2 X 210 MW TENUGHAT TPS-DRY FLY ASH COLLECTION AND DISPOSAL SYSTEM

SL No	Volume/Scetion	Clause No.	Page No	Tender specification Requirement	Queries/Clarification	TVNL's response
1	Section A/Technological	Sl.no.15 of clause 04.02	5of 8	The cooling water system to be provided shall have the capacity to supply cooling water to all the plant & equipment (including stand-by equipment) at a time	Bidder understands that the cooling water to all plant and equipment mean the equipment related to the proposed system of ash handling package referred in this tender.	Okay
2	Section A/Technological	Sl.no.3of 04.10	8 of 8	New set of special tools and tackles for erection and maintenance of the equipment supplied	Bidder understands that the tools and tackles speciifed at Clause no 17.02 of Chapter 17 shall be supplied and handedover to customer for maintenance of the equipment supplied.	Okay
3	Section A/Technological	6.07	1of 2	Industrial quality make-up water will be made available to the successful Bidder at one point at a pressure of approx 1.5 kg/ cm2 (g) only near ESPs	Please clarify whether the 2 nos. cooling water sources shall be given near ESP of each units or any one single unit.	cooling water shall be made available at one point near ESP of each units.
4	Section- A / Technological	07.03	3 of 4	System for Gas Duct hoppers	We have noted that the system is also required for Gas Duct hoppers (2 nos.) per unit, however the ash data for the same is not mentioned. Please provide the same.	Ash data for gas hopper isn't available at present. However, you ask for the same from your representatives who visited the site recently and discussed with TTPS site officials.
5	Section- A / Technological	07.03	3 of 4	Design Consideration	The system is to be selected considering 47 TPH of Normal (rated) ash collection per Unit and Designed @ 67 TPH of Design ash collection per Unit based on worst coal with 50% ash generation. Under scenario when 8 hrs. of ash collection is to be evacuated in 4 hrs. the Standby compressor shall become operational. Considering the coarse ash of Eco & APH it is not advisable to club the same with fine ash of ESP 3rd to 7th field, accordingly we have proposed separate conveying line for Eco & APH and separate conveying line for ESP 3rd to 7th.Since no specific capacity is mentioned for Stage – II (From Intermediate Silo to Main Silo), we have offered the same @ 70 TPH. Customer is requested to confirm the ash genration rate in ESP, ECO, APH,Gas Duct and stack hoppers. Customer is requested to confirm field wise ash collection rates in ESP.	We have mentioned the capacity of ash evacuation system as @ 100 T/Hr. The ash genration rate in ESP, ECO, APH,Gas Duct and stack hoppersmay be considered taking 130 T/Hr coal flow with 40% ash content in each unit.
6	Chapter 7	7.05	3of 4	Ash temperatures for ECO,APH,ESP, Gas duct and stack hoppers	Bidder requests to reconfirm the ash tempartures indicated.In all other plants, the ash temeprature for ECO hoppers is maximum 350 degC and the ash temperature for APH, stack hoppers and ESP is maximum 150 deg C. Customer is requested to indicate the ash temperature for gas duct hoppers.	

7	Chapter 7	7.07	**4 of 4**	**Guaranteed noise level will be limited to 85 dB(A) at 1 m away measured in any direction for all equipment**	The size of oil free screw compressors which shall be used for pneumatic conveying of ash and available in the world guarantees for 85dB(A) ± 3 dB(A) in free field condition. Customer is requested to confirm the same. All other equipment shall be as specified in the specification.	confirmed.
8	Chapter 7	7.1	4 of 4	The plant will be designed for a minimum life of twenty five (25) years and a minimum operating life of 200000 hours.	All the equipments in ash handling plant which are prone to wear and tear will have lesser life and will require spares. However,overall the ash handling plant shall be designed asper specification.	The plant will be designed for a minimum life of twenty five (25) years anda minimum operating life of 200000 hours.
9	Chapter 4	04.02 (10 - a)	2 of 8	Main Silo system dry extraction system into close trucks / Dumpers	Dry unloading (Telescopic Chute) is for close tanker unloading and Wet unloading (Ash Conditioner) is for Open truck unloading. Tlescopic chute shall be used for close tanker unloading only and not for open Dumpers.	confirmed.
