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Corrigendum - 4 dated 20/12/2025 to CPC Tender No. BHEL/CPC/KOD/EPC_AHP_PKG - II/26/058 for the work of "EPC Package (Package – II) for Main Ash Handling System of Unit#3 & Unit#4 at 2x800 MW DVC Koderma TPS Phase-II, Jharkhand".

A) Modification in PRE-QUALIFYING REQUIREMENTS (PQR): Some clauses of existing PRE-QUALIFYING REQUIREMENTS (PQR) (Annexure – 1) of NIT are **revised** as mentioned below;

Sl. No.	PQR Clause No.	Existing clause in Tender	Revised clause
1	A.1	The Bidder should be supplier of ash handling system(s) and should have executed ash handling system(s) involving design, engineering, manufacturing/got manufactured, supply, erection/ supervised erection and commissioning/ supervised commissioning for-. **(b) Pneumatic fly ash handling system for conveying** fly ash from ESPs of a single coal / lignite fired boiler unit by either: i. Pressure conveying system designed for 30 TPH or more conveying capacity. **Or** ii. Vacuum conveying system designed for 30 TPH or more conveying capacity per vacuum extractor. The reference fly ash handling systems should be of the same type i.e. pressure system or vacuum system, as is being offered by the Bidder. An individual boiler unit having its own independent fly ash handling system up to wetting units / dry dust collection buffer hoppers / intermediate Silos which includes, among others, independent fly ash handling equipment below ESP hoppers, independent ash conveying piping up to wetting units / dry dust	The Bidder should be supplier of ash handling system(s) and should have executed ash handling system(s) involving design, engineering, manufacturing/got manufactured, supply, erection/ supervised erection and commissioning/ supervised commissioning for-. **(a) Pneumatic fly ash handling system for conveying** fly ash from ESPs of a single coal / lignite fired boiler unit by either: i. Pressure conveying system designed for 30 TPH or more conveying capacity. **Or** ii. Vacuum conveying system designed for 30 TPH or more conveying capacity per vacuum extractor. The reference fly ash handling systems should be of the same type i.e. pressure system or vacuum system, as is being offered by the Bidder. An individual boiler unit having its own independent fly ash handling system up to wetting units / dry dust collection buffer hoppers / intermediate Silos which includes, among others, independent fly ash handling equipment below ESP hoppers, independent ash conveying piping up to wetting units / dry dust

Sl. No.	PQR Clause No.	Existing clause in Tender	Revised clause
		collection buffer hoppers can be considered as a plant for meeting the requirement above. **And** **(c) Pneumatic Fly Ash Transportation System** for transporting fly ash from coal/lignite fired boiler unit having capacity of not less than 20 TPH for a conveying distance of not less than 500 meters. Further, a transportation system provided for an individual boiler unit having dedicated transportation vessels below dry dust collection buffer hoppers and dedicated piping from dry dust collection buffer hoppers / intermediate Silos to storage silos, including storage silo equipment (like Vent Filter, Rotary Feeder, Ash unloader/Telescopic chute, Ash conditioner etc.) can be considered as a plant for meeting the requirement above. **And** **(d) Complete High concentration ash slurry disposal system** for handling not less than 40 tons of ash per hour for coal / lignite fired power stations which includes, among others, positive displacement ash slurry pumps & piping system with associated controls. **Notes to Clause no. A.1** The activity of design and engineering under A.1 (a) & (b) should have been carried out by the Bidder. The activity of design and engineering under clause A.1 (c) should have been carried out either by the bidder or through design agency/agencies having experience for high concentration ash slurry disposal system as in clause A.1 (c). Supply of HCSD Pump from owner/EPC contractor in the reference plant is also acceptable for the purpose of qualification. The systems	collection buffer hoppers can be considered as a plant for meeting the requirement above. **And** **(b) Pneumatic Fly Ash Transportation System** for transporting fly ash from coal/lignite fired boiler unit having capacity of not less than 20 TPH for a conveying distance of not less than 500 meters. Further, a transportation system provided for an individual boiler unit having dedicated transportation vessels below dry dust collection buffer hoppers and dedicated piping from dry dust collection buffer hoppers / intermediate Silos to storage silos, including storage silo equipment (like Vent Filter, Rotary Feeder, Ash unloader/Telescopic chute, Ash conditioner etc.) can be considered as a plant for meeting the requirement above. **And** **(c) Complete High concentration ash slurry disposal system** for handling not less than 40 tons of ash per hour for coal / lignite fired power stations which includes, among others, positive displacement ash slurry pumps & piping system with associated controls. **Notes to Clause no. A.1** The activity of design and engineering under A.1 (a) & (b) should have been carried out by the Bidder. The activity of design and engineering under clause A.1 (c) should have been carried out either by the bidder or through design agency/agencies having experience for high concentration ash slurry disposal system as in clause A.1 (c). Supply of HCSD Pump from owner/EPC contractor in the reference plant is also acceptable for the purpose of qualification. The systems mentioned at

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Sl. No.	PQR Clause No.	Existing clause in Tender	Revised clause
		mentioned at clause A.1 (a), (b) & (c) above, should have been in successful operation in at least one (1) plant for at least one (1) year. For the purpose of qualification, the experience as at clause A.1 (a), (b) & (c) above in separate plants also is permissible. For reference fly ash handling systems, the design capacity of conveying from ESPs to wetting units/buffer hoppers/intermediate Silos and of transportation from buffer hoppers/ intermediate Silos to storage silos will be the capacity which the client (of the reference plant against which the Bidder is seeking qualification) must have specified in its contract documents	clause A.1 (a), (b) & (c) above, should have been in successful operation in at least one (1) plant for at least one (1) year. For the purpose of qualification, the experience as at clause A.1 (a), (b) & (c) above in separate plants also is permissible. For reference fly ash handling systems, the design capacity of conveying from ESPs to wetting units/buffer hoppers/intermediate Silos and of transportation from buffer hoppers/ intermediate Silos to storage silos will be the capacity which the client (of the reference plant against which the Bidder is seeking qualification) must have specified in its contract documents
2	C.2 (C2.1 OR C2.2)	**C.2.1** Bidder/Consortium Partner Should have executed Structural Fabrication and Erection Works **2090 MT** within a period of Twelve Consecutive months in one running/complete contract. **Or** **C.2.2** Bidder/Consortium Partner Should have executed Structural Fabrication and Erection Works **3140 MT** within a common period of Twelve Consecutive months in cumulative of two running/complete contract.	**C.2.1** Bidder/Consortium Partner Should have executed Structural Fabrication and Erection Works **2300 MT** within a period of Twelve Consecutive months in one running/complete contract. **Or** **C.2.2** Bidder/Consortium Partner Should have executed Structural Fabrication and Erection Works **3450 MT** within a common period of Twelve Consecutive months in cumulative of two running/complete contract.
3	B.2 ((B2.1.1 OR B2.1.2) AND B2.2)	**B.2.1.1** Bidder/Consortium Partner should have Executed **7460 CUM** of RCC within a period of Twelve Consecutive months in one running/complete contract **Or** **B.2.1.2** Bidder/Consortium Partner should Have Executed **11190 CUM** of RCC within a period of Twelve Consecutive months in Cumulative of two running/complete contract. **And** **B.2.2** Bidder/Consortium Partner should have executed one "RCC Silo of at least 25 meters height" OR "Shell of one RCC Chimney up to at least 16 meters height" OR "Shell of one	**B.2.1.1** Bidder/Consortium Partner should have Executed **8200 CUM** of RCC within a period of Twelve Consecutive months in one running/complete contract **Or** **B.2.1.2** Bidder/Consortium Partner should Have Executed **12300 CUM** of RCC within a period of Twelve Consecutive months in Cumulative of two running/complete contract. **And** **B.2.2** Bidder/Consortium Partner should have executed one "RCC Silo of at least 25 meters height" OR "Shell of one RCC Chimney up to at least 16 meters height" OR "Shell of one NDCT up to at

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Sl. No.	PQR Clause No.	Existing clause in Tender	Revised clause
		NDCT up to at least 16 meters height" OR "any other RCC structure up to at least 33 meters height using Slip-Form/Jump-Form Technique" in a running/completed contract.	least 16 meters height" OR "any other RCC structure up to at least 33 meters height using Slip-Form/Jump-Form Technique" in a running/completed contract.

B) Modification in TECHNICAL CONDITIONS OF CONTRACT (TCC): Some clauses of existing TCC are revised as mentioned below;

<table>
<tr><th>Sl. No.</th><th>TCC Clause No.</th><th>Existing clause in Tender</th><th>Revised clause</th></tr>
<tr><td>1</td><td>CHAPTER-XIII: TIME SCHEDULE, Clause No. 13.01.00</td><td>After the issuance of the LOI for the EPC PACKAGE FOR MAIN ASH HANDLING SYSTEM, the total work shall be completed within 44 months.</td><td>After the issuance of the LOI for the EPC PACKAGE FOR MAIN ASH HANDLING SYSTEM, the total work shall be completed within 40 months.</td></tr>
<tr><td>2</td><td>CHAPTER-XIII: TIME SCHEDULE, Clause No. 13.05.00</td><td>Schedule of important Activities:
Time being the essence of the contract, the entire work shall be completed by the contractor within the time schedule so that the overall project milestones can be achieved
<table>
<tr><th>Sl No</th><th>Description</th><th>Completion schedule for Unit#1 (Within Months from LOI)</th><th>Completion schedule for Unit#2 (Within Months from LOI)</th></tr>
<tr><td>1.</td><td>Basic Engineering</td><td>3</td><td>3</td></tr>
<tr><td>2.</td><td>Detailed Engineering (M1)</td><td>12</td><td>12</td></tr>
<tr><td>3.</td><td>Completion of Main Supplies</td><td>30</td><td>34</td></tr>
<tr><td>4.</td><td>Completion of Fly Ash Storage Silo (M2)</td><td>30</td><td>30</td></tr>
<tr><td>5.</td><td>Completion of Mandatory Spares supplies</td><td>36</td><td>40</td></tr>
<tr><td>6.</td><td>AHP Readiness (Erection and Commissioning)</td><td>36</td><td>40</td></tr>
</table></td><td>Schedule of important Activities:
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<tr><td>3.</td><td>Completion of Main Supplies</td><td>26</td><td>30</td></tr>
<tr><td>4.</td><td>Completion of Fly Ash Storage Silo (M2)</td><td>30</td><td>30</td></tr>
<tr><td>5.</td><td>Completion of Mandatory Spares supplies</td><td>36</td><td>40</td></tr>
<tr><td>6.</td><td>AHP Readiness (Erection and Commissioning)</td><td>34</td><td>38</td></tr>
</table></td></tr>
</table>

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<table>
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<tr><td></td><td></td><td>
<table>
<tr><td>7.</td><td>Completion of Ash disposal system</td><td>39</td><td>43</td></tr>
<tr><td>8.</td><td>Completion of Facilities AHP</td><td>40</td><td>44</td></tr>
</table>
</td><td>
<table>
<tr><td>7.</td><td>Completion of Ash disposal system</td><td>35</td><td>39</td></tr>
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</table>
</td></tr>
<tr><td>3</td><td>CHAPTER-XII: LIST OF ENCLOSURES, Annexure – 10, Sl. No. 7</td><td>
<table>
<tr><th>SL. NO.</th><th>SCOPE DETAILS</th><th>INPUT DETAILS</th><th>ENGINEERING / DESIGN</th><th>SUPPLY</th><th>RECEIPT, UNLOADING, STORAGE, ERECTION, TESTING, COMMISSIONING</th><th>REMARKS</th></tr>
<tr><td>7</td><td>Roof Top Solar System</td><td>BHEL-SBD/RUDRAPUR</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>For estimation, the Bidder [Main Ash Handling Package Vendor (Package-II)] may take 10% of the total capacity of the Solar Plant Defined for this Project as a whole. Further before placement of the order, Bidder [Main Ash Handling Package Vendor (Package-II)] to ensure that the items thus procured shall be of the same make as installed in the main Plant area supplied by BHEL.</td></tr>
</table>
</td><td>
<table>
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<tr><td>7</td><td>Roof Top Solar System</td><td>BHEL-SBD/RUDRAPUR</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>Main Ash Handling Package Vendor (Package-II)</td><td>Bidder to accommodate 50 KWp in scope. Further before placement of the order, Bidder [Main Ash Handling Package Vendor (Package-II)] to ensure that the items thus procured shall be of the same make as installed in the main Plant area supplied by BHEL.</td></tr>
</table>
</td></tr>
<tr><td>4</td><td>CHAPTER-XII: LIST OF ENCLOSURES</td><td>New Annexure Added</td><td>- Addendum to Annexure-6 of TCC SECTION - I, II, III, IV, V & VII (attached along with this corrigendum)
- Annexure – 7A - DVC AMENDMENT NO. 6 TO BID SPECIFICATION (attached along with this corrigendum)
- Annexure – 34 - Technical Corrigendum-01 along with revised plot plan and FLOW DIAGRAM OF BOTTOM ASH, COARSE ASH HANDLING SYSTEM AND HCSD SYSTEM, BOTTOM ASH INTERMEDIATE SILO, LAYOUT OF ID SYSTEM- ELEVATION, SINGLE LINE FLOW DIAGRAM FOR FLY ASH HANDLING SYSTEM (VACCUM SYSTEM), SINGLE LINE FLOW DIAGRAM FOR FLY ASH HANDLING SYSTEM (PRESSURE SYSTEM), SINGLE LINE DIAGRAM FOR ASH CLASSIFIER SYSTEM (FOR PRESSURE CONVEYING SYSTEM), SINGLE LINE DIAGRAM FOR ASH CLASSIFIER SYSTEM (FOR VACCUM CONVEYING SYSTEM). (attached along with this corrigendum)</td></tr>
</table>

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C) Some of the Bidders had asked queries in the published tender specification. The clarifications issued by BHEL are as below;

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
1	Plot Plan;Dwg. No. PE-DG-519-100-M001	Main Silo Location	Please note that the distance of the Main Silos is approx. 1900M from the farthest Buffer Hopper. The distance as per NTPC specifications is Max. 1500 M in single stage. Please let us know if we can consider two stage conveying similar to Dense Phase Flow Diagram where the stage one conveying is 640M and second stage is 1240M.	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
2	SLD No. A-027 Rev. 1	Ash Transport Pipes to main silo	We understand that these pipes shown are indicative only and the same will be as per requirement. Please conform.	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
3	SLD No. A-027 Rev. 1	Detail-X for collector Tanks.	We understand that Detail X is not applicable. Please confirm.	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
4	SLD No. A-029 Rev. 2	Pressure conveying system	Please confirm that this scheme can also be followed for Vacuum system considering that the distance of conveying from the farthest Buffer Hopper to the main silos is approx. 1900 M.	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
5	TCC clause No. 02.07.00	Rerouting of existing ash slurry pipes	Please mention the area where this rerouting is envisaged. Please furnish the layout.	Bidder is requested to refer the *revised plot plan as per Technical Corrigendum - 01 (attached along with this corrigendum)*

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
				Tentative Rerouting of Ash Slurry pipe is marked in the plot plan. Actual rerouting of marked area of existing ash slurry pipe shall be finalised during detail engineering (if required) with consultation of DVC/BHEL without any cost implication.
6	General	Sludge	Any sludge is to be considered? If any then where will it be pumped.	Only Effluent generated in bidders systems shall be suitably handled/disposed by bidders by means of equipment/system specified in the tender.
7	Sub-section-IIA-16, clause no. 1.01.06 D, pg. 8 of 17	Buffer hopper to Classifier Silo	Please refer to our clarification no. 1 above and the para sighted in this clause. It is clear that all the ash from the buffer hopper is to brought to the classifier area and then pumped to Main Silo. Hence please check and confirm the requirement.	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
8	Sub-section-IIA-16, clause no. 1.01.07 9 (i), pg. 10 of 17	Three (3) ….	We understand that this is not applicable. Hence please check and confirm.	Bidder understanding is correct. Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
9	TCC clause No. 02.06.00	Dismantling of electricity transmission lines	Please elaborate your requirement.	Dismantling of 2 separate OH lines with approximately 20 poles each (Total poles 40 nos. approximately) in a span of 1 km (approx.). Existing poles has to be uprooted and arrangement has to be done for a

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
				separate route as per requirement of customer. Bidder shall consider for completing the job – both by OH transmission line and underground cable as per requirement/direction of customer. Note: Refer Tentative Route of OH/CABLE has furnished in ANNEXURE 33- TENTATIVE RE-ROUTING OF HT TRANSMISSION LINE. Re-routing has already been done in the Wagon Tippler area. (Approx. 250 M area – 8 poles)
10	Clause 15.13 of TCC	Retention amount of 5% of Contract Value	We kindly request BHEL to consider waiving the additional 5% retention requirement as per clause 15.13 of TCC, as BHEL will be withholding last 10% payment in addition to 5% Performance BG hence cumulative security amounting to 20% is disproportionately high and adversely affects cash flows, imposing financial burden.	Tender Conditions shall prevail
11	Clause 17.01 of TCC	Liquidated Damages @7.5%	We kindly request BHEL to consider revising the Liquidated Damages (LD) terms by either capping the LD at **5% of the total contract value** (in place of the current 7.5%). We believe this revision will ensure a balanced risk allocation aligned with standard industry practices.	Tender Conditions shall prevail

