B0.6.5)

System No.	Surface location	Temp In Celsius	Surface Preparation	Coating systems	No. of coats	Generic type	Dry film thickness (DFT) per coat micro m	Total DFT (Micro m)
1	Structural steel works, piping, vessels, tanks INDOOR	upto 120	SA 2.5	Primer	1	Zinc-Epoxy	80	80
				Finish	1	Epoxy High Solid	80	80
								160
2	Structural steel works, piping, vessels, tanks OUTDOOR	upto 120	SA 2.5	Primer	1	Zinc-Epoxy	80	80
				Intermediate	1-2	Epoxy High Solid	160	160
				Finish	1	2-Comp Polyurethane	50	50
								290
3	Piping, tanks, etc INDOOR and OUTDOOR, Insulated	upto 120	SA 2.5	Primer	1	Zinc-Epoxy	50	50
4	Pump, motors, other equipment OUTDOOR	upto 120	SA 2.5	Primer	1	Zinc-Epoxy	80	80
				Intermediate	1	Epoxy High Solid	110	110
				Finish	1	2-Comp Polyurethane	50	50
								240
5	Pump, motors, other equipment INDOOR	>120	SA 2.5	Primer	1	Zinc-Epoxy	80	80
				Finish	2	Epoxy High Solid	50	100
								180
6	Piping, reactors OUTDOOR Insulated	<120	SA 2.5	Primer	1	Zinc-Ethylsilicate	75	75
7	Stack OUTDOOR	<120	SA 2.5	Primer	1	Zinc-Ethylsilicate	75	75
				Finish	2	Silicone Acrylic	50	100
								175
8	Steel Surfaces Uninsulated	200-450	SA 2.5	Primer	1	Zinc-Ethylsilicate	75	75
				Finish	2	Silicone Aluminium	25	50
								125
9	Galvanized Surfaces	upto 120	Mechanical cleaning from contaminants and zinc salts by means of washing or steam jetting or sweep-blasting with fine sand	When finish coat is required, such as sea climate with chloride exposure	1	Epoxy High Solid *	125	125
10	Steel Surfaces permanently in contact with water, also river water splash zone	medium temp upto 60 degree Celsius	SA 2.5	Prime and finish coat in one	1	Glassfibre reinforced High Solid Epoxy	500	500
11	Plant/Cooling Water pipes	GRP, or steel lined concrete pipes with cathodic protection and coating according to AWWA C 203						

* Additional 1 x Finish Coat 2-Comp. Polyurethane, 50 micro m, when exposed to UV or weathering conditions and color retention is required

(1). BASE COLOR : SIGNAL RED / RAL : 3001, (2). LETTERING : SIGNAL WHITE / RAL :9003, (3). THE FIRE FIGHTING VEHICLES SHALL BE CONSIDERED AS OUTDOOR UNITS

ANNEXURE-A

2*660 MW BIFPCL MAITREE TPP-FIRE TENDER PACKAGE

PRE-BID CLARIFICATION

S.NO.	SECTION CLAUSE /PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CLARIFICATION REQUIRED	Changes in technical specification
1	Section I, sub section IC, 3.1.0	Chassis for carrying out fabrication work on water cum foam tender shall be VOLVO/ BENZ/ MAN/ TATA/ ASHOK LEYLAND / equivalent make. The chassis shall be able to meet the requirements of Chapter 12 of NFPA 1901.	Please note that compliance to chapter 12 of NFPA 1901 is possible only in case of custom built chassis, the options given for chassis by you are confirming to EN specifications. Therefore the chassis will not comply to chapter 12 of NFPA 1901, however the water pumping system will meet NFPA 1901. Please accept or change the vehicle chassis to custom built chassis. In case you keep the chassis option same then the best possible offer will be "The vehicle will not be fully complying to NFPA 1901 especially chassis. We will manufacture with reference to NFPA 1901 where applicable to its clauses with respect to what is proposed in the tender other than chassis. The specification is a mix of EN standard applicable on chassis and pump as per NFPA standard.	Bidder in its query have not specifically mentioned any technical constraints w.r.t. non-compliance from chapter 12 of NFPA-1901. Accordingly the chassis provided by the bidder shall meet the overall performance of the vehicle as per requirements of NFPA 1901. Specific constraints, if any, with relevant supporting documents shall be submitted by the vendor to BHEL which is subject to customer approval during detail engineering without commercial & delivery implication to BHEL & end customer
2	Section I, sub section IC, 3.7.0	The Diesel engine shall be manual transmission	Manual transmission engines with 25 T GVW are phasing out, so we will be proposing the diesel engine with 12 speed forward and reverse automated mechanical gear box. Basically automatic chassis with feature of manual gear transmission but without clutch. Please accept and change accordingly the tender specifications.	Refer Amendment-1
3	Section I, sub section IC, 5.1.2 b)	Underground reservoir through flexible suction hose up to suction lift of 7.5 m with the help of automatic water ring type primer.	With automatic water ring type primer, suction lift of 7.5 mtr is not possible, please accept or provide option to go with PISTON PRIMER. Reciprocating Piston primer also fully automatic.	Refer Amendment-1
4	Section I, sub section IC, 5.2.0 e)	Water tank shall have convex shape for bottom & top plates for lowest center of gravity.	Please accept as an option rectangular shape, which maintain better and lowest center of gravity which will increase the vehicle grade stability.	Refer Amendment-1
5	Section I, sub section IC, 5.2.0 j)	Inspection manhole of 750mm dia	Please accept between 500mm to 750 mm. 500mm is as per industry standard.	Bidder to comply technical specification.
6	Section I, sub section IC, 5.3.0 f)	Foam tank shall have convex shape for bottom & top plates for lowest center of gravity.	Please accept as an option rectangular shape, which maintain better and lowest center of gravity which will increase the vehicle grade stability.	Refer Amendment-1