10	Chapter 4	04.00		ESP fluidising system	For better performance & operability, we suggest a dedicated 2W+1SB, ESP fluidizing blower & heater is required. Please confirm.	confirmed.
11	Chapter 4	04.02 (11)	4 of 8	Compressed air system for Instrumentation	It is always preferred to opt for a dedicated Instrument air compressor and we propose Non Lubricated Reciprocating type Instrument air compressors in 1W + 1SB mode. With Refrigerant type Drier. Total qty of Conveying & Instrument air receivers shall be furnished during detail engg.	confirmed.
12	Chapter 4	04.02 (11)	4 of 8	Compressed air system for conveying / Design configuration '	Separate set of Conveying Air Compressors for Stage – I & Stage – II: Duty, Stage – I (From Ash & ESP hoppers to Intermediate Silo): This system shall operate continuously. Duty, Stage – II (From Intermediate Silo to Main Silo): This system shall operate on intermittent basis. Considering the above running duties, it is preferred to opt for separate set of conveying air compressors. This shall provide flexibility to install Oil Injected Screw type compressors. These compressors shall be smaller in size and Stage – I (Conveying air) shall operate continuously while Stage – II (Transport air) shall operate intermittently based on system requirement. This shall give advantage in terms of initial cost of machines as well as power consumption in terms of long run. Also the maintenance cost of oil injected screw compressors is less as compared to Centrifugal compressors.	For stage-I, i.e. Up to Intermediate SILO, ash will be collected in the silo with by vaccum pump based system. 2W+1SB vacuum pump is required for each unit no.1 & 2. For stage-II, oil free screw compressors, 2W+1SB for each of unit no. 1 & 2 required. These have to taken into consideration in submission of the offer.
13	Chapter 4		5 of 8	MOC of Pipe	Conveying Pipe shall confirm to the corresponding thickness of IS: 1239 / 3589.	AS per IS .
14	Chapter 6	06.06	1 of 2	Termination Point, Ash Conditioner water	We have noted that the Service water for Ash Conditioner shall be taken from the existing high pressure water line. Tapping to be provided near to the system, we have considered 1W+1SB Booster pumps for the application.	Okay.
15	Section- A / Technological	Design Data Information		Particle size distribution	The specification is silent about PSD, please provide the same	PSD isn't available. You may design taking the generalised value.

16	Chapter 8	08.03.07	15 of 19	No. of operating cycles	Nos. of Cycles restriction of 8 to 10 Cyl / Hr. is not feasible for the present system configuration and considering increase in tapping heights.	Okay.
17	Chapter 10	10		Inspection and Test Certificates	Please note that we have considered only Routine Test for the equipments under present scope of supply. Heat run test / temperature rise/ impulse test / any other type test or special test for electrical equipments are not considered. Please confirm	All tests as per requirement are to be considered.
18	Section- A / Technological	Chapter 13	1, 2 & 3 of 3	List of Preferred makes	Vendor list shall be discussed & freezed during detail engineering	Okay
19	Chapter 4	04.11	8 of 8		Drinking water tapping shall be provided upto Compressor house and Silo Utility building area.	Okay
20	General	--	--	--	Presently we have not considered any sewerage system, we have offered Toilet block with septic tank & soak pit.	Okay
21	General	--	--	--	In absence of clear data, we presume that the Approach Road shall be from existing 30 Mtrs. wide road to Main Silos and from nearest existing in plant road to Compressor house. Please confirm	Okay
22	Drawing	Drg No.MEC/11/S3/10F5/01 Rev 0	sheet 1 of 1	Ash Conveying lines from ECO/APH/Duct/Gas Duct and ESP hoppers	The ash conveying lines shall be re-arranged during detail engineering. However,the number of ash conveying lines shall not be reduced as indicated in the P&ID. Bidder undersatnds that both the ash conveying lines from intermediate silo to main silo shall be working.	Okay
23	chapter 8	08.02.03	5of 19	Proper washing arrangement, drain, drain pits, drain pumps, pipes, valves etc as required to be provided to keep the main silo area clean & pollution free	Please confirm the discharge point/location of drain pumps in silo area.	To be considered in detail engg.