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
12	Clause 1.10 of GCC	Security Deposit of 5%	As insurance Surety Bond is a new instrument in India, most of insurance companies have strong preference to issue insurance surety bonds of short duration. We request BHEL to accept Insurance Surety Bonds for **initial validity period of 24 months** which will be duly extended during the contract execution stage to meet the contractual requirements.	Tender Conditions shall prevail
13	Clause 13.09 of TCC	Defect Liability Period is 18 months from successful completion of Trial Operation	We kindly request BHEL to consider stipulating the warranty period/ DLP period as **18 months from the date of receipt of equipment at site**. Securing a longer warranty period is not feasible especially for bought-out items, and moreover, the Bidder has no control over the Trial Operation of the power plant unit. We trust this proposal will provide a fair and practical framework for warranty compliance.	Tender Conditions shall prevail
14	1) **Plot Plan** - Dwg. No.PE-DG-519-100-M001, Rev.02 2) **Flow Diagram of Bottom Ash, Coarse Ash Handling System and HCSD System -** Dwg. No. 3112-108-POM-A-910, Rev.2 3) Single Line Flow	Ash discharge on ART from various Silos, related Belt Conveyor Layout and Flow Diagram do	The following discrepancies are observed regarding ash discharge onto the Mixing / ART tank (6 Nos.) through belt conveyors from Bottom Ash Main Silo (2 Nos.) and Fly ash Storage Silo (3 Nos.) (Not from Fine Fly ash Storage Silo (1 No.). **1) Refer Plot Plan Main Silo area**- Six (6) Nos. of TP's and fourteen (14) nos. of Belt conveyors are shown in red colour of which six (6) Mixing/ ART tanks are also	Belt conveyors, TPs from Silo to ART tanks etc are part of Ash Handling System. Complete Ash Handling System (Except DBA System) are included in Bidder's scope only. Kindly refer scope matrix/specification.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
	Diagram for Fly Ash Handling System (Vacuum System), Dwg. No. XXXX-001 (R)-POM-A-027, Rev.1 do		located. It is not clear whether these (Belt conveyors, TP's) are included in present scope of supply or not, since no flow diagram / write up for the same are available in the specification document. .	
			The following discrepancies are observed regarding ash discharge onto the Mixing / ART tank (6 Nos.) through belt conveyors from Bottom Ash Main Silo (2 Nos.) and Fly ash Storage Silo (3 Nos.) (Not from Fine Fly ash Storage Silo (1 No.). 1**) Refer Flow Diagram of Bottom ash, Coarse ash handling system (Dwg. No. 312-106-POM-A-910, Rev.1):** only six (6) belt conveyors are shown below BA Main Slos (2 Nos.) for discharging bottom ash to HCSD Mixing tank / ART without any TP's. Pl. clarify the scheme envisaged for the same. Also technical details of the belt conveyors are not specified. Pl. specify the same.	1. The scheme/layout shown in plot plan below BAM Silo and Fly Ash Silo to ART for HCSD System is indicative. Bidder to submit the actual layout during detail engineering for DVC/BHEL approval. 2. Technical specification for Belt conveyors, TPs from Main Silo to ART tanks shall be followed as mentioned for Belt conveyors, TPs from BAIM silo to BA Main Silo.
15			The following discrepancies are observed regarding ash discharge onto the Mixing / ART tank (6 Nos.) through belt conveyors from Bottom Ash Main Silo (2 Nos.) and Fly ash Storage Silo (3 Nos.) (Not from Fine Fly ash Storage Silo (1 No.). **1) Refer Flow Diagram of Bottom Ash, Coarse Ash Handling System and HCSD System (Dwg. No. 3112-108-POM-A-910, Rev.1), Det-X:** Pl. clarify that all the	Bidder is requested to refer enclosed *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			equipment shown like Manual isolation valve, Rotary feed valve and Conveyor etc. shown below future connection of Main Fly ash silo are also to be included in future scope of work or present scope of work. In case it is included in future scope of work how fly ash will come to Mixing / ART Tank.	
16	Cl. No. 1.02.00 d), Annx.1, Scope of Supply & Services, Bottom Ash, Coarse Ash Handling System & HCSD System	HCSD Pipe lines	Kindly indicate the exact total length of HCSD pipelines to be supplied considering six (6) length of HCSD pipe lines envisaged from HCSD Pump House upto plant boundary.	Bidder is requested to refer the *revised plot plan as per Technical Corrigendum - 01 (attached along with this corrigendum)* The tentative location of HCSD Pump House and terminal point of HCSD Pipe is indicated in the plot plan. Bidder shall estimate the same based on the plot plan/site visit. The exact routing shall be decided during detail engineering based on actual site condition/AHP Layout.
17	Pt. No. 23, Amendment No. 1 to Bid Specification, 42, Amendment -I	The discharge of the sump drainage pump at main silo area shall be fed into ash pond.	The discharge of sump drainage pump can not be fed to ash dyke since this is vertical sump drainage pump only and head of such pump can not be very high. Kindly indicate where the above pump discharge can be fed.	Bidder shall consider a pipeline distance of 1.5 km and a static lift of 5 m from terminal point for design of Silo area drain pump.
18			Pl. indicate the source of water requirement for cooling of all compressors including intercooler, aftercooler and any other cooling water requirement purpose.	Kindly refer technical specification, in which terminal point is mentioned for cooling water requirement.

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
19			Pl. confirm that all Vacuum Pumps and ESP / Buffer Hopper aearation Blowers will be installed below 1st. Field of ESP Hopper of each unit.	Bidder to comply the specification requirement.
20			Kindly confirm that the Metallic belt conveyor below Economiser hopper of each unit are included in Dry Bottom Ash System supplier scope of work.	Bidder is requested to refer the *Technical Corrigendum - 01 (attached along with this corrigendum).* Flow Diagram for Bottom Ash, Coarse Ash and HCSD System *with Scope demarcation of Interface portion between Package-I and Package-II (attached along with this corrigendum).* However, bidder shall read the specification and scope matrix for detail scope.
21			We understand that the Pipe rack and Cable rack are common as per Plot Plan dwg. The entire Pipe rack including all structural and RCC foundation routed from ESP area upto main Silo area is included in whose scope of supply (BHEL or Ash Handling System Supplier) as the same is shown in BHEL's ISG scope of supply as per Plot Plan Legend.	Bidder is requested to refer the *revised plot plan as per Technical Corrigendum - 01 (attached along with this corrigendum)* Scope is clearly mentioned in the specification and scope matrix.
22			Kindly indicate whether all the Compressors House (Transport air compressor house, Conveying air compressor house) shown in the plot Plan are included in the BHEL ISG's scope of work or Ash handling system supplier scope of work.	Kindly review the specification again. Scope is clearly mentioned in the specification and scope matrix.

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
23			Two (2) Nos. Instrument air compressors including Air Drying Plant are located near Main Silo area as per Flow Diagram. This will serve the instrument air requirement in Main Silo area. **However kindly indicate whether the Instrument air compressor, Air Drying Plant, Air receiver etc. required for other ash handling area is included in BHEL's scope of supply or Ash handling system supplier scope of supply? Kindly confirm.**	Kindly review the specification again. Scope is clearly mentioned in the specification and scope matrix.
24			Pl. indicate gallery cross section size with all the dimensions for all the conveyor gallery included in scope of supply of Ash handling system supplier.	Complete Ash Handling System (except Dry Bottom Ash) is in bidder scope only.
25			Pl. indicate belt width of all the belt conveyors included in Ash handling system supplier scope of supply.	Already mentioned in the specification. Kindly check in part 5 of Annexure-7 of TCC.
26			Pl. indicate the material of construction (MOC) of Coarse Ash Intermediate Surge Hoppers.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
27			Any latest Mandatory spare parts list is to be considered? Kindly indicate.	Bidder to comply specification.
28	1) Plot Plan - Dwg. No.PE-DG-519-100-M001, Rev.02 2)	Belt Conveyor Layout and Flow Diagram	Layout of Belt conveyors and TP's shown in the Plot Plan Dwg. and the material flow diagram shown in the Flow Diagram	Bidder is requested to refer *DVC amendment No 6 to bid specification*

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
	Flow Diagram of Bottom Ash, Coarse Ash Handling System and HCSD System - Dwg. No. 3112-108-POM-A-910, Rev.2		dwg. are not matching. Kindly check and revise the Plot Plan or Flow Diagram dwg. as applicable.	*along with the technical specification (attached along with this corrigendum).*
29			Kindly indicate the location of 3.3 kV SWGR for installation of the same.	Location of switchgears to be decided by bidder.
30			VFD Transformers are required for HCSD System. Kindly indicate whether the Feed for VFD Transformer will be from 6.6kV or directly from 11kV.	Please refer ANNEXURE-10-ELECTRICAL, CONTROL AND INSTRUMENTATION SCOPE MATRIX
31			Pl. confirm that all the power cable and control cable required for belt conveyors are to be routed along Belt conveyor gallery from ESP area to Main Silo area.	Please refer ANNEXURE-10-ELECTRICAL, CONTROL AND INSTRUMENTATION SCOPE MATRIX
32	Bottom ash Main Silo aeration system	1) Flow Diagram of Bottom Ash, Coarse Ash Handling System and HCSD System - Dwg. No. 3112-108-POM-A-910, Rev.2, Sheet 1 of 2	Aeration system for two (2) Nos. Bottom Ash Main Silo are not envisaged in Technical Specification. Kindly indicate whether aeration system for the Bottom Ash main Silos are required or not.	Bidder to design BA Main Silos for smooth flowability of Ash from its respective outlets. Any Equipments like blower, heater, air blaster, vibrator etc as required to be provided by Bidder to supplement smooth flow of ash.
33	Coarse Ash Intermediate Silo aeration system	1) Flow Diagram of Bottom Ash, Coarse Ash Handling System and HCSD System - Dwg. No. 3112-108-POM-A-910, Rev.2, Sheet 2 of 2	Aeration system for Coarse Ash Intermediate Silos (2 Nos. for each unit) are not envisaged in Technical Specification. Kindly indicate whether aeration system for the Coarse Ash Intermediate Silos are required or not.	Bidder to design Coarse Ash IM Silo for smooth flowability of Ash from its respective outlets. Any Equipments like blower, heater, air blaster, vibrator etc as required to be provided by Bidder to supplement smooth flow of ash.

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
34	3-Annexure-1-to-5-TCC - Single Line Flow Diagram for Fly Ash Handling System (Vacuum system) (XXXX-001-POM-A-027/28/29/30 Rev.1	Flow Diagrams for Fly ash.	**Based on the 1st Stage Vacuum Conveying flow diagram from ESP for each unit:** Six fly ash conveying lines from the ESP buffer hoppers are shown discharging directly to the main FA silos or the classifier silo. After segregation in the classifier system, the fine fly ash hopper is connected to two fine ash discharge lines leading to the main fine ash silos, and the coarse fly ash hopper is connected to four discharge lines that can feed any of the three coarse ash silos. From this configuration, it appears that no separate, dedicated conveying pipelines have been considered from the classifier hoppers to the main fly ash silos. Instead, the design philosophy seems to rely on tapping the six conveying pipelines at suitable locations: first, at the nearest point for feeding the classifier system, and again at the outlet of the coarse and fine ash hoppers for routing the classified ash back into these running pipelines for onward conveying to the respective main silos. We therefore seek confirmation that the same six conveying lines are intended to serve both as inlet lines to the classifier and as discharge carriers from the classifier hoppers, and that no independent new pipelines are to be provided for this purpose. Accordingly,	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			tapping is to be carried out at the nearest feasible locations—both for the inlet to the classifier silo and for the outlets from the classifier hoppers—so that classified ash can re-enter the existing conveying lines toward the main FA silos. **Based on the 1st Stage Pressure Conveying flow diagram from ESP for each unit** Ash from the ESP buffer hoppers is shown being conveyed either toward the classifier silo or toward the intermediate silo with slurrfier arrangement at discahrge. As discussed during the pre-bid meeting, intermediate silos are not to be considered in the present scope; therefore, ESP ash shall be routed only to the classifier system. In case ESP ash is also intended to discharge directly to the main FA silos, then similar to the vacuum conveying philosophy, tapping on the common conveying pipelines will be required at both the inlet side (towards classifier) and outlet side (from classifier hoppers) to allow proper routing of ash into and out of the classifier system. Further, the number of pressure conveying lines shown at the classifier hopper outlets (Coarse ash-12 nos) appears higher than the number of inlet	

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			points (Coarse ash-10 nos) at the main FA silos. Please clarify.	
35	3-Annexure-1-to-5-TCC Single Line Flow Diagram for Fly Ash Handling System (Pressure system) (XXXX-001-POM-A-28 Rev.1	Flow Diagrams for Fly ash.	We understand that the three Intermediate Silos with the slurrifier arrangement and further any lean slurry system are no longer part of the tender scope as discussed in the pre-bid meeting. However, these items continue to appear in the flow diagram and revised specifications. Please clarify.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
36	16-Annexure-7-Part-5-TCC. 46-Bid Clarification No. 2	CTBD water to accommodate the water requirement of ash handling system at ash water tank	We understand that the EPC bidder has to tap the CTBD water from a single point provided by BHEL. Please confirm the location and distance of the terminal tapping point for the CTBD water source from BAIM silo area.	Specification is clear regarding terminal point.
37	3-Annexure-1-to-5-TCC Single Line Flow Diagram for Bottom Ash Handling System (DWG NO.-3112-108-POM-A-910) Rev-2	Flow Diagram of Bottom ash	In view of Package-II scope commencing at the inlet of Belt Conveyors 3A/3B and 4A/4B, please specify the feed elevation level of these conveyors located below the BAIM silo discharge system (Detail A-ash conditioner system).	Bidder shall specify the requirement in their offer. Exact height shall be discussed and finalised during detail engineering.
38	16-Annexure-7-Part-5-TCC, 40-Annexure II	The fine ash and coarse ash after classification shall be stored in separate RCC hoppers/structural steel hoppers, fine ash hopper and coarse ash hopper respectively. The capacity of the fine ash hopper (01 no) and coarse ash hopper (02 no) shall be 300 Tonnes each.	The specification mentions that the fine ash and coarse ash after classification shall be stored in separate RCC or structural steel hoppers, each of 300-ton capacity. Kindly confirm the required Material of Construction (MOC) for these hoppers whether RCC, structural steel, or	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).* It can be RCC Hopper or Structural Steel hoppers.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			if both options are acceptable so that design, weight calculations, and structural interfaces can be finalized accordingly.	
39	16-Annexure-7-Part-5-TCC, 40-Annexure II	Three (3) nos. of fly ash storage silos (RCC Silo) & 1 no fine fly ash silo of 2000 MT effective storage capacity each. Please confirm construction of fine fly ash silo	We understand that the Fine Fly Ash Silos are also intended to be of RCC construction. Please confirm the required MOC.	Bidder understanding is correct.
40		Single Line Diagram/Plant Layout	Please provide the Main SLD in a readable format along with the plant layout with contour details in AutoCAD (DWG) format.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*
41		HCSD System	The pond area is not indicated in the plant layout. The specification, however, mentions a distance of 3.5 km including garlanding with a static head of 40 m. Based on this, we understand that the EPC contractor is required to supply the complete HCSD slurry disposal system, including pumps and HCSD slurry pipelines for a total length of 6 × 3.5 km = 21 km. Kindly confirm.	Kindly check again. The data is provided for design purpose. Bidder scope is limited as per scope matrix.
42		HCSD System	The tender does not specify the proportion of Bottom Ash (BA) and Fly Ash (FA) required for mixing in the Agitator retention tank (ART). We understand that a BA proportion of 20% is to be considered for mixing with FA in the ART system. Kindly confirm the applicable ash proportion for design and sizing.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum).*

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43		HCSD System	The slurry rheological study shall be carried out by BHEL, consistent with the methodology followed in their other ongoing projects.	The Ash Rehology Test is in Bidder scope only. For details - Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
44		HCSD System	We note that adequate space appears to be available adjacent to the ESP on the pipe-rack side. Please confirm whether the Compressor House (CAC & TAC) can be relocated to this area so that a **s**ingle common Electrical Building can be adopted in place of two separate buildings, considering that only AHP ER-2 currently has provision to accommodate the electrical load of AHP ER-1. Additionally, please confirm whether a combined building configuration is acceptable i.e., Compressor House at the ground floor and Electrical-cum-Control Room on the first floor.	Bidder's proposal is not acceptable. However, merging of building may be allowed and decided during detail engineering at the location shown in plot plan. Bidder to note the following points before any proposal of clubbing during detail engineering: - Clubbing/relocation Feasibility for any facility shall be decided by bidder for bidder's facility/loads based on the input shared along with the tender. However, bidder shall mandatorily consider MCC building in the designated location as per plot plan for AHP ER-2 and AHP ER-3 to facilitate DBA package-I facilities/loads Clubbing of electrical loads of AHP ER-1 and AHP ER-2 excluding DBA load shall be decided by bidder based on space availability. Following power supply feeders along with suitable cables/trays/cabling upto DBA boards incomer (located at AHP ER-2, AHP ER-3) shall be provided by

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
				Main Ash Handling Package Vendor (Package-II) to DBA Vendor (Package-I). Further distribution shall be in DBA Vendor (Package-I) scope. a) 2 No of 415 V ACB Feeder for Unitised DBA application for Unit#3 b) 2 No of 415 V ACB Feeder for Unitised DBA application for Unit#4: c) 2 Nos. of Feeder for below system: c.1) 220 V DC Source: At AHP ER-2 & 3 MCC building c.2) 24V DC Source: At AHP ER-2 & 3 MCC building c.3) UPS Source: At AHP ER-2 & 3 MCC building For combining electrical facilities as proposed by bidder, Bidder shall ensure the space availability w.r.t to transformer withdrawal & maintenance, Elevator, hoist facility, BHEL pipe/cable racks/facilities, AHP package-II pipe rack etc envisaged as per plot plan/ NIT Specs/standards and additional facilities required due to clubbing.
45	3-Annexure-1-to-5-TCC	Annexure-1, Plot Plan	Please clarify the applicability of piperack on boiler side and chimney side of ESP.	Kindly refer *Technical Corrigendum - 01 (attached along with this corrigendum)*

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
46		Annexure-1, Plot Plan	As per Plot plan drawing, after crossing ESP area the belt conveyors & piperack shown are running parallel to each other. We propose to combine the structure for pipe rack & belt conveyors wherever possible upto main fly ash silo area.	Bidder to comply the specification
47		Flow Diagram/Tech Specs	Is there any inclination angle limitation for moist bottom ash belt conveyors by owner/BHEL or EPC bidder has to select based on IS 11592/CEMA.	The inclination angle shall be governed by IS 11592 and CEMA 5th Edition.
48		Flow Diagram/Tech Specs	We request BHEL to kindly specify the maximum belt speed for moist BA conveyors.	Already mentioned in the specification. Kindly check in part 5 of Annexure-7 of TCC.
49		Flow Diagram (DWG No. 3112-108-POM-A-910 Rev-2),	As per the Flow Diagram (DWG No. 3112-108-POM-A-910 Rev-2), Conveyor 8A/8B is shown discharging directly via chutes at TP-6 onto the reversible belt feeders located on the silo top. This arrangement is not practically feasible, as a reversible feeder cannot receive direct discharge from a main conveyor without an intermediate conveyor to achieve the required elevation and ensure controlled feeding. In contrast, the plant layout clearly indicates a conveyor continuing beyond TP-6 up to the silo-top feeders, which is the technically correct and workable configuration. Since this intermediate conveyor is absent in the Flow Diagram and only discharge chutes are depicted, the two documents are	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			inconsistent. Kindly clarify the correct and final feeding arrangement i.e. the layout scheme with the extended conveyor is to be adopted and the Flow Diagram needs correction.	
50	18-Annexure-9-to-29-TCC Electrical Scope matrix Annexure-10, Rev-01	Bidder [Main Ash Handling Package Vendor (Package-II)] shall provide space for the below listed EPC PACKAGE-I- Dry Bottom Ash System equipments for each Unit in AHP ER 2 & 3 MCC building: 1. LT MCC panel-01 no 2. VFD Panels-06 No's (In airconditioned location) 3. DCS Panels- 08 No's (In airconditioned location) 4. PDB for 24V DC-01 no 5. PDB for UPS-01 no 6. Any other panels as per Detailed engineering Above list of equipments are minimum requirement, however detailed input will be provided during detailed engineering by DBA Vendor (Package-I). Supply and E&C of all networking cables, below ground earthing, electronic earthing material for DBA Vendor (Package-I) equipments shall be in Bidder's scope. Unloading and storage of BHEL free issue items shall be in the scope of BHEL. BHEL region shall issue these items to Main Ash Handling Package Vendor (Package-II). Local	We need dimension of LT MCC, VFD-6 nos, DCS panel- 6nos, 24V PDB, UPS PDB for DBA-Package-I vendor to consider ER-2 & ER-3 MCC room dimension.	Details shall be shared to the successful bidder during detailed Engineering

