

Design, Manufacture, Supply, Installation, Testing and Commissioning of E&M works comprising of Electrical Sub Stations with HT and LT works, Ventilation and Air Conditioning Systems (VAC), Fire Detection Systems, Fire Suppression (Fire Fighting) Systems, Building Management System (BMS), EOT cranes, Air-Compressors including compressed air piping works and Plumbing Pumps for the Depot Buildings including OCC and at grade Aarey Station for "Mumbai Metro Line -3"

CONTRACT NO: MM 3-CBS-DEM-R

PREBID QUERIES

Sr. No.	VOL	Page No.	Clause No.	Tender Description	Query	Response
1	As per BOQ			33KV GIS - Type test reports.	As per the global guideline for all the OEMs that repeat type test shall not be performed unless and until there is change in manufacturing design. So type test reports available with OEMs are old more than 5 years. Kindly accept.	Tender Conditions Prevail.
2	VOLUME 4	Page 126 of 151	2.16.1.2 - XIII	Calibrated Day Services Tank minimum capacity of 990 litres for operation of DG sets. The tank shall be made out of 14 SWG thick MS sheets with all accessories such as oil level indicator, drain plugs, manhole and painting etc. complete as required by Indian Explosive Rules and Regulations.	We can provide the separate tank of 990 Ltr capacity for each DG set. Please share the details of distance between DG and Day tank for better clarity.	ASS-Room Equipment layout, Trench Layout with sizing, etc. is part of detailed design. Please refer Tender Architectural Drawings. Tender Conditions Prevail.
3	VOLUME 4	Page 126 of 151	2.16.1.2 - XVII	Supply and fixing of hot air exhaust duct of 22 SWG GI sheet with DG canopy to remove hot air (if required).	Please confirm about ducting is required or not. About DG location nothing is mentioned in Architectural drawings.	ASS-Room Equipment layout, Trench Layout with sizing, etc. is part of detailed design. Please refer Tender Architectural Drawings. Tender Conditions Prevail.
4	VOLUME 4	Page 126 of 151	2.16.1.2 - B	Exhaust piping system including MS pipes, specials, bends, flanges and reducer's etc. connection to silencers and lagging the exhaust pipe as per specifications.	Please share DG room layout with section and exhaust pipe routing.	ASS-Room Equipment layout, Trench Layout with sizing, etc. is part of detailed design. Please refer Tender Architectural Drawings. Tender Conditions Prevail.
5	VOLUME 4	Page 129 of 151	2.16.2.1 - Operating conditions	The Engine Alternator are to be installed at Aarey Depot/ Mumbai (Maharashtra) and shall be capable of working at any ambient temperature between 0oC and 50oC and relative humidity up to 100%.	The test will be conducted at FAT only. Please confirm?	Testing for all rating DG testing shall be in the scope of the DEM- R Contractor as stipulated in Volume-4 Employer Requirement, Technical Specification, Section VIB-Electrical-LT, Clause-2.16.2.12 Testing & Commissioning and in compliance to Volume-3 - Employer's Requirement, General Specification, Clause-9. Tender Conditions Prevail.
6				The DG et shall be suitable for continuous operation inside the acoustic enclosure under all ambient conditions up to 50 Deg c ambient temp with out any adverse effect of its performance.	The test will be conducted at FAT only. Please confirm?	Testing for all rating DG testing shall be in the scope of the DEM- R Contractor as stipulated in Volume-4 Employer Requirement, Technical Specification, Section VIB-Electrical-LT, Clause-2.16.2.12 Testing & Commissioning and in compliance to Volume-3 - Employer's Requirement, General Specification, Clause-9. Tender Conditions Prevail.
7				As per the CPCB guidelines the Chimney / Stack height has to be higher than the building height, therefore suitable Lightning protection system on the Exhaust pipe, duly approved by MMRC has to be provided.	Please share DG room layout with section and exhaust pipe routing.	ASS-Room Equipment layout, Trench Layout with sizing, etc. is part of detailed design. Please refer Tender Architectural Drawings. Tender Conditions Prevail.