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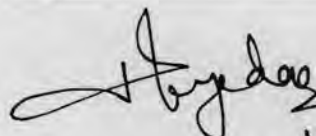

 14/10/19
 (Harish Kumar)

2*660 MW BIFPCL MAITREE TPP-FIRE TENDER PACKAGE

PRE-BID CLARIFICATION

S.NO.	SECTION CLAUSE /PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CLARIFICATION REQUIRED	Changes in technical specification
7	Section I, sub section IC, 5.3.0 i)	Inspection manhole of 750mm dia	Please accept between 500mm to 750 mm. 500mm is as per industry standard.	Bidder to comply technical specification.
8	Section I, sub section IC, 5.4.0	Around the pump foam proportioning system in line with Chapter 20 of NFPA 1901 and details mentioned below shall be provided	Specification for the foam pump is clear and is asking for balanced pressure foam proportioner. Around the pump foam proportioner is wrongly mentioned in your specifications. Please replace the same with balanced pressure foam proportioner.	Refer Amendment-1
9	Section I, sub section IC, 5.5.0 d)	The pump casing, shaft and other parts coming in contact with foam compound shall be made of SS316. However gears as per AISI - 410 hardened. Gears shall be double helical and profile grounds. Bearing shall be of GM and Teflon bush. Shaft sealing shall be by mechanical seals. Alternatively, material of construction for the foam concentrate pump shall be corrosion resistant and compatible with the type of foam concentrate.	We shall be provide alterante as " Pump body made of bronze, shaft made of 255 Duplex Stainless Steel. Pump rotors shall be spur gear design using corrosion resistant material. Made from amiralty bronze alloy and composite materials that provide no tooth to tooth wear and no corrosion. Please accept.	Bidder to follow technical specification. Specific constraints, if any, with relevant supporting documents shall be submitted by the vendor to BHEL which is subject to customer approval during detail engineering without commercial & delivery implication to BHEL & end customer
10	Section I, sub section IC, 5.7.0 f)	Foam expansion: 1:7 to 1:8	We shall be offering the world's leading make of UL listed water cum foam monitor but even they have maximum foam expansion as 1:3 to 1:4 as per Industry standard. Please accept the same.	Refer Amendment-1
11	Section I, sub section IC, 5.8.0	Hose Reel high pressure	In the section 5.1.3 - fire water pump required is a normal pressure , so please change the specifications of water to dual pressure or change hose reel to low pressure.	Bidder to follow technical specification. Also the fire water pump shall be in line with the technical specification.
12	Section I, sub section IC, 5.9.0	An auxiliary heat exchanger shall be provided to maintain the temperature in the engine at or below the engine manufacturer's maximum temperature rating under all conditions for which the apparatus is designed.	Original chassis manufacturer cooling system is sufficient for running the pumps continuously without overheating. No additional heat exchanger is required. Please accept.	Refer Amendment-1

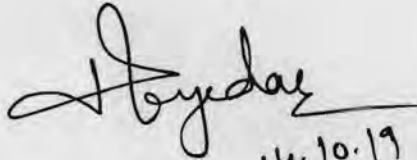
Rehman
14.10.19


14.10.19
(Harish Kumar)

2*660 MW BIFPCL MAITREE TPP-FIRE TENDER PACKAGE

PRE-BID CLARIFICATION				
S.NO.	SECTION CLAUSE /PAGE NO.	STATEMENT OF THE REFERRED CLAUSE	CLARIFICATION REQUIRED	Changes in technical specification
13	Section I, sub section IC, 5.11.2	Structure/ Frame Work	We propose a better material of construction as : The structure frame for crew cabin will be combination of Stainless steel, Aluminium profiles. We are proposing our proven body fabrication with Aluminium extrusions which is corrosion resistant and light weight and can provided easy maintenance. The superstructure is build using aluminium profiles 6061 T6, fastened to a strong base structure made of stainless steel tubing. Connectors being used in assembling the profiles are of stainless steel 316L grade. This customized design allows great flexibility in arranging shelves, drawers, partitions, even after the vehicle is finalized, as well as keeping intact the strength of the 6061 alloy which will keep its original composition unmodified by weld heat. Full superstructure assembly is mounted on auxiliary frame by means of conical rubber bearings.	Bidder to follow technical specification. Specific constraints, if any, with relevant supporting documents shall be submitted by the vendor to BHEL which is subject to customer approval during detail engineering without commercial & delivery implication to BHEL & end customer

Rehman
14.10.19


14.10.19
(Harish Kumar)