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
		loading/unloading /transportation of these materials from BHEL storage to bidders storage/facilities shall be in bidders scope [Main Ash Handling Package Vendor (Package-II)		
51			DBA vendor of Package-I to provide actual cable tray requirement in ER-2 & ER-3 building as well as loading.	Refer electrical scope matrix for no of trays. Loading details shall be given during detailed Engineering.
52			BHEL to confirm dimension of 11KV switchgear and 3.3KV switchgear for finalization of MCC building dimension. We presume that all these switchgear will be kept in ER-1 AHP building. BHEL to confirm HT load except AHS load to finalise 11/3.45KV transformer size. This transformer will be supplied by AHP vendor. We understand that only two no feeder of 11KV will be taped from station switchgear for 11KV switchgear installed in AHP ER-1 switchgear (free supply by BHEL). AHP vendor will take power from ER-1 11KV switchgear for 11/3.45KV trans.	Dimension of 11KV switchgear and 3.3KV switchgear is based upon the bidders load list. Hence, the same shall be provided during detail engineering. Location of switchgears to be decided by bidder. 11kV 3.3kV HT Load,/ feeders for BHEL Use are not envisaged in 11kV , 3.3kV AHP switchgear . Specification is clear. Bidder to comply the specifications.
53			Only 4 No's of 11KV uncabled Feeder shall be provided by BHEL for Unitized AHP 11/0.433kV Transformer application at two locations as mentioned below: Location-1: Two feeders at MV Switchgear room of Power house building	These 4 no's 11KV uncabled feeders are for Unitized AHP 11/0.433kV Transformer of Ash extraction MCC's which are in the scope of Main Ash Handling Package Vendor (Package-II). From these unitized ash extraction

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			at EL.4.0M from A-row to C-row between grid-2 to Grid-4. Location-2: Two feeders at MV Switchgear room of Power house building at EL.4.0M from A-row to C-row between grid-15 to Grid-17 These 4 nos. 11KV feeder where will be used not clear. BHEL to confirm.	MCC's, each unit DBA Board incomer and any other Main Ash Handling Package Vendor (Package-II) loads shall be powered.
54			Roof top solar system: BHEL to confirm actual plant load of solar system so that same to be considered 10% of total solar plant load as mention. And these will be installed on MCC roof top.	Bidder to accommodate 50 KWp in scope
55	Annexure-9-Broad Scope Matrix	Complete Civil, Structural and architectural Works for MCC buildings/control rooms/ any other electrical building and cable rack/trestle etc. for Dry Bottom Ash System as indicated in Annexure-10 will be done by main Ash handling plant vendor (Package-II)	The point is contradictory with above mentioned in TCC at Page no 37. Kindly clarify the scope of Civil structural & architectural work for Package-I i.e. from dry bottom ash hopper onwards to BAIMsilo structure foundation. And if Package II supplier scope We require GA & Load data of structures under Package-1(DBA vendor scope) for which civil drawings and construction will be our scope mentioned at Annexure 9A Sr. No. 1.3,1.4,2.2,3.2,4.2 and 7	The scope matrix is clear. The bidder shall refer to all the annexures.
56	TCC	The scope of civil, structural {Except Civil and structural works for Dry Bottom Ash Handling System (Package-I) and Foundation of DBA Hopper, refer- Annexure-9A & 10} and architectural works of complete ash handling system shall include site	We understand that Civil structural & architectural work for Package -1 (DBA package) is in BHEL scope. Package 2 vendor has nothing to do with it	The scope shall be as per the respective scope matrices

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
		clearance, dismantling & re-routing of existing structures/substructures/facilities (including the supply of required material if any), site levelling & grading (as per the scope matrix - Annexure-9),		
57	TCC Clause 8.11.00	Construction Power	what will be the per unit charges of construction power (415V/440 V as per tender specification mentioned in TCC)	The Construction Power consumed by the contactor shall be chargeable based on prevalent rate of WBERC (West Bengal Electricity Regulatory commission) regulation and orders for West Bengal consumers.
58	TCC 8.12.00	Construction water	The specification states that the contractor must arrange construction water independently, while drawl of construction/potable water from the bore-well may be permitted subject to suitability, with statutory clearances to be obtained by the contractor and assistance provided by BHEL/Owner. Kindly clarify whether bore-well water drawl will be allowed for this project and, if so, specify the permissible quantity, tapping location, and responsibility for testing water suitability.	Tender condition is clear: Construction/ potable water from the bore-well may be permitted, if same found suitable. Any statutory clearance required shall be obtained by the contractor
59	General	General	Please share the ash particle size analysis report at ECO Outlet, APH & AH-ESP Duct Hoppers for system design.	PSD for ECO Outlet, APH & AH-ESP Duct Hopper are not available. Bidder shall consider the particle size suitably as per their previous experience with sufficient margin.

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60	General	General	We request the General Arrangement (GA) Drawing, showing Plan & Elevation for the ECO, ECO DUCT, APH and DUCT Ash Hoppers along with their positions w.r.t. the nearest platform. Additionally, please provide the expansion details for each Ash Hopper.	The required drawing shall be provided during detail engineering
61	Amendment No.: 1 to the Bid Specification	The discharge of the sump drainage at Main Silo area shall be fed into the ash pond. The terminal point in this regard shall be limited to plant boundary only. The discharge of the sump drainage pump at classifier silo/ vacuum pump area shall be fed to nearest ETP/ CSSP.	Please furnish the route length of disposal length (for sump drainage pump) to be considered for pump selection	Bidder shall consider a pipeline distance of 1.5 km and a static lift of 5 m from terminal point for design of Silo area drain pump.
62	Drawing No.: 3112-108-POM-A-910	Single Line Flow Diagram for Dry Bottom Ash Scheme & Ash Water System (Rev-2)	In the said Flow Scheme, Densephase Pneumatic Conveying System is envisaged for ECO DUCT, APH and DUCT Ash Hoppers. A typical sketch showing the equipment arrangement for Ash Conveying Vessel consisting Inlet Material Feed Valves & Outlet Material Discharge Valves etc. is shown. We wish to clarify that the Ash Conveying Vessel design is our proprietary. As per our design requirement, Discharge Valve, Vent Valve, Equalizer Valve, Level Switch in the conveying vessel are not required. Instead, a Level Switch will be provided in the Ash Hopper as per system requirements. A Pressure Switch will be installed in the Pneumatic Panel of the	Bidder to follow the Technical Specification. However, Bidder's Specific requirement regarding ash conveying vessel design shall be decided during detailed engineering.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Conveying Vessel to monitor Conveying Vessel and Line pressure, consistent with our proven design and successfully commissioned systems for similar type of applications.	
63	Drawing No.: 3112-108-POM-A-910	Single Line Flow Diagram for Dry Bottom Ash Scheme & Ash Water System (Rev-2)	In the said Flow Scheme, Densephase Pneumatic Conveying System is envisaged for ECO DUCT, APH and DUCT Ash Hoppers upto Intermediate Surge Hopper (Cap.: 90 Ton) and then upto Bottom Ash (BA) Intermediate Silo. We wish to clarify that Pressure Pneumatic Conveying Pipeline (from above collection points) will not directly terminated at the top of BA Intermediate Silo and it will be via a Surge Hopper (of suitable capacity) to isolate the Conveying Air from the BA Intermediate Silo.	Bidder proposal is noted. The same shall be discussed and finalised during detail engineering.
64	Drawing No.: XXXX-001('R)-POM-A-029	Single Line Diagram for Fly Ash Classification System (For Pressure Conveying System)	In the said Flow Scheme, 02 Nos. (1W+1Sb) Coarse Fly Ash Hoppers & 01 No. Fine Fly Ash Hoppers is envisaged for Fly Ash Classification System for all the three units. #) 01 No. Fly Ash Classifier is shown at the top of Working Coarse Fly Ash Buffer Hopper. #) There are 06 Sets. of Ash Conveying system below each Coarsae Fly Ash Hopper & 02 sets. (01W+01SB) below	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Fine Fly Ash Hopper. #) There are 11 Nos. (07W+04Sb) Conveying Air Compressors. We have internally discussed the scheme and did the calculation for selection of Fly Ash Conveying System's line capacity from each of Coarse & Fine Fly Ash Hoppers to Main Fly Ash Silos and wish to inform you that followings: **#)** There will be no working & standby Coarse Fly Ash Hopper and both the buffer hopper should be naming as working. **#)** There will be 01 No. Fly Ash Classifier for one unit and total 02 Nos. Fly Ash Classifiers for both the units. The operation sequence of Fly Ash Conveying/ Transportation System from Coarse & Fine Fly Ash Hoppers to Main Fly Ash Silos will be: **Case-1:** In normal plant operation, when no Fly Ash Classification System (of any Unit) is to be done. **Case-2**: During Fly Ash Classification of any 01 Unit, selected Fly Ash System conveying line capacity (from each of Coarse & Fine Fly Ash Hoppers) will be sufficient to convey the Fly Ash upto the Main Fly Ash Silo. **Case-3:** But during Fly Ash Classification of 02 Units, results in collection of Fine Fly	

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Ash on higher side and accordingly both the Conveying System/ Stream (below Fine Fly Ash Hoppers) will be required to operate to convey the Fine Fly Ash. Considering above 7-8 Nos. Conveying System/ Stream (average conveying capacity 95-100 TPH) below 02 Nos. Coarse & 01 No. Fine Fly Ash Hopper will be in operation via 07 Nos. working Conveying Air Compressors.	
65	Drawing No.: XXXX-001(;R)-POM-A-027 XXXX-001('R)-POM-A-029	Single Line Diagram for Fly Ash handling System (Vacuum System) Single Line Diagram for Fly Ash Classification System (For Vacuum Conveying System)	As per the said Flow Scheme, Fly Ash from ESP Ash Hoppers shall be conveyed upto Main Fly Ash Silo with a diversion to Fly Ash Classification System. For Fly Ash Classification system, 01 No. each Fine & Coarse Fly Ash Hopper is envisaged. Subsequently, refer Technical Specification Section-VI-Part-B, Sub Section-A-01 Equipment Sizing Criteria (Page No.: 73 of 89), it is envisaged that Transportation of Ash in single stage pressure conveying shall be limit to 1500 Mtrs. But the distance from Buffer Hoppers upto Main Fly Ash Silos comes around 1800 Mtrs. So, we request you to kindly review and confirm the final scheme to enable us to consider.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

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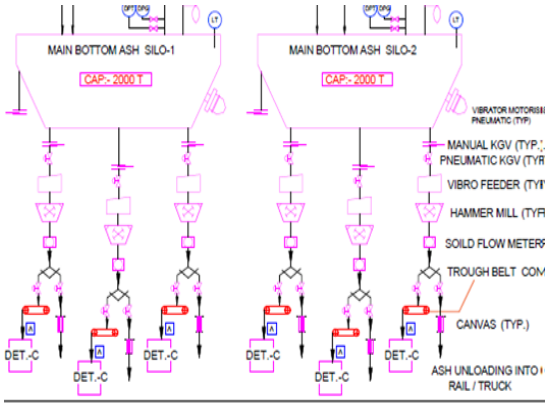
66	Drawing No.: 3112-108-POM-A-910 (Flow Sheme of Bottom Ash & Coarse Ash Handling System)	As per the Tender Specification and subsequent said Flow Scheme, unloading system below each Bottom Ash Silo as under: 	As per the tender Flow Scheme, 03 Nos. discharge opening are required below each Bottom Ash Silo. Each opening will have 01 No. Manual Operated Plate Valve01 No. Pneumatic Operate Plate Valve, 01 No. Vibrating Feede,01 No. Hammer Mill & 01 No. Solid Flow Metter. Then via 01 No. Bifergating Chutte, Bottom Ash will be divered either into HCSD System OR to be loadaded into Tail Wagon/ Truck. In this regard, we wish to highlight the followings:	
			1) During loading of BA into Rail/ Truck, crushing is of no use. Accordingly, can be eliminated. Please check & confirm?	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
			2) As per our experience, Solid Flow Meter (SFM) does not work properly with moist Bottom Ash & to be eliminated as during feeding of BA in HCSD System, the capacity will be controlled via Belt Weigher and during loading into Rail/ Truck via Vibro Feeder (VFD Optd.) through weigh bridge (to be installed along the Railway Track).	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
			3) We understand that at a time 02 Nos. BOXN type Rail Wagons shall be places below each Bottom Ash Silo and total 04	Bidder is requested to refer *DVC amendment No 6 to bid specification*

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Nos. below both the Bottom Ash Silos. Please confirm? Bottom Ash to be loaded @ 40-75 TPH into each of Rail Wagon. We understand that only BOXN Type wagon to be used for BA loading. Further, please note the followings: * If we consider 55 - 60 Ton loading capacity of each wagon, then the required loading time will be 55/75 - 60/75 = 0.73 – 0.8 Hrs. (means 44-48 minutes). * To load the complete rack of 58-60 wagons, 15 cycles will be required. * If, each cycle of Rail Wagon placement time 4-5 minutes, then approx.. 15 Hrs. time will be required to load the complete Rack. Please review & check? * As the Rail Track is common below Bottom Ash & Fly Ash Silos. So during loading of Bottom Ash into Rail Wagon, Fly Ash loading into Rail Wagon + Truck/ Tanker will not happened for both Coarse & Fine Fly Ash Silos.	*along with the technical specification (attached along with this corrigendum)*.
			4) As per the Tender Specification Bottom Ash crusher (Cap.: 40-75 TPH) with output size of (-) 8 mm is envisaged. As the Bottom Ash inside the Bottom Ash Silo is wet (having moisture content 10-15%), For the specified capacity, it may be very problematic to feed the Bottom Ash	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			into the crusher. It should be either completely dry OR in fairly wet form for the gravity flow, otherwise Bottom Ash will hang/ bridge and not enter into the crusher. So, we recommend not to opt the crusher for Rail Wagon Loading and enhance/ increase the unloading capacity 200 TPH (approx.) to reduce the loading time.	
			5) As the requirement is either "to load the Bottom Ash into 02 Nos. Rail Wagon below each Bottom Ash below each Bottom Ash Silo and total 04 nos. below both the Bottom Ash Silos" OR "03 Nos. ART's from 01 No. Bottom Ash Silo and 06 Nos. from both the Bottom Ash Silos". Hence we understand that the 6th unloading system (below each Bottom Ash Silo) will be of no use and should be eliminated.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
			Meeting to your both the requirement (i.e. either Bottom Ash unloading into Rail Wagon OR disposal via HCSD System, we have prepared a scheme as attached for your kind consideration.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
67	Drawing No.: 3112-108-POM-A-910	As per the Tender Specification and subsequent said Flow Scheme, unloading system below each Fly Ash Silo as under:	As per the tender flow scheme, below each Fly Ash Silo, there are 08 Nos. discharge openings:	

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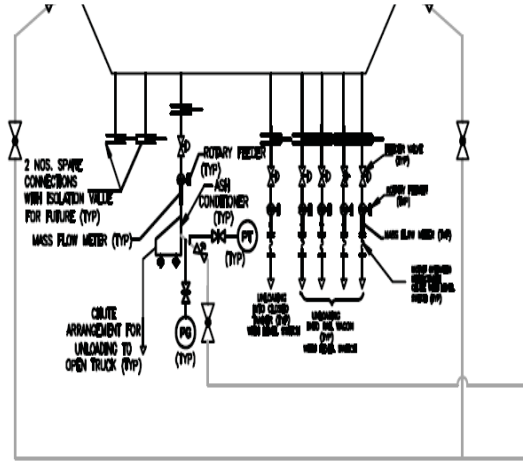
Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
	(Flow Sheme of Fly Ash Handling System)		01 No. via Ash Conditioner System for open Trucks 01 No. via Unloading Spout System for Closed Truck/ Tanker 04 Nos. via Unloading Spout System for Closed Type Rail Wagon Loading System 02 Nos. Future requirement Both the future openings (below Coarse Fly Ash Silo) shall be used for the proposed HCSD System. Further, it is envisaged that "The pitching of ash silo and overall arrangement of hydro-mix conditioner units, telescopic chutes, air slides etc shall facilitate simultaneous loading of five wagons (BOXN/ BCFC/ BCCW/ BTAP) from three number of RCC Silos. Suitable arrangement for Control of movement of Telescopic spout shall have to be provided in all three X Y-Z directions to facilitate loading of ash into Wagons. While loading ash in wagons, top lids of wagons need to be accessed. For ensuring safety while accessing the top of wagon, a suitable platform at approx. height of 4.5 Mtrs above railway track all along the length of track in silo area shall be provided."	
			In this regard, 1) We wish to inform you that as 01 No. Ash Conditioner System is envisaged below each Fly Ash Silo. Hence loading of	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Fly Ash in 05 Nos. BOXN Type Rail Wagon from 03 Nos. Fly Ash Silo is not possible and only 03 Nos. Rail Wagon can be filled. Please confirm? 2) As there are 04 Nos. Unloading Spout system is envisaged below each Fly Ash Silo for Rail Wagon Loading System and total 12 Nos. Unloading Spout System below all the three Fly Ash Silo to loading the 05 Nos. BCFC/ BCCW/ BTAP Type Rail Wagon. We understand that 02 Nos. Unloading Spout System shall be used to load any one of Rail Wagon. Please confirm?	
68	2-TCC TECHNICAL CONDITION OF CONTRACT Cl. No. 03.02.04 Common Water System page 29 of 120	The following points also to be noted by bidder 1. The Total Cooling water .... 1630 M3/hr for both units. 2. The Total raw water/CTBD water..... 385 M3/hr for both units. 3. The Total seal/clarified water .....72 M3/hr for both units. 4. The Total clarified water ..... 110 M3/hr for both units.	Owner to note that the water quantity (cooling, sealing, raw, clarified water) shall be finalized during detail engineering based on the individual OEM inputs, hence specified water quantity may vary during detail engineering. Kindly confirm.	Bidder is requested to refer *Technical Corrigendum - 01 (attached along with this corrigendum)*
69	2-TCC TECHNICAL CONDITION OF CONTRACT Cl. No. 03.02.05 Ash Handling Conveyor system from BAIM Silo page 30 of 120	4. Separate Pump house with compressor, pumps and all associate accessories (with 100% standby system) for Service water, drinking water, Fire Water and DFDS system to be consider by bidder.	1) Owner is requested to kindly clarify the quantity & type of all equipment to be located in this separate pump house. 2) Also provide the type (RCC / Steel shed) & location of the pump house.	1. Bidder to follow technical specification. 2. Pump House will be of RCC. 3. Location of DFDS Pump House is shown in the plot plan.