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8	VOLUME 4	Page 133 of 151	2.16.2.5 Constructional features	- 1) STRUCTURE: Enclosure shall be made in modular design and can be dismantled/ assembled at site. It shall be made out of heavy gauge mild steel sections and reinforced with fabricated super structure, the supporting frame work shall be of 2.0 mm thickness. Outside covers & doors shall be fabricated in 2.0 mm thick CRCA sheet.	All these DG sets are manufactured as per the pre Cpcb / ARAi certified design. We can not dismantled the acoustic enclosure and acoustic enclosure shall be fabricated out of 1.6mm thick CRCA sheet as per our standard of manufacturing.	For all the product particulars compliance shall be in line with the Volume-3, Appendix-28, Vendor Approval Process and as per Volume-6, Preamble, clause a.1.4.6 Serial no 6. for obtaining No Objection from the Engineer. Tender conditions prevail.
9	VOLUME 4	Page 134 of 151	2.16.2.5.g. Safety systems	i. Governor The performance of the governor under load conditions shall be to Class A1 in accordance with BS 5514: Part 4 (ISO 3046).	Governor class G3 and G2 are as per ISO 8528 and A1 as per BS 8528. G2 and A1 characteristics re same. This will be standard as per engine manufacturing design.	For all the product particulars compliance shall be in line with the Volume-3, Appendix-28, Vendor Approval Process and as per Volume-6, Preamble, clause a.1.4.6 Serial no 6. for obtaining No Objection from the Engineer. Tender conditions prevail.
10	VOLUME 4	Page 136 of 151	2.16.2.6.b. Excitation system	- i. The main exciter shall receive power from a permanent magnet generator through separate auxiliary windings on stator via Automatic Voltage regulator.	PMG is a product of Stamford alternator. The similar system is provided in LS as AREP (auxiliary winding regulation excitation principle)	For all the product particulars compliance shall be in line with the Volume-3, Appendix-28, Vendor Approval Process and as per Volume-6, Preamble, clause a.1.4.6 Serial no 6. for obtaining No Objection from the Engineer. Tender conditions prevail.
11	VOLUME 4	Page 137 of 151	2.16.2.6.b. Excitation system	- iii. The excitation system and engine governor should be such that the alternator is capable of starting up induction motors having a starting kVA of not less than 1.8 times the alternator rated kVA.	Will be as per manufacturers standard. Kindly confirm.	For all the product particulars compliance shall be in line with the Volume-3, Appendix-28, Vendor Approval Process and as per Volume-6, Preamble, clause a.1.4.6 Serial no 6. for obtaining No Objection from the Engineer. Tender conditions prevail.
12	VOLUME 4	Page 144 of 151	AMF Panel	ENCLOSURE IP 54 (IEC)	Being Indoor panel it will be IP 42	Tender Conditions Prevail.
13	VOLUME 6		E.01-M SWITCHGEAR	V General	In specification nothings is mentioned about Protection for mCCB we will consider as per BOQ.	MCCB's Protection compliance shall be as per Volume-4; Technical Specification, Clause 2.1.3 - MCCBs. Tender conditions prevail.
14	VOLUME 4	Page 122 of 151	2.15.11 RELIABILITY, MAINTENANCE, SPARES & LIFE	Equipment shall be designed and manufactured in modular manner to facilitate the fault diagnosis and replacement of each modular part. Each module shall be capable of being interchanged with other modules of the same type without affecting the rest of modules in place	Tender specs have been asked for UPS in modular manner/Construction. Please confirm whether do we need to consider Modular in construction or true modular UPS with hot swappable power modules?	Tender Conditions Prevail.

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15	VOLUME 4	Page 115 of 151	2.15.5 SUB COMPONENTS OF UPS SYSTEM	Twin Battery banks supplying 100% rated load suitable for half hour back up with each UPS i.e. two banks of 2 hours backup for a set of UPS over its full service life complete with heavy duty, high discharge valve regulated lead-acid type batteries, battery racks and interconnecting cables shall be provided.	Please confirm about battery back up. 2 hrs as per specs or 30 min as per BOQ.	Please refer BOQ description. Tender BOQ Conditions prevail.
16	Volume-6 - Part-c : C.03 - OCC	181 of 273	2.3 - Pump head	Pump head specified on the Drawings and / or Equipment Schedules are for guidance and information only and are calculated based on assumed equipment pressure drops. The exact pump head based on the pipe run and the offered equipment shall be carefully checked and re-calculated for each pump before ordering the equipment. Calculation shall be submitted for approval. No modification to the piping system shall be allowed without prior approval. Any additional cost for the modification of the system (pumps, motors, switchgears, cables, panel boards, switchboards, etc.) from that indicated in BOQ, necessary to Meet the specified duties, special conditions and the offered equipment shall be provided at no extra cost to the Employer.	This is BOQ based tender, at this stage we are quoting as per the quantities, capacities and static pressure given in the BOQ. We confirm that the all the calculations regarding static pressure shall be done during engineering stage before ordering the equipment. However any additional cost for the modification of the system (pumps, motors, switchgears, cables, panel boards, switchboards, etc.) from that indicated in BOQ, necessary to meet the specified duties, special conditions and the offered equipment shall be compensated accordingly.	Refer clause 12 of GCC AND SCC for Variation. Tender Conditions Prevail
17	General				<p>TYPE OF CONTRACT It is clarified that: "It is a BOQ contract based on Preliminary design (i.e.Part Design and Build Contract). DDC(s)will do detail Designing. Tender conditions Prevail."</p> <p>We would like to clarify that post award of the contract if DDC design has a variation in specifications / design; For e.g. – during tendering capacity of Chiller mentioned in BOQ is 300 T and price for same has been considered in bid; and during the time DDC design it is required 350 T; how will the difference in cost due to change in specification be treated as variation in BOQ compensated in our contract Price. Another example can be if cable capacity during tender is considered as 300 sq mm and cost for 300 sqmm is considered but during detailed design it changes to 400 sq mm for which price is not considered then how variation in Price will be considered. Please Clarify.</p>	Refer clause 12 of GCC AND SCC for Variation. Tender Conditions Prevail