24	chapter 8	08.02.07	7of 19	Service air	Please confirm the requirement of service air and which areas are to be provided with service air	As per requirement of the system
25	Chapter 4	04.06	6 & 7 of 8	Pipe Supports	From the sections, we presume the intermediate Pipe supports is without walkway in two tier for pneumatic conveying pipe lines from Boiler & ESP hoppers to intermediate Storage Silo. and from Intermediate silo to Main Fly Ash Silo the Pipes shall be laid on RCC pedestals at an approx. elevation of 500 mm above the ground level as required. Wherever possible other Pipe racks and ESP supports shall be used to the extent possible. Please confirm.	Okay
26	chapter 8	08.03.04	12of 19	Material	Material of construction of compressors and driers shall be as per manufacturer's standard.	Okay
27	chapter 8	08.03.07	15 of 19	The number of cycles, velocity and material to air ratio	All these parameters shall be specific to ash handling system designer and shall not be limited to as specified. However,the system shall be provided for guaranteed ash conveying rate.	Okay
28	chapter 8	08.03.08.01	16 of 19	The air piping shall be galvanised and shall be as per IS :1239 Heavy Grade. The pipes shall have screwed ends asper BSPT (Brithsh Standard Pipe Threads	Bidder undersatnds that this is applicable for instrument air piping only. All other air piping shall be MSERW as per IS 1239/3589	AS per standard

29	chapter 8	08.03.08.04	19 0f19	Manually operated isolation valves shall be provided at the outlet of each transporter vessel	Bidder understands that this is applicable for 2nd stage ash conveying vessels only. However,it is not recommended to provide manual isolation valve at outlet of vessels. Please confirm	As per clause of tender.
30	chapter 11	11.04	5of 6	In case the tenderer fails to adhere to the time specified in the technical specification then Liquidated Damage shall be applied as per stipulation of Volume-I.	Volume-I is not available.	LD applicable as per tender doc. i.e max. limited up to 5%
31	chapter 14	14.07.03	7of8	Painting scheme and thickness	Painting of Bought out items like compressors, motors, drier, pumps, cooling towers, blowers shall be as permanufacturer's standard.	Okay
32	chapter 16	16.01	1of 5	Bidder shall submit eight copies of drawing, documents, calculation data information etc to TTPS / Consultant. TTPS / Consultant will return one copy of the same after comment / approval to bidder.	Keeping the project schedule on priority, customer/consultant is requested to approve/comments on soft copies of drawings/dcouments sent vide email /online portal. This shall reduce transit time of drawings/documents. The final apporved drawing shall be sent in hard copies in required numbers. Customer/consultant is requested to approve/comment within 7 days of drawing submission.	Okay
33	chapter 17	17.01	1to 4 of 4	Mandatory spares	Bidder understands that the applicable mandatory spares are only to be supplied.	Okay
34	section B- handling and hoisting facilities	1.2	1 of 14	Underslung crane for above silo and blower room	it is not possible to provide SG EOT or underslung crane on silo top. Manual Hoist shall be supplied and erected as per clause 4.07 Section A. Since equipment in blower room are not more than 2 T and as specified at Clause no 02.00 (page 2 of14),electric hoist shall be provided in blower room. Kindly confirm.	As per clause of tender.
35	Section F- Cooling water system	01.02.01	1of 19	civil & structural works, electrics, instrumentation, automation, **telecommunication**, material handling & hoisting equipment etc as specified and required for compressors, blowers and other equipment as specified herein as turnkey basis	Bidder understands that the Telecommunication is part of this enquiry and is typographical error.	Okay
36	Section F- Cooling water system	general	1of 19	Motor operated valves	pneumatic operated valves can be provided in place of motor operated valve.	As per clause of tender.
37		General		Transportair compressors conveying ash from intermediate silo to main silos	Bidder proposes to use hot air for conveying of ash from intermediate silo to main silo. This will eleminate the requirement of drier for compressor. This will also result and in huge reduction of cooling water and there will be saving in power consumption on account of above.	As per clause of tender.