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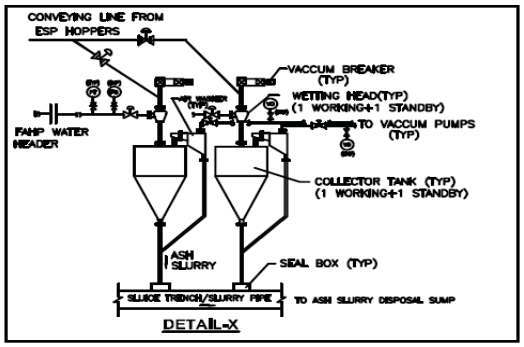
Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
70	Annexure-3-DVC-NIT Flow diagrams Single Line flow Diagram for Fly Ash Handling System (Vacuum System) (Doc. No. XXXX-001(R)-POM-A-027_Rev 1) Page 3 of 6		Bidder understand that fly ash slurry provision shall not be envisaged from buffer hopper, hence kindly provide the updated Detail-X.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
71	Annexure-3-DVC-NIT Flow diagrams Single Line flow Diagram for Fly Ash Handling System (Vacuum System) (Doc. No. XXXX-001(R)-POM-A-027_Rev 1) Page 3 of 6	Note:- 18. Two (2) nos. (one at entry & one at exit) ……**in between two coarse fly ash silos**…….for each main fly ash silo, as specified.	Bidder understand that the referred note is applicable for main fly ash silo and there shall not be any weigh bridge in / below classifier area. Kindly confirm.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
72	ANNEXURE-I SUB-SECTION: IIA-16 AHP: SCOPE CHANGE Page 6 of 9 & Plot Plan (Doc No. 3112-110-PVM-F-007_Rev 02)	d) Six (6) lengths seamless steel pipes with fittings for high concentration slurry disposal from HCSD pumps up to plant boundary.	In plot plan HCSD pump house is already shown near the plant boundary and terminal point for HCSD pipes are not specified, hence we are not able to calculate the total length of HCSD pipes for supply. It is requested to kindly confirm the total length (for all six lines) of HCSD pipe supply.	Bidder is requested to refer *revised plot plan as per Technical Corrigendum - 01 (attached along with this corrigendum)* The tentative location of HCSD Pump House and terminal point of HCSD Pipe is indicated in the plot plan. Bidder shall estimate the same based on the plot plan/site visit.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
				The exact routing shall be decided during detail engineering based on actual site condition/AHP Layout.
73	Plot Plan (Doc No. 3112-110-PVM-F-007_Rev 02)	Different colour indicated in plot plan for cable rack, belt conveyor, pipe rack, facilities etc.	Owner is requested to kindly provide the scope demarcation for all the indicated colours as shown in plot plan.	Bidder is requested to refer *revised plot plan as per Technical Corrigendum - 01 (attached along with this corrigendum)* Kindly refer technical specification/amendments/Scope matrix for scope.
74	ANNEXURE-I SUB-SECTION: IIA-16 Page 11 of 17 & ANNEXURE-I SUB-SECTION: IIA-16 AHP: SCOPE CHANGE Page 5 of 9	(ii) Three (3) nos. of fly ash storage silos (RCC Silo) & 1 no fine fly ash silo of 2000 MT ……. operation and maintenance of dry fly ash storage system. (xxiii) Total two (2) nos. BA Main silo of MS fabricated with liner shall be provided. Each BA Main silo capacity shall be of 2000 MT.....for Rated capacity of 75 TPH.	In reference to referred clauses, kindly note that there are total six (6) silos of 2000 MT capacity located in same envelope in those four silos are of RCC & Two silos are of Steel, in this regard it is suggested that all six silos shall be of RCC considering the same capacity, same envelope, construction ease etc. Kindly confirm.	Bidder to comply the specification.
75	ANNEXURE-I SUB-SECTION: IIA-16 AHP: SCOPE CHANGE Page 9 of 9	2.00.00 Due to change in ash handling philosophy …….. to make the plant ZLD compliant as per technical specification Clause no. 3.09.00 of SUB SECTION-A-01, SECTION-VI, PART-B.	Bidder understand that there is no separate equipment / facilities except as specified are in Bidder's scope to make plant ZLD compliant.	Effluent generated in bidders systems shall be suitably handled/disposed by bidders by means of equipment/system specified in the tender.
76	AMENDMENT NO. 1 TO BID SPECIFICATION Page 6 of 6	1.03.00 (vi) NEW CLAUSE ADDED The discharge of the sump drainage pump at Main silo area shall be fed into ash pond, the terminal point in this regard shall be limited to plant boundary only. The discharge of the sump drainage pump at Classifier silo/Vacuum pump area shall be fed to nearest ETP/CSSP.	There is no pedestal / pipe rack from plant boundary to ash pond are in the Bidder's scope, Hence kindly provide the pipe distance and its routing with support details from main silo area to ash pond for the drainage pipe.	Bidder shall consider a pipeline distance of 1.5 km and a static lift of 5 m from terminal point for design of Silo area drain pump.

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
77	Sub SectionA-01 of Technical Specification Part-B, Cl. No. 4.00.00(e) page73 of 89	e) Dry Fly Ash Transportation system ESP ash from the buffer hoppers (applicable for vacuum conveying system) to classifier silos and from ash classifiers silo to fly ash storage silos by pressure transportation system shall be transported. Transportation of Ash in single stage pressure conveying shall limit to 1500 meters.	As per plot plan, the distance from buffer hopper to main fly ash silo is approx. 1800-1850 meter excluding vertical height for single stage pressure conveying. Owner is requested to check the same and confirm accordingly.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
78	DWG NO.-3112-108-POM-A-910	FLOW DIAGRAM OF BOTTOM ASH, COARSE ASH HANDLING SYSTEM AND HCSD SYSTEM	HCSD system has been envisaged below Main Bottom Ash Silo for Bottom Ash evacuation. We request to recheck the same as HCSD system may not be performing well for Bottom Ash evacuation. However you may put a series of Horizontal centrifugal pump for pumping of Bottom Ash to dyke. The same philosophy was considered in recently finalized NTPC tender for Gadarwara and Nabinagarh.	Bidder to comply the specification.
79	DWG NO.-XXXX-001(R)-POM-A-029 , R2	SINGLE LINE DIAGRAM FOR ASH CLASSIFER SYSTEM (FOR VACUUM CONVEYING)	We request to provide the capacity selection criteria for pressure conveying system below coarse and fine fly ash hopper.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
80	Annexure-9 (Scope matrix)	Fire fighting System for Complete Ash Handling System (Package- I & Package-II)	We request to keep the same in BHEL Scope as fire fighting system other than AHP is supplied by BHEL.	Tender conditions prevail.
81	XXXX-001(A)-POM-A-025 R (A)	SINGLE LINE FLOW DIAGRAM OF BOTTOM ASH HANDLING SYSTEM	We understand that this drawing is not applicable for the project.	Bidder is requested to refer *DVC amendment No 6 to bid specification*

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
		(JET PUMP SYSTEM) ASH DISPOSAL & ASH WATER SYSTEM		*along with the technical specification (attached along with this corrigendum)*.
82	TECHNICAL CONDITIONS OF CONTRACT 03.02.06 Miscellaneous Equipment	Elevator at Ash Silo complex and Ash classification area,	Elevator is not required for Bottom Ash IM Silo. Kindly confirm.	Minimum 3 Elevator is required at three places as per specification/ amendments: - 1. For Classifier Silo in Ash Classification area 2. For BA Main Silo in Main Silo area and 3. For Fly Ash Silo in Main Silo Area For details follow technical specification/amendments etc.
83	TECHNICAL CONDITIONS OF CONTRACT 05.02.04 Operation and Maintenance of Ash Handling System:	The operation and Maintenance of this Main Ash Handling EPC package including AHP conveyor systems (except Dry Bottom Ash Handling System) and all BHEL supplied Equipment's for this AHP package till hand over the Main Ash Handling System to DVC	Kindly confirm the duration for O&M. i.e is the O&M shall be carried out for 1 year from the date of commissioning of the plant.	Specification is clear. The operation and Maintenance of this Main Ash Handling EPC package including AHP conveyor systems (except Dry Bottom Ash Handling System) and all BHEL supplied Equipment's for this AHP package till handed over the Main Ash Handling System to DVC
84	XXXX-001(A)-POM-A-027 R (1)	SINGLE LINE FLOW DIAGRAM OF FLY ASH HANDLING SYSTEM (VACUUM SYSTEM)	10 Nos coarse fly ash and 2 Nos fine fly ash pipe is connected to each main fly ash silo. No of pipe connected to main fly ash silo shall be as follows:- 1. From Buffer hopper 6Nos. / unit total 12 Nos for 2 units. 2. 4 Nos (2W+2S) pipe from below Coarse Fly Ash Hopper. 3. 2 Nos. (1W+1S) pipe from below Fine Fly Ash Hopper	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
			Thus total No of pipe above fly Ash silo shall be 18Nos. Please Confirm.	
85	XXXX-001(A)-POM-A-027 R (1)	SINGLE LINE FLOW DIAGRAM OF FLY ASH HANDLING SYSTEM (VACUUM SYSTEM)	Wetting head, Air washer etc. as such fly ash slurry system is shown from the FAE tower / Buffer Hopper. Kindly confirm Fly ash slurry system is to be considered or not.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
86	DWG NO.-3112-108-POM-A-910 , R 2	FLOW DIAGRAM OF BOTTOM ASH, COARSE ASH HANDLING SYSTEM AND HCSD SYSTEM	In Detail E for ECO System showing arrangement for pressure conveying system however below the same mettalic conveyor is shown. Kindly confirm the exact requirement.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
87	Tender Notice (9. Assessment of Capacity of Bidders) (I. Load)	The cut off month for reckoning 'Load' shall be the 3rd Month preceding the month corresponding to the 'latest date of bid submission',	If the bid submission date is extended, cut off month will also vary. To fix the cut off month for "Load" we request to calculate the same from the tender published date which is fixed.	Tender conditions shall prevail.
88	Tender Notice (A3 EPC Organization in collaboration with QAHPM)	Notes for Clause A.3: QAHPM (Qualified Ash Handling Plant Manufacturer) means a single manufacturer meeting requirement stipulated at A.1(a), (b), (c),	We have not found any A.1 (a) for pre-qualification requirement. Kindly clarify.	Please refer *Sl. No. A of this corrigendum.*
89	Refer tender SLD (DWG NO. 3112-108-POM-A-910, Sht. 1 of 2, Rev.-2)	Flow Diagram for Bottom Ash, Coarse Ash and HCSD System	As per tender Spec., Scope of AHP bidder would start from Belt Conveyor below BAIM silos. Vent Filter and & Pressure Relief Valve should be in AHP bidder scope. Please review & confirm.	Bidder is requested to refer the *Technical Corrigendum - 01 (attached along with this corrigendum)* Flow Diagram for Bottom Ash, Coarse Ash and HCSD System with Scope demarcation of Interface portion

Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
				between Package-I and Package-II. However, bidder shall read the specification and scope matrix for detail scope.
90	Refer tender SLD (DWG NO. 3112-108-POM-A-910, Sht. 1 of 2, Rev.-2)	Flow Diagram for Bottom Ash, Coarse Ash and HCSD System, DETAIL-B	It is indicated that "From Instrument Air Compressor. Please review and confirm, Instrument Air is from which Instrument Air Compressor.	Bidder to follow Clause No 03.02.03 (Page 28 & 29 of 120) of TCC Volume-IA for Instrument Air System.
91	Refer tender SLD (DWG NO. 3112-108-POM-A-910, Sht. 1 of 2, Rev.-2)	Flow Diagram for Bottom Ash, Coarse Ash and HCSD System.	Below Main Bottom Ash Silos, BA to be loaded into RAIL/Truck. Please review and inform type of RAIL & TRUCK for BA loading with higher particle size. Particle size of BA to be reviewed and inform considering HCSD system.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
92	Refer tender SLD (DWG NO. 3112-108-POM-A-910, Sht. 2 of 2, Rev.-2)	Flow Diagram for Bottom Ash, Coarse Ash and HCSD System , Eco ash hoppers to Metallic BA Conveyor.	DETAIL-E is shown below ECO hoppers which not applicable. Please review and confirm.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
93	5. Refer tender SLD (DWG NO. 3112-108-POM-A-028, Sht. 1 of 2, Rev.-1)	Single Line Flow Diagram for Fly Ash Handling System	Intermediate silos with slurry Disposal system is indicated. Please review and confirm that this is not applicable for this AHP pkg.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
94	6. Refer tender SLD (DWG NO. 3112-108-POM-A-028, Sht. 1 of 2, Rev.-1)	Single Line Flow Diagram for Fly Ash Handling System	10 Nos. FA lines Coarse Ash Hoppers and 2 Nos. Fine FA lines from Fine Fly Ash Hoppers is shown. Total 12 nos. FA lines from Coarse Ash Hoppers & 2 Nos. Fine Ash Lines from Fine Fly Ash Hoppers to be provided. Please review and confirm.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.

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Sl. No.	Section/Clause No	Specification	Bidder's Query	BHEL Clarification
95	7. Refer tender SLD (DWG NO. 3112-108-POM-A-028, Sht. 1 of 2, Rev.-1)	Single Line Flow Diagram for Fly Ash Handling System	Drain Pumps discharge is shown to BA Ash Slurry Sump which is not applicable. Please review and inform the discharge from Drain Pumps.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
96	Refer tender SLD (DWG NO. 3112-108-POM-A-029, Sht. 1 of 2, Rev.-2)	Single Line Flow Diagram for Fly Ash Handling System	Drain Pumps discharge is shown to BA Ash Slurry Sump which is not applicable. Please review and inform the discharge from Drain Pumps.	Bidder is requested to refer *DVC amendment No 6 to bid specification along with the technical specification (attached along with this corrigendum)*.
97	Refer GCC pg 9 of 43, sr no.-1.9 EARNEST MONEY DEPOSIT	In case EMD amount is more than Rs. Two Lakhs, Tenderer has the option to submit the amount in excess of Rs. Two lakhs in the forms described above in clause no.1.9.1.ii)(a) to (e) or in the form of Bank Guarantee in the prescribed formats as mentioned in Clause 1.12(i) (along with the Offer).The Bank Guarantee in such cases shall be valid for at least six months from the due date of tender submission.	Please confirm if **E-BG** on account of EMD is accepted. If yes, kindly provide the below requisite details as required for issuance. 1. CONSTITUION OF COMPANY******** 2. PAN NUMBER AND UIN NUMBER OF THE BENEFICIARY******** 3. DATE OF INCORPORATION OF THE BENEFICIARY****** 4. ACTIVE MOBILE NUMBER OF THE BENEFICIARY******** 5. ACTIVE E MAIL ID OF THE BENEFICIARY***** 6. PIN CODE/ZIP CODE********** 7. Beneficiary BU Code	For issuance of e BG, BHEL is a registered entity in NeSL the platform through which e BG is issued. There only required BHEL PAN No AAACB4146P for issuance of BG with BHEL as beneficiary.

1) **All other terms and conditions against this NIT shall remain unchanged.**
2) **This corrigendum is to be submitted duly signed and stamped along with the Techno-commercial bid (Part- I).**

for BHARAT HEAVY ELECTRICALS LTD
Sr. Manager/ SCT

DVC-KTPH PH-II (2x800MW) EPC PACKAGE CHANGE PROPOSAL

AMENDMENT NO. 6 TO BID SPECIFICATION

S. NO.	SPECIFICATION REFERENCE				EXISTING (As per Base Specification)	SHALL BE READ AS
	SEC/ PART	SUB-SEC.	PAGE NO.	CLAUSE NO.		
1.	AMEND-MENT NO.4 TO TECH-NICAL SPECIFI-CA-TION(SEC TION VI)		25 of 30	MH-44	The fine ash and coarse ash after classification shall be stored in separate RCC hoppers/structural steel hop-pers, fine ash hopper and coarse ash hopper respec-tively. The capacity of the fine ash hopper (01 no) and coarse ash hopper (02 no 1W+1S) shall be 300 Tonnes each for pressure conveying system.	The fine ash and coarse ash after classification shall be stored in separate RCC hoppers/structural steel hoppers, fine ash hopper and coarse ash hopper respectively. The capacity of the fine ash hopper (01 no) and coarse ash hopper (02 no ~~**1W+1S**~~) shall be 300 Tonnes each **for both pressure & vacuum** conveying system.
2.	VI/A	IIA-16	1 of 17	1.01.04(i)	New clause added	**The scope of supply for Vacuum system & Pressure system along with Classifier system shall be governed by the ten-der dwg. as per Sl. No. 7 of Amendment-6.**
3.	VI-A	IIA-16	9 of 17	1.01.06 E, (f)	Ten (10) nos. Pump tanks/Air lock tank for each coarse ash hopper and four (4) nos. of pump tanks/air locks tank for fine ash hopper for transportation of coarse fly ash and fine fly ash, to silos provided for dry fly ash storage silos meant for Road and Rail loading. Provi-sions shall be provided to convey & store coarse ash and Fine Ash to all Fly ash Silo.	**Twelve (12)** nos. Pump tanks/Air lock tank for each coarse ash hopper and four (4) nos. of pump tanks/air locks tank for fine ash hopper for transportation of coarse fly ash and fine fly ash, to silos provided for dry fly ash storage silos meant for Road and Rail loading. Provisions shall be provided to convey & store coarse ash and Fine Ash to all Fly ash Silo.

4.	VI-A	IIA-16	9/17	1.01.06 E, (g)	Additionally, the fine ash shall be pneumatically conveyed to fine ash silo, located in Fly ash silo complex with the provision of bagging plant. Suitable number of outlets shall be provided for feeding to the bagging plant. This silo shall have one outlet provided with telescopic chute and rotary feeder for loading the ash into closed tankers. The silo shall be provided with Target box and bag filter assembly along with pulse jetting arrangement, fan units etc. and other accessories, Five (5) nos. Slide plate type isolation valves below the silo, Required numbers segregation valves for isolation of fly ash transportation lines and required numbers of silo inlet valves of specified type, All necessary hydraulic or pneumatic actuators, All interconnecting compressed air pipelines complete with valves, fittings, pipe rack and supporting steel structure, All nuts, bolts and jointing materials at flanged termination points.	Additionally, the fine ash shall be pneumatically conveyed to fine ash silo, located in Fly ash silo complex with the provision of bagging plant. Suitable number of outlets shall be provided for feeding to the bagging plant. This silo shall have ~~**one**~~ four outlets provided with telescopic chute and rotary feeder for loading the ash into rail wagons/ closed tankers **as per drawing no XXXX-001(R)-POM-A-027, Rev-02 & XXXX-001-POM-A-028, Rev-02.** The silo shall be provided with Target box and bag filter assembly along with pulse jetting arrangement, fan units etc. and other accessories, **Air slides(if required), Required** nos. Slide plate type isolation valves below the silo, Required numbers segregation valves for isolation of fly ash transportation lines and required numbers of silo inlet valves of specified type, All necessary hydraulic or pneumatic actuators, All interconnecting compressed air pipelines complete with valves, fittings, pipe rack and supporting steel structure, All nuts, bolts and jointing materials at flanged termination points **as per drawing no XXXX-001(R)-POM-A-027, Rev-02 & XXXX-001-POM-A-028, Rev-02.** **The system should be designed to operate all the eight ash conditioners of fly ash silos simultaneously**.

5.	VI/A	Annexure -I (IIA-16 AHP Scope Change)	5 of 9	(xxiii)	Total two (2) nos. BA Main silo of MS fabricatedwith liner shall be provided. Each BA Main silo capacity shall be of 2000 MT. Below each BA Main silo, 3 sets of Vibro feeder (VFD Driven) capacity of 40 to 260 TPH along with hammer mill/ crushers shall be provided for Rail/road unloading and HCSD system. Each set of Vibro feeder and hammer mill/crushers shall either feed to rail or road or HCSD system. The output size of crusher / hammer mill shall be suitable for HCSD system [(-) 8 mm]. For rail/road unloading, all three sets shall work at a time. Each set of vibro feeder and crusher /hammer mill shall be designed for Rated capacity of 75 TPH.	Total two (2) nos. BA Main silo of MS fabricated with liner shall be provided. Each BA Main silo capacity shall be of 2000 MT. Below each BA Main silo, 3 sets of Vibro feeder (VFD Driven) capacity of 40 to 260 TPH ~~along with hammer mill/ crushers~~ shall be provided for Rail/road unloading and HCSD system. Each set of Vibro feeder ~~and hammer mill/crushers~~ shall either feed to rail or road or HCSD system. **The particle size for Rail/road unloading shall be considered (-)25 mm. Additional hammer mill/crusher shall be provided for HCSD system and the output size of crusher / hammer mill shall be suitable for HCSD system max. of [8 mm] or less as required by HCSD Vendor. For rail/road unloading, two sets shall work at a time and one set will be dedicated for unloading into open truck independently.** Each ~~**set of vibro feeder and**~~ crusher /hammer mill shall be designed for Rated capacity of 75 TPH.
6.	VI/A	Annexure -I (IIA-16 AHP Scope Change)	5 of 9	(xxvi)	New Clause added	The pitching of ash silo and overall arrangement to facilitate simultaneous loading of minimum of four wagons **(BOXN)/**Open Truck from two number of Bottom ash Main Silos. For ensuring safety while accessing the top of wagon, a suitable platform at approx. height of 4.5 Mtrs above railway track all along the length of track in silo area shall be provided.

7.	VI/E	Tender drawings			Single Line flow diagram for fly ash handling system (Vacuum System)- XXXX-001(R)-POM-A-027, Rev-01 Single Line flow diagram for fly ash handling system (Pressure System)- XXXX-001-POM-A-028, Rev-01 Single Line flow diagram for ash classifier system (Vacuum System)- XXXX-001(R)-POM-A-029, Rev-02 Single Line flow diagram for ash classifier system (Pressure System)- XXXX-001(R)-POM-A-029, Rev-02 Flow diagram of bottom ash, coarse ash handling system and HCSD System - 3112-106-POM-A-910 Sheet 1of 2, Rev-2 Flow diagram of bottom ash, coarse ash handling system and HCSD System - 3112-106-POM-A-910 Sheet 2 of 2, Rev-2	Single Line flow diagram for fly ash handling system (Vacuum System)- XXXX-001(R)-POM-A-027, Rev-02 Single Line flow diagram for fly ash handling system (Pressure System)- XXXX-001-POM-A-028, Rev-02 Single Line flow diagram for ash classifier system (Vacuum System)- XXXX-001(R)-POM-A-029, Rev-03 Single Line flow diagram for ash classifier system (Pressure System)- XXXX-001(R)-POM-A-029, Rev-03 Flow diagram of bottom ash, coarse ash handling system and HCSD System - 3112-106-POM-A-910 Sheet 1of 2, Rev-3 Flow diagram of bottom ash, coarse ash handling system and HCSD System - 3112-106-POM-A-910 Sheet 2 of 2, Rev-3

<table>
<tr>
<td>8.</td>
<td>VI/B</td>
<td>Annexure -I (A-21 ASH HAN-DLING PLANT)</td>
<td>34 of 41</td>
<td>6.00.00</td>
<td>New Clause added:</td>
<td>Each coarse fly ash hopper shall be designed to handle ESP ash from both units. In this case, all six conveying lines from the coarse fly ash hopper to the main silo shall be in operation for ease of maintenance. Vent fan & Bag Filter for each coarse fly ash hopper shall be designed accordingly. Data sheet of Bag filter for coarse fly ash hopper shall be as follows:
<table>
<tr><td>Design</td><td>:</td><td>To achieve a sustained dust emission at outlet not exceeding 50 mg/NM3</td></tr>
<tr><td>Special features</td><td>:</td><td>i) It should be possible to carry out the maintenance and replacement of bags without affecting the performance of the system.</td></tr>
<tr><td></td><td></td><td>ii) The performance of bag filter shall not get affected with 10% of bags plugged. Air to cloth ratio taken for bag selection shall be maximum 1.5 m/min.</td></tr>
<tr><td></td><td></td><td>iii) Bag filter shall be supplied with automatic bag filter pulse jet cleaning equipment including controller.</td></tr>
</table>
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</table>

<table>
<tr>
<td>9.</td>
<td>VI/A</td>
<td>Annexure -I (IIA-16 AHP Scope Change)</td>
<td>6 of 9</td>
<td>1.03.00 MISC. COMMON SYSTEMS</td>
<td>(iii) Three (3) nos. (2W + 1SB) HCSD LP water pumps with adequate pressure & capacity for supplying water to mixing/retention tank with drive motors, base plates, foundation bolts, inserts, embedment, pipelines, valves, fittings, pipe rack, structural steel supports for piping system and accessories as specified and as required. HCSD LP water Tank shall be over ground RCC construction with minimum 30 minutes capacity. Make-up to HCSD seal-cooling water Tank shall from CTBD / Raw water source.</td>
<td>(iii) Three (3) nos. (2W + 1SB) HCSD LP water pumps with adequate pressure & capacity for supplying water to mixing/retention tank with drive motors, base plates, foundation bolts, inserts, embedment, pipelines, valves, fittings, pipe rack, structural steel supports for piping system and accessories as specified and as required. HCSD LP water Tank shall be over ground RCC construction with minimum 1 hour capacity. Make-up to HCSD seal-cooling water Tank shall from CTBD / Raw water source. Ash conditioner water pumps for the fly ash silo and bottom ash silo and wash water pump shall take suction from the HCSD LP water tank. For the purpose of tank volume calculation, the bidder shall consider the maximum water requirement of either the ash conditioner pumps or the HCSD LP water pumps, whichever is higher.</td>
</tr>
<tr>
<td>10.</td>
<td>VI/B</td>
<td>Annexure -I (A-21 ASH HANDLING PLANT)</td>
<td>9 of 22</td>
<td>12.00.00</td>
<td>Bottom Ash Intermediate Silo/Bottom Ash Main Silo
<table>
<tr><td>Number</td><td>As specified and as required.</td></tr>
<tr><td>Type</td><td>Flat bottom / Conical type with proven design with respect to flowability of ash.</td></tr>
<tr><td>Storage capacity</td><td>As specified elsewhere</td></tr>
<tr><td>Material of construction</td><td>MS plates, IS:2062 min 10mm thick. Min 3 mm thick SS liner as per SS 409 M/410 at conical portion of silo</td></tr>
</table>
</td>
<td>Bottom Ash Intermediate Silo/Bottom Ash Main Silo/ Coarse Ash Intermediate Surge Hoppers
<table>
<tr><td>Number</td><td>As specified and as required.</td></tr>
<tr><td>Type</td><td>Flat bottom / Conical type with proven design with respect to flowability of ash.</td></tr>
<tr><td>Storage capacity</td><td>As specified elsewhere</td></tr>
<tr><td>Material of construction</td><td>MS plates, IS:2062 min 10mm thick. Min 3 mm thick SS liner as per SS 409 M/410 at conical portion of silo</td></tr>
</table>
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<table>
<tr>
<td>11.</td>
<td>VI/B</td>
<td>Annexure -II (A-21 ASH HAN-DLING PLANT)</td>
<td>29 of 41</td>
<td>3.08.00</td>
<td>Dry Ash unloader, Conditioned Ash unloader, Telescopic chute

<table>
<tr><td>1</td><td>Qty</td><td>:</td><td>As per scope</td></tr>
<tr><td>2</td><td>Capacity range</td><td>:</td><td>40-100 TPH during open truck/Bulker loading through Condition ash unloader

40-300 TPH for Truck/Bulker/Rail Wagon Loading through Dry Ash unloader</td></tr>
</table>

Suitable arrangement for Control of movement of Telescopic spout shall have to be provided in all three X-Y-Z directions to facilitate loading of ash into BOXN, BCFC, BCCW and BTAP Wagons during loading of Ash and to facilitate simultaneous loading into Wagons from all the Silos and into Wagons in between two Silos.</td>
<td>Dry Ash unloader, Conditioned Ash unloader, Telescopic chute

<table>
<tr><td>1</td><td>Qty</td><td>:</td><td>As per scope</td></tr>
<tr><td>2</td><td>Capacity range</td><td>:</td><td>40-260 TPH during open truck/Bulker/ Rail wagon loading through Condition ash unloader (FA Main Silo)

40-120 TPH during open truck/Bulker loading through Condition ash unloader (BAIM Silo)

40-300 TPH for Truck/Bulker/Rail Wagon Loading through <s>Dry</s> Ash unloader through Telescopic chute (BA & FA Main Silo)

40-120 TPH for dedicated open truck loading (BA Main Silo)</td></tr>
</table>

Suitable arrangement for Control of movement of Telescopic spout shall have to be provided in all three X-Y-Z directions to facilitate loading of ash into BOXN, BCFC, BCCW and BTAP Wagons during loading of Ash and to facilitate simultaneous loading into Wagons from all the Silos and into Wagons in between two Silos.</td>
</tr>
</table>

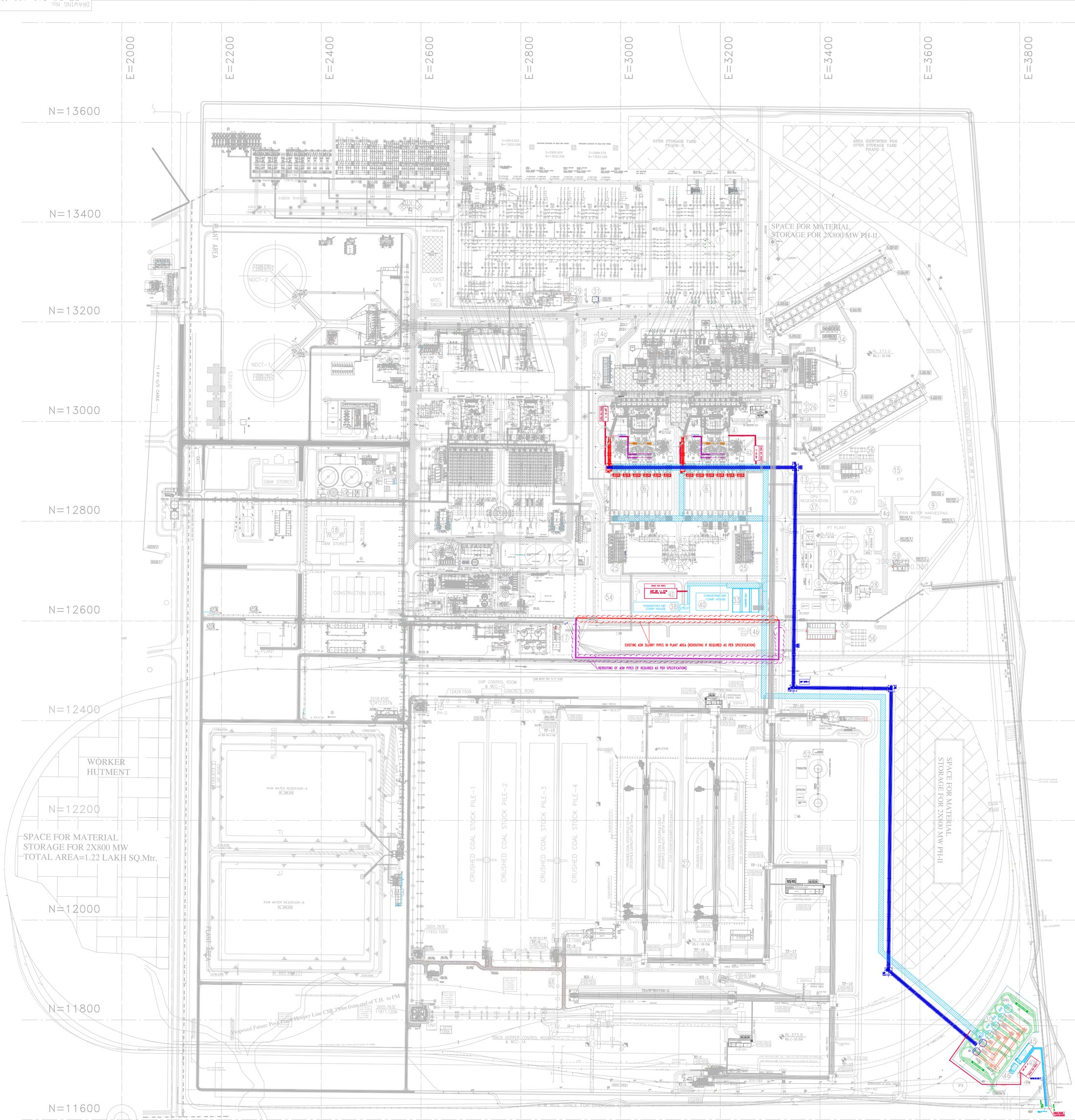
12.	VI/B	Annexure -I (A-21 ASH HAN-DLING PLANT)	**9 of 22**	**13.00.00 Com-bined High Concen-tration Ash Slurry Dis-posal System**	vi) Bidder should ascertain the slurry rheological characteris-tics to design ash slurry pumping system. Chemical treatment if required for HCSD slurry formation shall be provided. No extra claim shall be entertained for system modifications at later date on account of the same.	vi) **Ash Rheology Test with Bottom Ash and Fly Ash for the de-sign of HCSD System is in Bidder's scope.** Bidder shall ascertain the slurry rheological characteristics to design ash slurry pumping system. Chemical treatment if required for HCSD slurry formation shall be provided. No extra claim shall be entertained for system modifications at later date on account of the same. **Contractor shall collect the ash sample from DVC operating plant (to be identified by DVC at the contract stage). DVC will facilitate collection of ash sample at its power plant. However, Contractor shall make his own arrangement for collection and transportation of ash sample to its works / laboratory from DVC plant.**

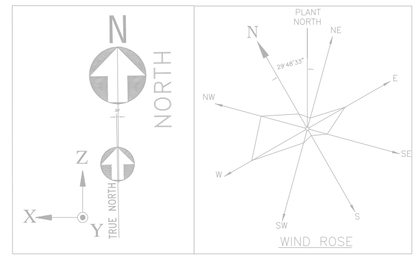
	2 X 800 MW Koderma TPS **TCC- Main Ash Handling System -EPC Package (Package-II)**	**Technical Corrigendum-01**

Sl.No	Reference Document/ Page/ Clause/Sl. No	Description in Tender	To be Read as
1.	12.00 List of Enclosures-Annexure-1	Plot Plan	Please find revised Plot Plan for Main Ash Handling System -EPC Package (Package-II). However, bidder shall read the specification and scope matrix for detail scope.
2.		General	Please find Flow Diagram for Bottom Ash, Coarse Ash and HCSD System with Scope demarcation of Interface portion between Package-I and Package-II. However, bidder shall read the specification and scope matrix for detail scope.
3.		General	Structural Steel works, grating, chequered plate, handrail etc for access/maintenance platforms for Economiser outlet duct hoppers/Air Preheater Hoppers/AH-ESP Duct Hoppers equipment at different elevations in Boiler area is in bidder scope only.
4.		General	1. The Pipe Rack & conveyor galleries between BA TP-01 to BA TP-02 and BA TP-02 to BA TP-03 are passing through the ID duct area (In front of ESP). Providing dedicated supports in this area is difficult due to space constraints; hence, these galleries shall be supported by taking support from the ID duct columns (columns by BHEL). Beyond the ID Duct column, the vendor shall plan the trestles as per the requirement. 2. The Pipe racks going through the ID duct area (behind ESP). Providing dedicated supports in this area is difficult due to space constraints; hence, these pipe racks shall be supported by taking support from the ID Duct columns (columns by BHEL). Beyond the ID Duct column, the vendor shall plan the trestles as per the requirement. We have enclosed the Layout of ID System (Ref Drg No-3112-102-PVM-B-025) for reference.

Date-09-12-2025

5.	SL No 23 of Amendment -01 – Annexure-7 part 5-TCC	The discharge of the sump drainage pump at Main Silo area shall be fed into ash pond, the terminal point in this regard shall be limited to plant boundary only. The discharge of the sump drainage pump at Classifier area/Vacuum Pump area shall be fed to nearest ETP/CSSP.	The discharge of the sump drainage pump at Main Silo area shall be fed into ash pond, the terminal point in this regard shall be limited to plant boundary only. Bidder shall consider a pipeline distance of 1.5 km and a static lift of 5 m from terminal point for design of Silo area drain pump. The discharge of the sump drainage pump at Classifier area/Vacuum Pump area shall be fed to CSSP Clarifier/CSSP. The location of the drain pump discharge point for Classifier area and Vacuum Pump area (as applicable) shall be provided by BHEL during detail engineering. Bidder shall consider a pipeline distance of 1.2-1.4 km from Vacuum Pump House area and classifier silo area for design of drain pumps of respective area.
6.	2-TCC TECHNICAL CONDITION OF CONTRACT Cl. No. 03.02.04 Common Water System page 29 of 120	The following points also to be noted by bidder 1. The Total Cooling water .... 1630 M3/hr for both units. 2. The Total raw water/CTBD water..... 385 M3/hr for both units. 3. The Total seal/clarified water ……72 M3/hr for both units. 4. The Total clarified water ……. 110 M3/hr for both units.	The following points also to be noted by bidder 1. The Total Cooling water .... 1630 M3/hr for both units. 2. The Total raw water/CTBD water..... 385 M3/hr for both units. 3. The Total seal/clarified water ……72 M3/hr for both units. 4. The Total clarified water ……. 110 M3/hr for both units. The Water Quantity mentioned in the specification is final. Bidder shall thoroughly review the requirements for ash handling system envisaged in Koderma. In case bidder feels that cooling water is insufficient, then bidder shall plan localised cooling tower for recirculation of water to meet their requirement. In case bidder feels that the Raw Water/CTBD Water quantity is insufficient, then DVC/BHEL shall provide a source of Cooling Tower Blowdown water in ESP area of maximum capacity 200 m3/hr. Bidder shall construct a water tank of 30 min capacity for collecting the water and supply and install two no (1W+1SB) booster pumps with adequate head and capacity to meet up the actual requirement of the system.





FOR TENDER PURPOSE ONLY
DTD. 10.12.2025

LIST OF BUILDING/EQUIPMENT SHOWN (PHASE-II)

NO	DESCRIPTION
1	SWITCHYARD
2	TRANSFORMER YARD
3	POWER HOUSE BUILDING
4	BOILER
5	MILL BAY
6	ELECTROSTATIC PRECIPITATOR
7	CHIMNEY
8	WATER SYSTEM CONTROL ROOM & ANNEX.
9	RAIN WATER HARVESTING POND
10	RAW WATER PUMP HOUSE & MCC
11	PT PLANT
12	D.M PLANT(RO/CONVENTIONAL)
13	D.M. WATER TANKS & PUMP HOUSE
14a	SEWAGE TREATMENT PLANT-1
14b	SEWAGE TREATMENT PLANT-2
14c	SEWAGE TREATMENT PLANT-3
15	EFFLUENT TREATMENT PLANT
16	CW TREATMENT PLANT
17	F.O.P.H.
18	O&M STORES
19	COOLING TOWER
20	C.W. PUMP HOUSE & FOREWAY
21	PLANT CLO2 SYSTEM
22	COMPRESSOR HOUSE
23	MRS SILO
24	DG SETS
25	ESP ~~CUM FGD~~ CONTROL ROOM
26	CONDENSATE STORAGE TANK & PH
27	COAL STOCK YARD
28	CHEMICAL HOUSE-PT PLANT
29	SWITCHYARD CONTROL ROOM
30	MAIN BA & FA SILO

NO	DESCRIPTION
31	SAFETY CONTROL ROOM
32	CLARIFIED /SERVICE WATER TANK & PUMP HOUSE
33	CLASSIFIER SILO
34	ELECTRICAL SWITCHGEAR ROOM FOR COOLING TOWERS(2 NOS.)
35	CEP VFD ROOM
36	FIRE WATER BOOSTER PUMP HOUSE
37	CPU REGENERATION AREA
38	TRANSPORT AIR COMPRESSOR HOUSE
39	COAL SLURRY SETTLING POND
40	CONVEYING AIR COMPRESSOR HOUSE
41	CHP PUMP HOUSE-2
42	AHP MCC (4 NOS.)
43	CHP PUMP HOUSE-1
44	CHP MCC/ER
45	HCSD PUMP HOUSE
46	SILO UTILITY BUILDING
47	SPACE FOR SERVICE BUILDING
48	CRUSHER HOUSE (ISG)
49	GYPSUM DEWATERING BILDING & STORAGE SHED DELETED
50	BALL MILL BUILDING DELETED
51	MCC CUM CONTROL ROOM FOR CHP
52	PT PLANT-CSSP
53	BA INTERMEDIATE SILO
54	CARBON CAPTURING SPACE
55	SPACE FOR SCR INSTALLATION(FUTURE)
56	SHED FOR CONSTRUCTION WORKERS AND O&M WORKERS
57	FGD RC PUMP & OXIDATION BLOWER AREA DELETED
58	MAINTENANCE BUILDING
59	PCRI LAB
60	AAQMS
61	SO2 ANALYZER ROOM

NOTES:-

1. ALL DIMENSIONS ARE IN MM & ELEVATIONS IN METERS UNLESS STATED OTHERWISE.
2. TG BUILDING FINISH FLOOR LEVEL EL 0.0M, CORRESPONDS TO RL (+)373.50 M FFL IN BOILER AREA SHALL BE RL (+)373.30M AND FFL IN TRANSFORMER YARD SHALL BE RL (+)373.40M.
3. BOILER AREA, ESP AREA & FGD LAYOUT IS SHOWN INDICATIVE ONLY FOR SPACE ALLOCATION PURPOSE. FOR DETAILS, PL. REFER RESPECTIVE DRAWING OF BHEL TRICHY & RANIPET.
4. LOCATION/SIZE/LAYOUT OF VARIOUS FACILITIES/BUILDINGS ARE TENTATIVE ONLY AND SHALL BE FINALISED DURING FURTHER DETAIL ENGINEERING.
5. ADDITIONAL RAIL LINE IS REQUIRED FOR TRACK HOPPER, WAGON TIPPLERS AND ASH SILOS RAIL LINE SHOWN IN GLP ARE INDICATIVE. ALL THE REQUIRED STUDY,NECESSARY APPROVALS & CONSTRUCTION REQUIRED FOR RAILWAY SIDING WORK ARE IN THE SCOPE OF DVC RAIL FOR TRACK HOPPER COMPLEX & WAGON TIPPLER RAIL TABLE ARE IN BHEL SCOPE.
6. CO-ORDINATES OF PHASE-1WILL BECOME NULL AND VOID IN REVISED PLOT PLAN (EXISTING PHASE-I & PHASE-II)

IMPORTANT NOTE:

ALL THE HIGHLIGHTED COLORS UTILITIES (PIPE/CABLE RACK, PEDESTALS, BUILDINGS, SILOS ETC...) SHOWN IN PLOT PLAN ARE IN MAIN ASH HANDLING PACKAGE (PACKAGE-II) BIDDER SCOPE. HOWEVER, BIDDER SHALL READ THE NIT SPECIFICATION/AMENDMENTS AND PROVIDE THE ADDITIONAL AHP UTILITIES AS PER CONTRACT REQUIREMENT FOR SUCCESSFUL COMPLETION OF ASH HANDLING SYSTEM (EXCEPT DRY BOTTOM ASH HANDLING SYSTEM).

LEGEND:

1. ROAD
2. BOUNDARY WALL
3. FENCING
4. RAILWAY LINE (PLANNED IN SATGE I).
5. LAND ACQUISITION LINE

REV.	DATE	ALTD	CHD	APPD
02	20.09.2025	MK	MK	BKA
01	PLOT PLAN REVISED BASED ON MEETING ON SITE DTD. 08-10TH SEPT. 2025.			
02	PLOT PLAN REVISED INLINE WITH CUSTOMER LETTER NO. BTPP/DVC/7104-525 DTD. 30.07.2025 REGARDING FGD DELETION.			

REV.	DATE	ALTD	CHD	APPD
01	21.01.2025	RJK	MK/KK	BKA
01	PLOT PLAN BASED ON CHANGE PROPOSAL OF DRY ASH EVACUATION SYSTEM & CHIMNEY ARRANGEMENT FOR KODERMA TPS PHASE-I			
02	PLOT PLAN REVISED BASED ON DISCUSSION WITH CUSTOMER IN DVC HQ KOLKATA DTD. 08-10TH JANUARY 2025.			

CUSTOMER DRG.NO.: 3112-110-PVM-F-007

CUSTOMER: DAMODAR VALLEY CORPORATION

PROJECT: KODERMA THERMAL POWER PROJECT PH-II (2x800 MW)

BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA

JOB NO. 519
STATUS CONTRACT
DISTRIBUTION

	DEPT	NAME	SIGN	DATE
CODE	DRN	DINESH	-Sd-	03.09.2024
M	DE (SI)	MUKESH	-Sd-	03.09.2024
	CHD	KK	-Sd-	03.09.2024
	APPD	BKA	-Sd-	03.09.2024

TITLE: PLOT PLAN

DRAWING NO. PE-DG-519-100-M001
SHEET 1 OF REV. 02
SIZE-A0

FURNACE

CAMERA (TYP.)

BYPASS AIR DUCT WITH VALVE

AIR FLOW

MATERIAL FLOW

BOTTOM ASH HOPPER UNIT#3
STORAGE--5 HRS

ISOLATION GATE

HORIZONTAL AIR VALVE

1st STAGE DRY BA ASH CONVEYOR
CAP:- 108 TPH

FOR MANUAL DUMPING TO GROUND & FURTHER TRANSPORTATION DURING EMERGENCY

ASH FROM ECO METALLIC BELT CONVEYOR
REF. DWG NO.- 3112-108-POM-A-910 (SH-02 OF 02)

M MOTORIZED GATE

MANUAL GATE

JAW CRUSHER (IF APPLICABLE)

CLINKER GRINDER

2nd STAGE DRY ASH CONVEYOR (BA + ECO ASH)
CAP:- 129.5 TPH

REF. DWG NO.- 3112-108-POM-A-910 (SH-02 OF 02)

ASH FROM ISH # B

ASH FROM ISH # A

L-8

L-7

DETAIL-B

DPT DPG

LT

VENT FILTER WITH FAN (TYP.)

BOTTOM ASH INTERMEDIATE (IM) SILO UNIT#3
CAP:- 520 T

OPENING FOR FUTURE USE

DETAIL-A

VIBRO FEEDER

ASH CONDITIONER

TE (TYP)

PT

PG

TROUGH BELT # CONV.#2A

TROUGH BELT # CONV.#2B

CANVAS TYPE CHUTE ARRANGEMENT FOR UNLOADING TO OPEN TRUCK (TYP.)

P FROM CONDITIONER WATER PUMP

TP-1 SW DW FW DFDS

TROUGH BELT # CONV.#1A

TROUGH BELT # CONV.#1B

EACH BELT CAP:- 260TPH (RATED) 286TPH (DESIGN) #

TP-2 SW DW FW DFDS

TP-3 SW DW FW DFDS

TP-4 SW DW FW DFDS

TP-5 SW DW FW DFDS

TP-6 SW DW FW DFDS

TP AT SILO TOP SW DW FW DFDS

TROUGH BELT CONV.#3 A @

TROUGH BELT CONV.#3B @

EACH BELT CAP:- 520TPH (RATED) 572TPH (DESIGN) @

CONV.#4 A @

CONV.#4B @

CONV.#5 A @

CONV.#5 B @

CONV.#6 A @

CONV.#6 B @

CONV.#7 A @

CONV.#7 B @

REVERSIBLE BELT FEEDER#1 @

REVERSIBLE BELT FEEDER#2 @

MAIN BOTTOM ASH SILO-1
CAP:- 2000 T

MAIN BOTTOM ASH SILO-2
CAP:- 2000 T

VIBRATOR MOTORISED / PNEUMATIC (TYP)

MANUAL KGV (TYP.)

PNEUMATIC KGV (TYP.)

VIBRO FEEDER (TYP.)

TROUGH BELT CONVEYOR (TYP.)

BELT WEIGHER (TYP.)

SCREW FEEDER (TYP.)

CANVAS (TYP.)

CRUSHER / HAMMER MILL (TYP.) #2

DET.-C

ASH UNLOADING INTO TYP.) RAIL / TRUCK

ASH UNLOADING INTO DEDICATED OPEN TRUCK (TYP.)

VENT FILTER

IM SILO

PULSE TIMER

FROM INSTRUMENT AIR COMPRESSOR

TYPICAL VENT FILTER ARRANGEMENT ON IM SILO AT BOILER AREA

DETAIL-B

TO DIFFERENT PNEUMATIC ACTUATOR AND VENT FILTER IN SILO AREA

AR

ADP

IAC

M

TWO(2) NOS. INSTUMENT AIR COMPRESSORS (IAC) AT MAIN SILO AREA (1 W + 1 S)

MANUAL ISOLATION VALVE (TYP)

PNEUMATIC FEED VALVE (TYP)

ASH CONDITIONER (TYP)

VIBRO FEEDER (TYP)

CHUTE ARRANGEMENT

FROM CONDITIONING WATER PUMP

FLOW INDICATOR

DETAIL-A

FROM BOTTOM ASH MAIN SILO

FROM OTHER MAIN FA SILO (SH 02 OF 02)

MIXING TANK / AGITATOR RETENTION TANK (TYP)

CONTROL VALVE (TYP)

FROM HCSD LP WATER PUMP (SH 02 OF 02)

CHARGE PUMP

HCSD PUMP WITH VFD

HCSD PIPE LINE

TO HCSD DYKE INCLUDING GARLANDING

TO BAG FILTER/ HCSD SILO TOP

DETAIL-C

NOTE :---

1. REQUIRED NUMBER OF INTERMEDIATE CONVEYORS & TRANSFER POINTS SHALL BE PROVIDED AS PER SYSTEM AND LAYOUT REQUIREMENT.
2. BELT WEIGHT FEEDER AT BOTTOM ASH MAIN SILOS ALONG WITH ITS SUPPORTING STRUCTURES, TRANSFER POINTS AND SPACE PROVISION FOR CONVEYOR SYSTEM NEAR SILO AREA FOR TRANSPORTING ASH TO MIXING TANK OF HCSD SYSTEM SHALL BE PROVIDED.
3. TOTAL FOUR NOS. PIT-LESS TYPE WEIGH BRIDGE SHALL BE PROVIDED BELOW BOTTOM ASH MAIN SILO (SUITABLE FOR RAIL / TRUCK LOADING) AT PLANT BOUNDARY AREA COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS FOR WEIGHMENT OF TRUCKS DURING FILLING FROM SILOS.
4. THE SCHEME IS INDICATIVE ONLY SHOWING THE OVER ALL REQUIREMENTS & BROAD PARAMETERS (REFER RELEVANT CLAUSES OF TECH. SPECS. FOR SYSTEM DESIGN AND GUIDE LINES.)
5. INSTRUMENTS/CONTROL SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM AND FUNCTIONAL INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL.
6. INSTRUMENT AIR PIPING IS NOT SHOWN IN THE DRG. IT SHALL BE ROUTED TO DIFFERENT VALVES, BAG FILTERS ETC. IN THE BOTTOM ASH HANDLING SYSTEM AS PER SYSTEM DESIGN AND REQUIREMENTS.
7. THE SCHEME & NO. OF EQUIPMENT SHOWN ARE TENTATIVE ONLY AND THE SAME SHALL BE FINALISED DURING DETAIL ENGG. BASED ON TECHNICAL SPECIFICATION & SYSTEM REQUIREMENTS.
8. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECH.SPECS. AND OTHER TENDER DOCUMENTS.
9. BIDDER SHALL PROVIDE INDIVIDUAL MONORAIL AND HOIST(ELECTRIC OPERATED) FOR EACH BOTTOM ASH INTERMEDIATE SILO AT BOILER AREA AND MAIN BOTTOM ASH SILO AT PLANT BOUNDARY.
10. ONE NO. BELT WEIGHER SHALL BE PROVIDED ON EACH CONVEYOR TAKING FEED FROM EACH BOTTOM ASH INTERMEDIATE SILO.
11. SERVICE WATER (SW), DRINKING WATER (DW) AND FIRE WATER (FW) SHALL BE MET UP FROM NEAREST AVALABLE HEADERS.
12. #2 NECESSARY ARRANGEMENT SHALL BE PROVIDED FOR TWO NOS. OF RAIL/ TRUCK LOADING FROM EACH BA-MAIN SILO.
13. #3 NECESSARY ARRANGEMENT SHALL BE PROVIDED FOR ONE NO. OF INDEPENDENT OPEN TRUCK LOADING FROM EACH SILO.

LEGEND :

SOLENOID VALVE	FT FLOW TRANSMITTER	DM	DENSITY METER
GLOBE VALVE	LT LEVEL TRANSMITTER (ULTRASONIC TYPE)	SFT	SULLRY FLOW TRANSMITTER
BALL VALVE	LT** LEVEL TRANSMITTER (RADER TYPE)	S	LEVEL SWITCH
GATE VALVE	TE TEMP ELEMENT	LG	LEVEL GAUGE
NON RETURN VALVE	TG TEMP GAUGE		ELECTRONIC BELT WEIGHER
PRESSURE RELEASE VALVE	PS PRESSURE SWITCH	SW	SERVICE WATER
PNEUMATIC KGV	PG PRESSURE GAUGE	DW	DRINKING WATER
MANUAL KGV	DPS DIFF PRESSURE SWITCH	FW	FIRE WATER
M MOTOR	DPG DIFF PRESSURE GAUGE	IA	INSTUMENT AIR LINE
PT PRESSURE TRANSMITTER	VACUUM PRESSURE RELIEF VALVE	DFDS	DRY FOG DUST SUPPRESSION
DPT DIFF PRESSURE TRANSMITTER			

FOR TENDER PURPOSE ONLY

DAMODAR VALLEY CORPORATION

KODERMA THERMAL POWER PLANT, PH-II
(800 MW x 2)

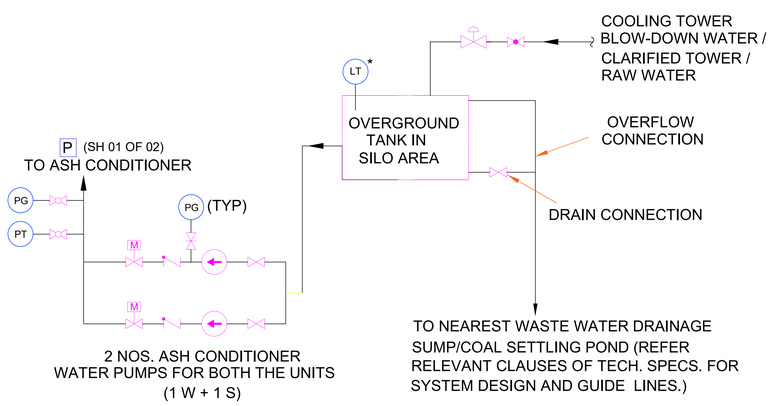
TITLE:- FLOW DIAGRAM OF BOTTOM ASH, COARSE ASH HANDLING SYSTEM AND HCSD SYSTEM

DRAWN: KD	SCALE: NTS	DATE: 09/12/2025
CHECKED: KD	REVIEWED: AKB	APPROVED: AKB

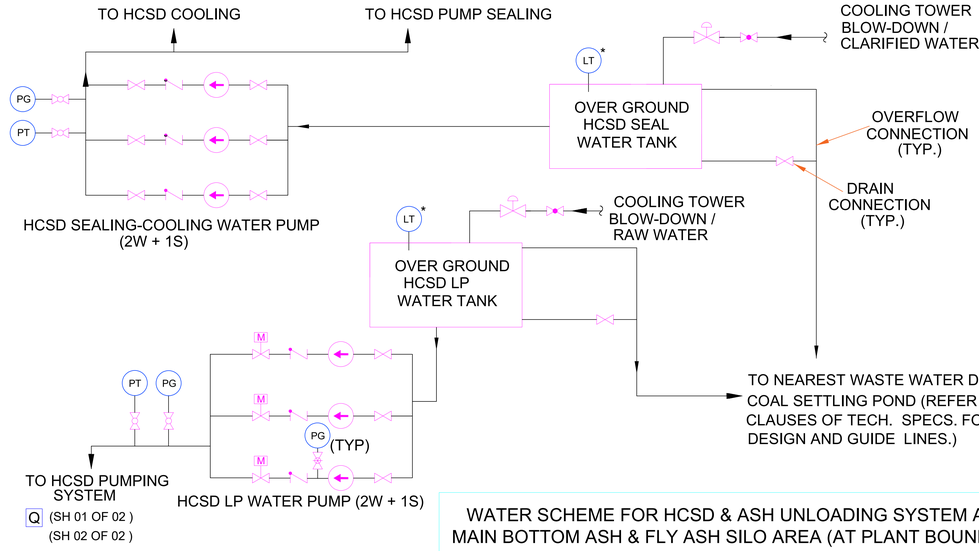
DWG NO.-3112-108-POM-A-910

SHEET 1 OF 2

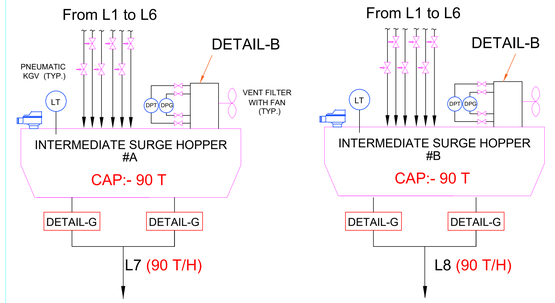
REV-3



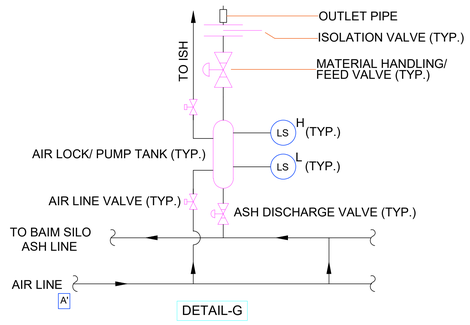
WATER SCHEME FOR IM SILO AT MAIN PLANT (BOILER AREA)

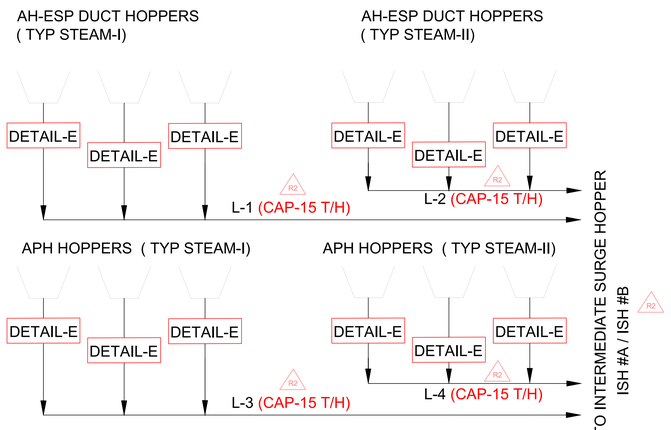


WATER SCHEME FOR HCSD & ASH UNLOADING SYSTEM AT MAIN BOTTOM ASH & FLY ASH SILO AREA (AT PLANT BOUNDARY)

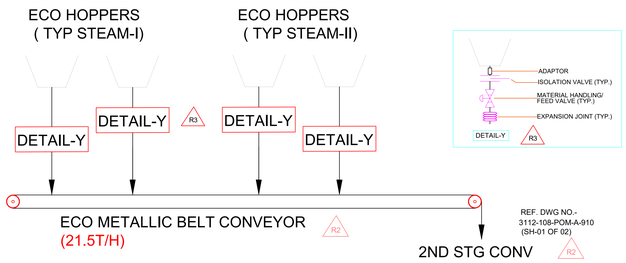


COARSE ASH INTERMEDIATE SURGE HOPPER (1W+ 1S) / UNIT

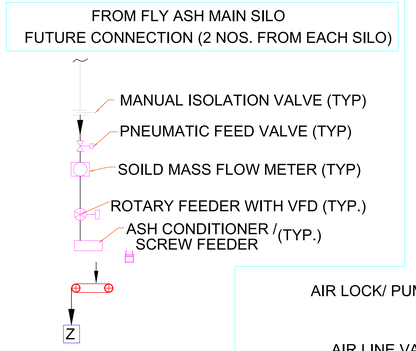


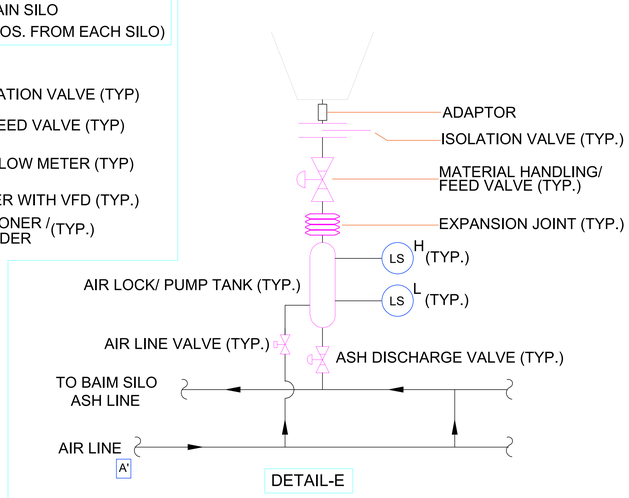


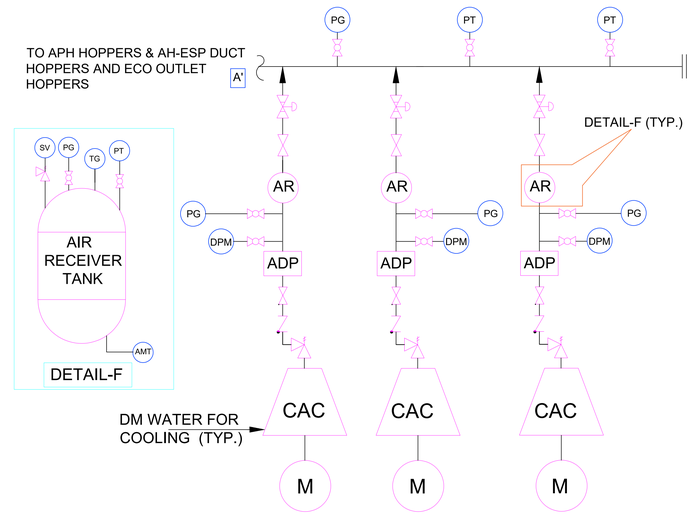
PNEUMATIC CONVEYING SCHEME ECO O/L, APH & AH-DUCT HOPPER (FOR INDIVIDUAL UNIT)



SCHEME FOR ECO METALLIC BELT CONVEYOR (FOR INDIVIDUAL UNIT)







TWO(3) NOS. CONVEYING AIR COMPRESSORS (CAC) FOR EACH UNIT (2 W + 1 S)

I. MATERIAL OF SEAL USED IN MATERIAL HANDLING VALVE SHALL BE SUITABLE FOR CONTINUOUS OPERATING TEMPERATURE AND ALSO SUITABLE FOR OCCASIONAL EXPOSURE TO MAXIMUM TEMPERATURE. BIDDER SHALL ALSO PROVIDE SUITABLE ARRANGEMENT TO TAKE CARE OF HOT AIR COMING OUT OF BUFFER HOPPER. BAG FILTERS SHALL BE SELECTED SUITABLE FOR CONTINUOUS EXPOSURE OF TEMPERATURE OF 175°C MIN. AND MOMENTARY CONTACT 195°C AT BUFFER HOPPERS/ASH STORAGE SILOS.

II. PNEUMATICALLY ACTUATED ISOLATION VALVES TO BE PROVIDED BELOW EACH TYPE OF COLLECTION HOPPERS IN ADDITION TO MANUAL OPERATED VALVES.

III. COMMON AIR COMPRESSORS SHOWN ARE TYPICAL FOR EACH UNIT.

IV. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECH. SPEC. AND OTHER TENDER DOCUMENTS.

V. INSTRUMENTS SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL REQUIREMENTS AS SPECIFIED.

VI. INSTRUMENT AIR PIPING IS NOT SHOWN. IN THE UNIT, IT SHALL BE ROUTED TO DIFFERENT VALVES, BAG FILTERS, ETC., IN FLY ASH HANDLING SYSTEM AS PER SYSTEM DESIGN AND REQUIREMENTS.

R1 VII. SUITABLE DUST SUPPRESSION FACILITIES SHALL BE PROVIDED IN BA SILO AREA SIMILAR TO THAT OF FA SILO AREA.

R1 VIII. EACH CONVEYING AIR COMPRESSOR SHALL BE PROVIDED WITH INDEPENDENT AIR DRYING PLANT REFRIGERANT TYPE AND AIR RECEIVER AS PER TECH. SPECIFICATION.

IX. NECESSARY HEAD ROOM (6.8 M MIN.) TO BE PROVIDED BELOW SILOS FOR TRUCK/ RAIL WAGON MOVEMENT. THE SILO UNLOADING FACILITY SHALL BE SUITABLE FOR OPEN TRUCK/ CLOSED TANKER/ RAILWAGON LOADING. HOWEVER, BIDDER SHALL ENSURE THAT THE CLEARENCE OF ASH SILOS OVER THE RAILWAY TRACKS SHALL BE AS PER RAILWAYS/ RDSO GUIDLINES. THE SCOPE INCLUDES GETTING APPROVALS FROM RAILWAYS.

X. ALL DEVICES REQUIRING INSTRUMENT AIR SHALL BE PROVIDED WITH MANUAL ISOLATION VALVE IN AIR LINE. THIS IS APPLICABLE FOR THE ENTIRE ASH HANDLING SYSTEM.

XI. LIMIT SWITCHES ARE TO BE PROVIDED FOR MANUAL VALVES AS PER SYSTEM REQUIREMENTS & CONTROL PHILOSOPHY.

XII. FOR ALL INSTRUMENTS AND DRIVES, SUPPLIER TO ASSIGN UNIQUE TAG NUMBERS FOR IDENTIFICATION. THIS TAG NUMBER SHALL BE INDICATED ON ALL DOCUMENTS/DRAWINGS/DATA SHEETS APPLICABLE FOR THE RESPECTIVE INSTRUMENT/DRIVE.

XIII. PRESSURE MEASUREMENT (TRANSMITTER) TO BE PROVIDED FOR INSTRUMENT AIR HEADER IN SILO AREA.

XIV. ONE NO. PI AND PG SHALL BE PROVIDED IN EACH UNIT SERVICE WATER HEADER USED FOR VACUUM PUMP SEALING/COOLING.

XV. THERE SHALL BE TWO NO. OF OUTLETS FROM EACH OF THE FLY ASH MAIN SILO (I.E., SILO NO.:-1,2 & 3), FOR UNLOADING OF FLY ASH THROUGH HCSD SYSTEM. IN DOING SO, DETAIL-X SHALL BE APPLICABLE.

R2 XVI.THERE SHALL ONE (01) NO INCONECTION LINE WITH ISOLATING VALVE AT COMMON HEADER CONVEYING AIR LINE OF EACH UNIT.

R3 XVII. WATER TANK AT BA MAIN SILO AND FA MAIN SILO AREA SHALL BE COMMON FOR DUST CONDITIONER WATER PUMP AND WASH WATER PUMP.

LEGEND :

- SOLENOID VALVE
- GLOBE VALVE
- BALL VALVE
- GATE VALVE
- NON RETURN VALVE
- PRESSURE RELEASE VALVE
- PNEUMATIC KGV
- MANUAL KGV
- M — MOTOR
- PG — PRESSURE GAUGE
- PT — PRESSURE TRANSMITTER
- PS — PRESSURE SWITCH
- LT — LEVEL TRANSMITTER (ULTRASONIC TYPE)
- LG — LEVEL GAUGE
- LS H — LEVEL SWITCH
- LS L — LEVEL SWITCH
- DM — DENSITY METER
- SFT — SULLRY FLOW TRANSMITTER
- DPM — DEW POINT METER
- AMT — AUTOMATIC MOISTURE TRAP
- TG — TEMPERATURE GAUGE

FOR TENDER PURPOSE ONLY

DAMODAR VALLEY CORPORATION

KODERMA THERMAL POWER PLANT, PH-II (800 MW x 2)

TITLE:- FLOW DIAGRAM OF BOTTOM ASH, COARSE ASH HANDLING SYSTEM AND HCSD SYSTEM

DRAWN: KD	SCALE: NTS	DATE: 09/12/2025
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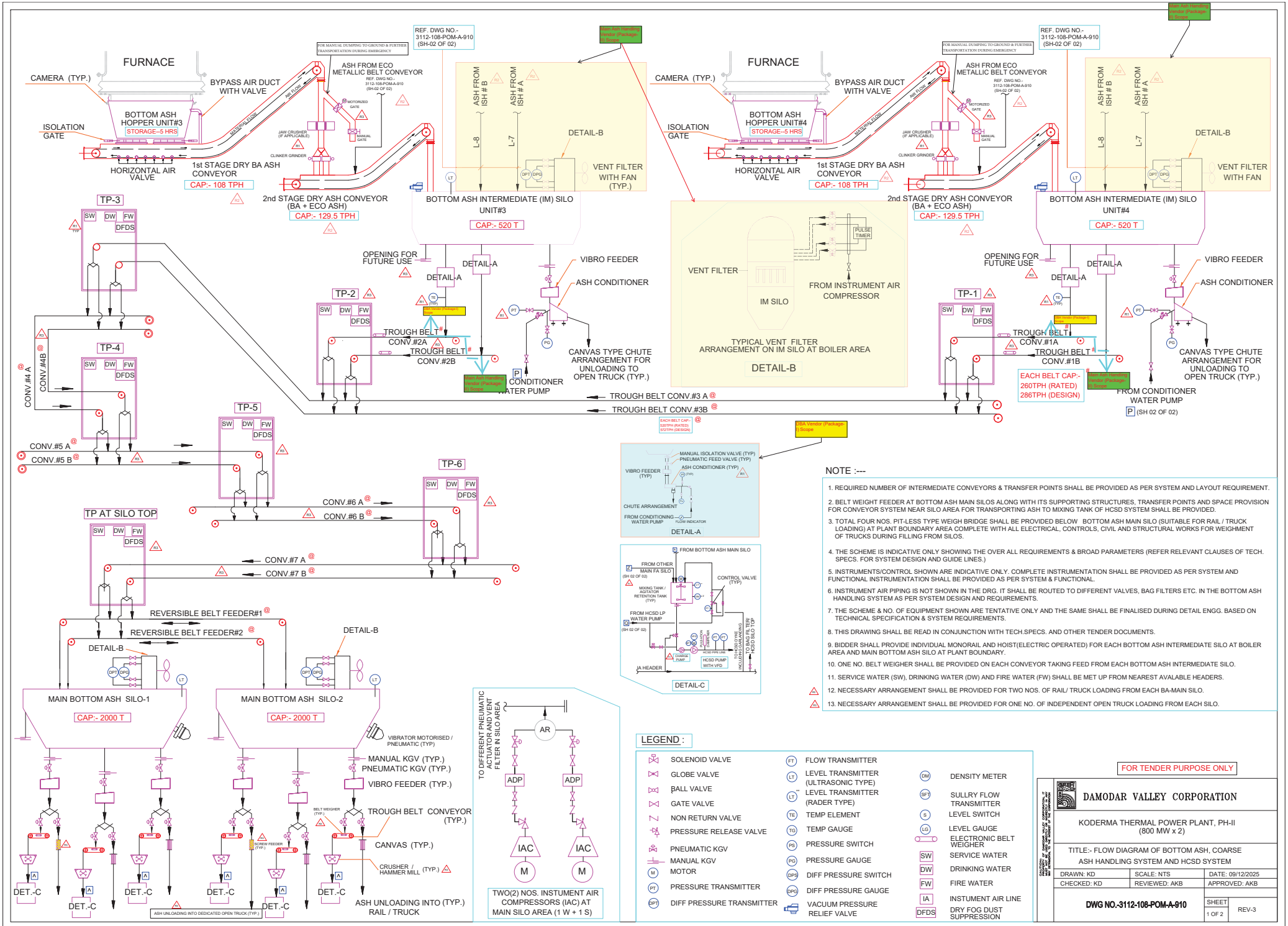
SHEET 2 OF 2

REV-3



NOTE :---

1. REQUIRED NUMBER OF INTERMEDIATE CONVEYORS & TRANSFER POINTS SHALL BE PROVIDED AS PER SYSTEM AND LAYOUT REQUIREMENT.
2. BELT WEIGHT FEEDER AT BOTTOM ASH MAIN SILOS ALONG WITH ITS SUPPORTING STRUCTURES, TRANSFER POINTS AND SPACE PROVISION FOR CONVEYOR SYSTEM NEAR SILO AREA FOR TRANSPORTING ASH TO MIXING TANK OF HCSD SYSTEM SHALL BE PROVIDED.
3. TOTAL FOUR NOS. PIT-LESS TYPE WEIGH BRIDGE SHALL BE PROVIDED BELOW BOTTOM ASH MAIN SILO (SUITABLE FOR RAIL / TRUCK LOADING) AT PLANT BOUNDARY AREA COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS FOR WEIGHMENT OF TRUCKS DURING FILLING FROM SILOS.
4. THE SCHEME IS INDICATIVE ONLY SHOWING THE OVER ALL REQUIREMENTS & BROAD PARAMETERS (REFER RELEVANT CLAUSES OF TECH. SPECS. FOR SYSTEM DESIGN AND GUIDE LINES.)
5. INSTRUMENTS/CONTROL SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM AND FUNCTIONAL INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL.
6. INSTRUMENT AIR PIPING IS NOT SHOWN IN THE DRG. IT SHALL BE ROUTED TO DIFFERENT VALVES, BAG FILTERS ETC. IN THE BOTTOM ASH HANDLING SYSTEM AS PER SYSTEM DESIGN AND REQUIREMENTS.
7. THE SCHEME & NO. OF EQUIPMENT SHOWN ARE TENTATIVE ONLY AND THE SAME SHALL BE FINALISED DURING DETAIL ENGG. BASED ON TECHNICAL SPECIFICATION & SYSTEM REQUIREMENTS.
8. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECH.SPECS. AND OTHER TENDER DOCUMENTS.
9. BIDDER SHALL PROVIDE INDIVIDUAL MONORAIL AND HOIST(ELECTRIC OPERATED) FOR EACH BOTTOM ASH INTERMEDIATE SILO AT BOILER AREA AND MAIN BOTTOM ASH SILO AT PLANT BOUNDARY.
10. ONE NO. BELT WEIGHER SHALL BE PROVIDED ON EACH CONVEYOR TAKING FEED FROM EACH BOTTOM ASH INTERMEDIATE SILO.
11. SERVICE WATER (SW), DRINKING WATER (DW) AND FIRE WATER (FW) SHALL BE MET UP FROM NEAREST AVALABLE HEADERS.
12. NECESSARY ARRANGEMENT SHALL BE PROVIDED FOR TWO NOS. OF RAIL/ TRUCK LOADING FROM EACH BA-MAIN SILO.
13. NECESSARY ARRANGEMENT SHALL BE PROVIDED FOR ONE NO. OF INDEPENDENT OPEN TRUCK LOADING FROM EACH SILO.

LEGEND :

- SOLENOID VALVE
- GLOBE VALVE
- BALL VALVE
- GATE VALVE
- NON RETURN VALVE
- PRESSURE RELEASE VALVE
- PNEUMATIC KGV
- MANUAL KGV
- MOTOR
- PRESSURE TRANSMITTER
- DIFF PRESSURE TRANSMITTER
- FLOW TRANSMITTER
- LEVEL TRANSMITTER (ULTRASONIC TYPE)
- LEVEL TRANSMITTER (RADER TYPE)
- TEMP ELEMENT
- TEMP GAUGE
- PRESSURE SWITCH
- PRESSURE GAUGE
- DIFF PRESSURE SWITCH
- DIFF PRESSURE GAUGE
- VACUUM PRESSURE RELIEF VALVE
- DENSITY METER
- SULLRY FLOW TRANSMITTER
- LEVEL SWITCH
- LEVEL GAUGE
- ELECTRONIC BELT WEIGHER
- SERVICE WATER
- DRINKING WATER
- FIRE WATER
- INSTUMENT AIR LINE
- DRY FOG DUST SUPPRESSION

FOR TENDER PURPOSE ONLY

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KODERMA THERMAL POWER PLANT, PH-II (800 MW x 2)

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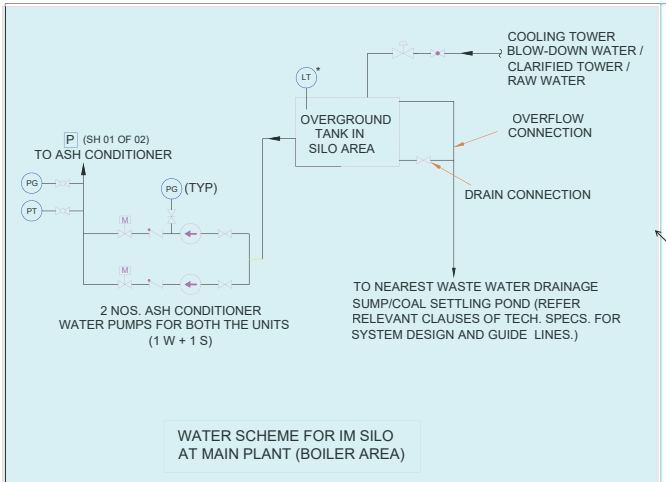
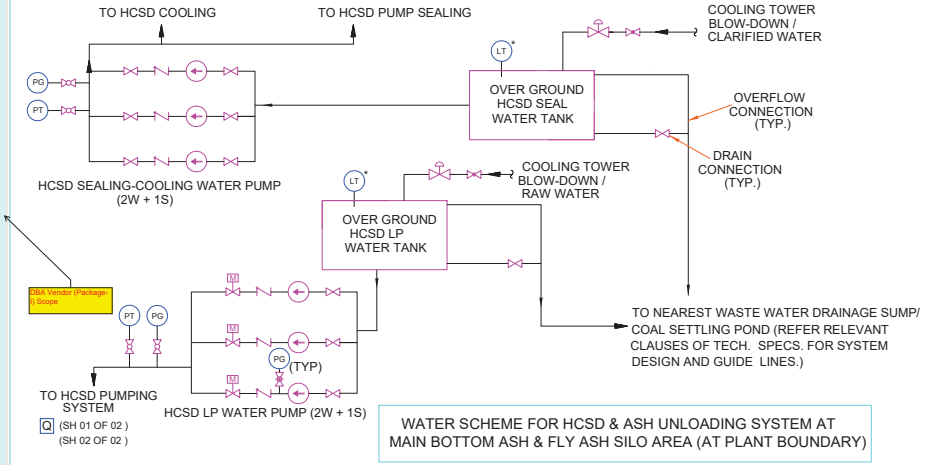
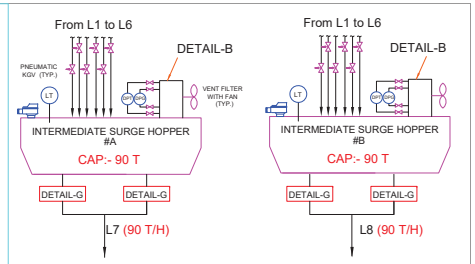
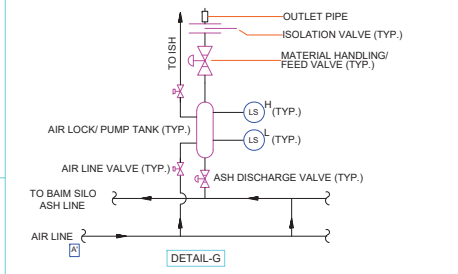


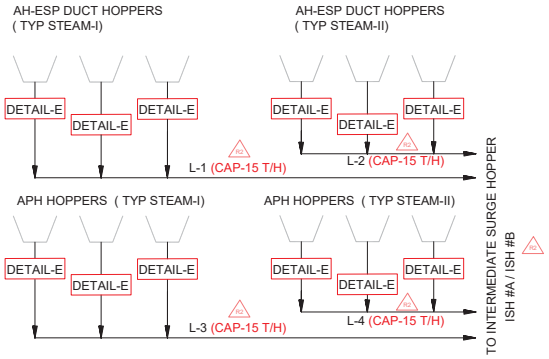
WATER SCHEME FOR IM SILO AT MAIN PLANT (BOILER AREA)

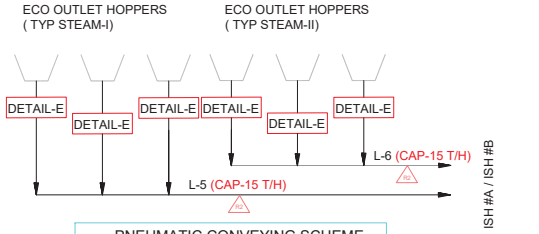


WATER SCHEME FOR HCSD & ASH UNLOADING SYSTEM AT MAIN BOTTOM ASH & FLY ASH SILO AREA (AT PLANT BOUNDARY)

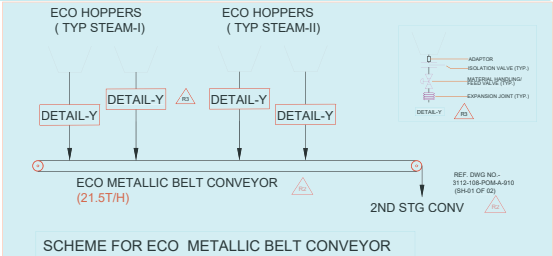




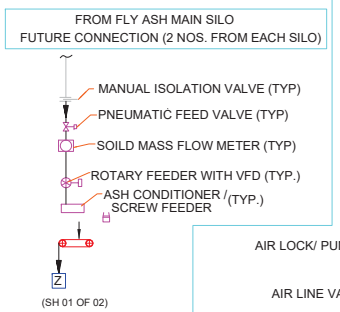




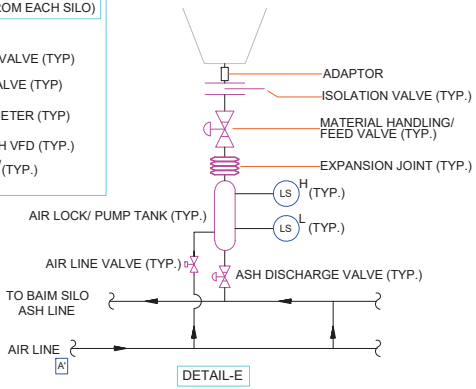
PNEUMATIC CONVEYING SCHEME ECO O/L, APH & AH-DUCT HOPPER (FOR INDIVIDUAL UNIT)

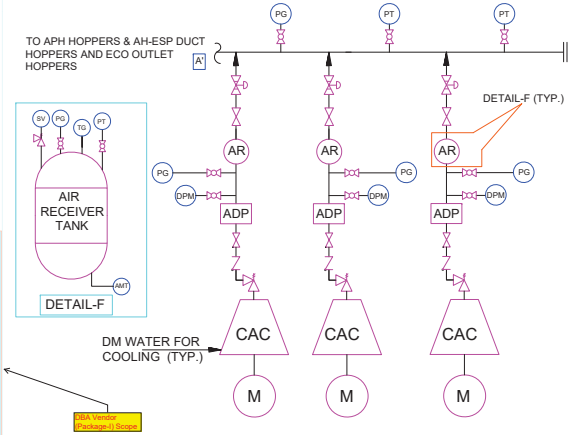


SCHEME FOR ECO METALLIC BELT CONVEYOR (FOR INDIVIDUAL UNIT)



DETAIL-X





TWO(3) NOS. CONVEYING AIR COMPRESSORS (CAC) FOR EACH UNIT (2 W + 1 S)

I. MATERIAL OF SEAL USED IN MATERIAL HANDLING VALVE SHALL BE SUITABLE FOR CONTINUOUS OPERATING TEMPERATURE AND ALSO SUITABLE FOR OCCASIONAL EXPOSURE TO MAXIMUM TEMPERATURE. BIDDER SHALL ALSO PROVIDE SUITABLE ARRANGEMENT TO TAKE CARE OF HOT AIR COMING OUT OF BUFFER HOPPER. BAG FILTERS SHALL BE SELECTED SUITABLE FOR CONTINUOUS EXPOSURE OF TEMPERATURE OF 175°C MIN. AND MOMENTARY CONTACT 195°C AT BUFFER HOPPERS/ASH STORAGE SILOS.

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X. ALL DEVICES REQUIRING INSTRUMENT AIR SHALL BE PROVIDED WITH MANUAL ISOLATION VALVE IN AIR LINE. THIS IS APPLICABLE FOR THE ENTIRE ASH HANDLING SYSTEM.

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XIII. PRESSURE MEASUREMENT (TRANSMITTER) TO BE PROVIDED FOR INSTRUMENT AIR HEADER IN SILO AREA.

XIV. ONE NO. PI AND PG SHALL BE PROVIDED IN EACH UNIT SERVICE WATER HEADER USED FOR VACUUM PUMP SEALING/COOLING.

XV. THERE SHALL BE TWO NO. OF OUTLETS FROM EACH OF THE FLY ASH MAIN SILO (I.E., SILO NO.:-1,2 & 3), FOR UNLOADING OF FLY ASH THROUGH HCSD SYSTEM. IN DOING SO, DETAIL-X SHALL BE APPLICABLE.

R1 R3 XVI.THERE SHALL ONE (01) NO INCONECTION LINE WITH ISOLATING VALVE AT COMMON HEADER CONVEYING AIR LINE OF EACH UNIT.

R3 XVII. WATER TANK AT BA MAIN SILO AND FA MAIN SILO AREA SHALL BE COMMON FOR DUST CONDITIONER WATER PUMP AND WASH WATER PUMP.

LEGEND :

- SOLENOID VALVE
- GLOBE VALVE
- BALL VALVE
- GATE VALVE
- NON RETURN VALVE
- PRESSURE RELEASE VALVE
- PNEUMATIC KGV
- MANUAL KGV
- (M) MOTOR
- (PG) PRESSURE GAUGE
- (PT) PRESSURE TRANSMITTER
- (PS) PRESSURE SWITCH
- (LT) LEVEL TRANSMITTER (ULTRASONIC TYPE)
- (LG) LEVEL GAUGE
- (LS H) LEVEL SWITCH
- (LS L) LEVEL SWITCH
- (DM) DENSITY METER
- (SFT) SULLRY FLOW TRANSMITTER
- (DPM) DEW POINT METER
- (AMT) AUTOMATIC MOISTURE TRAP
- (TG) TEMPERATURE GAUGE

FOR TENDER PURPOSE ONLY

DAMODAR VALLEY CORPORATION

KODERMA THERMAL POWER PLANT, PH-II (800 MW x 2)

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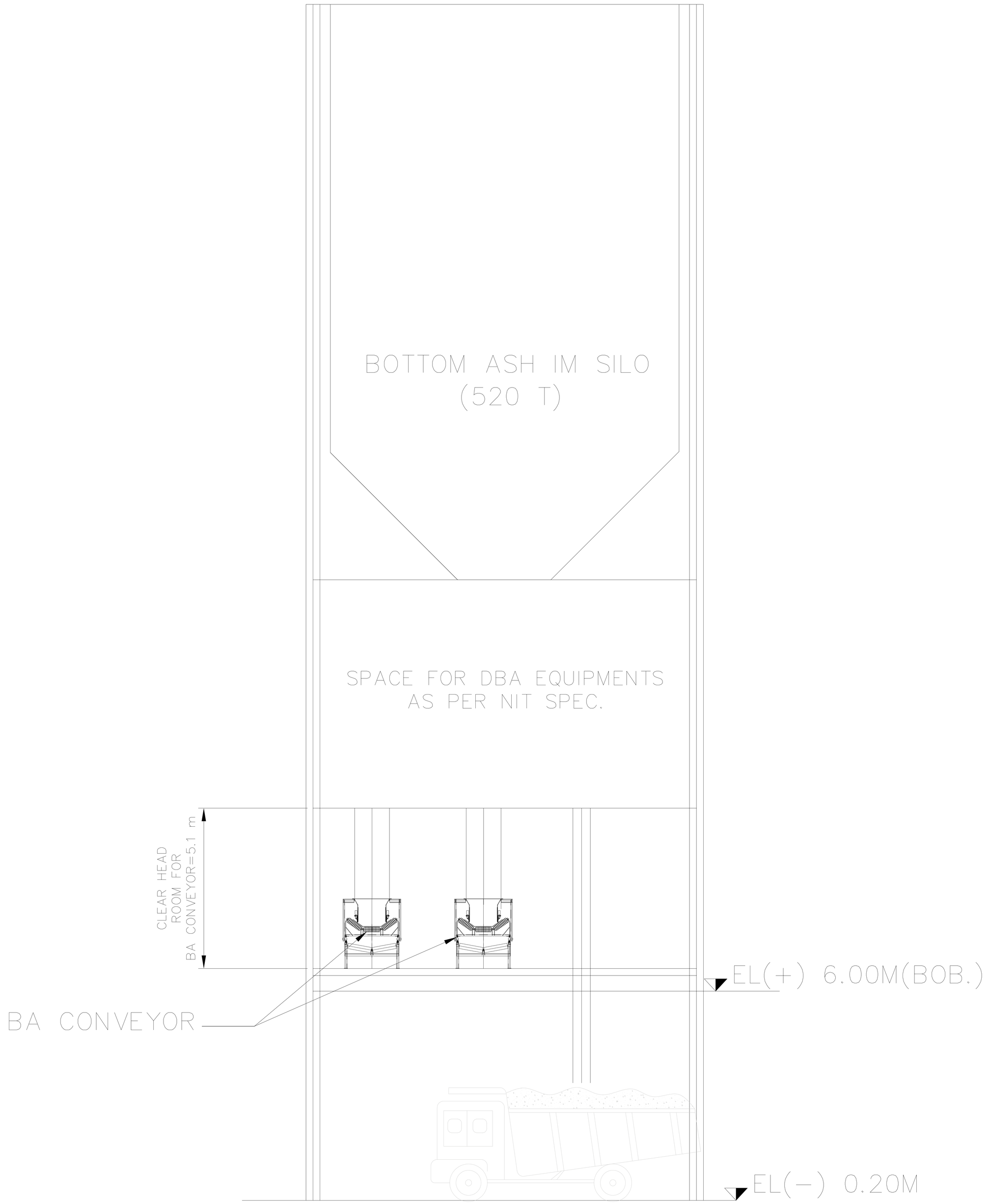
SHEET 2 OF 2 | REV-3

BOTTOM ASH INTERMEDIATE SILO



NOTE:

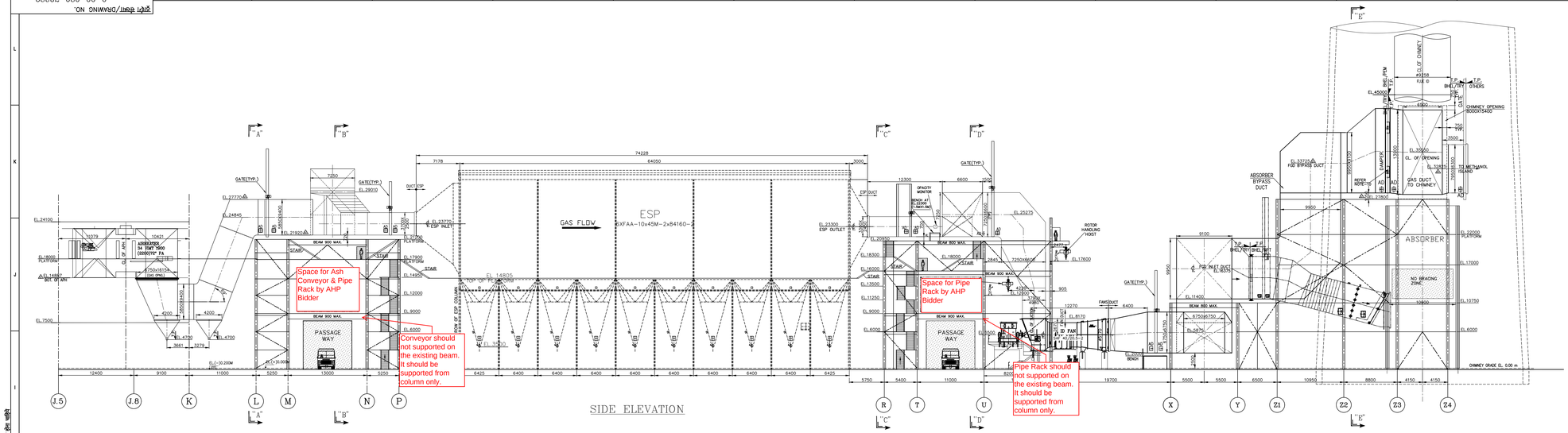
1. THIS SKETCH IS ONLY TO INDICATE MINIMUM ELEVATION REQUIRED FOR BELT CONVEYOR FLOOR.
2. DIAMETER OF THE SILO AND OTHER DIMENSIONS ARE TO BE DECIDED BY BIDDER SUITING LAYOUT.
3. ACTUAL DIMENSION SHALL BE FINALIZED DURING DETAIL ENGINEERING AS PER THE SIZING CALCULATION SUBMITTED BY BIDDER.

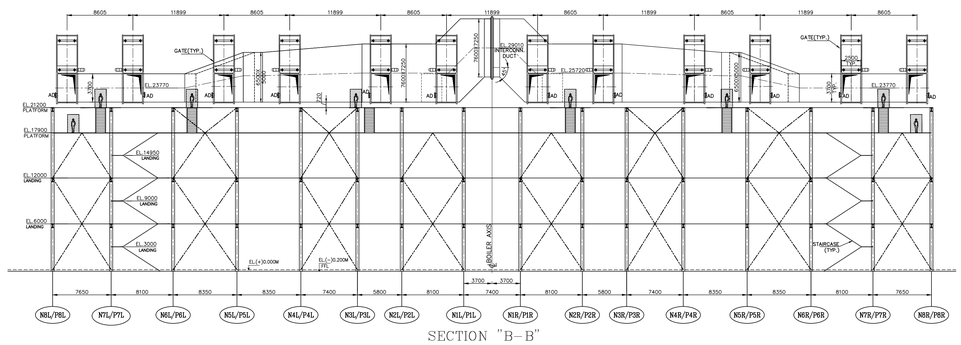
2X800 MW Koderma
Dry Bottom Ash Handling System-
EPC Package (Package-I)

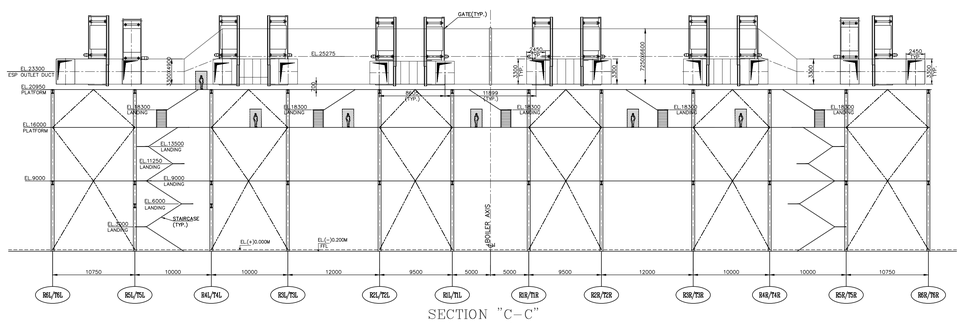
ELECTRONIC FILE NAME : Kodarma_BD_System_Elevation_01.dwg

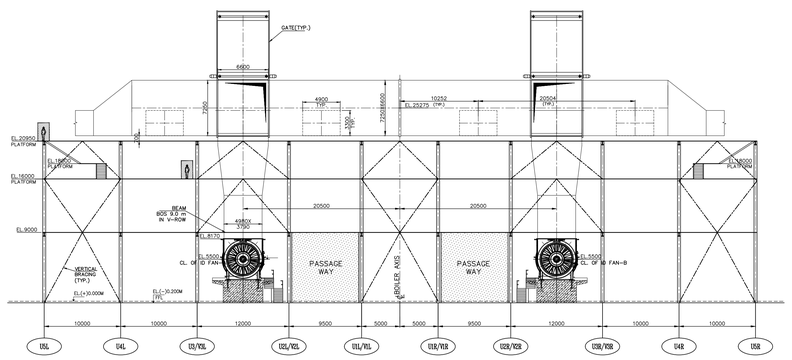
फर्स्ट एंगल प्रोजेक्शन/FIRST ANGLE PROJECTION | सभी माप मि॰ मी॰ में है/ALL DIMENSIONS ARE IN MM

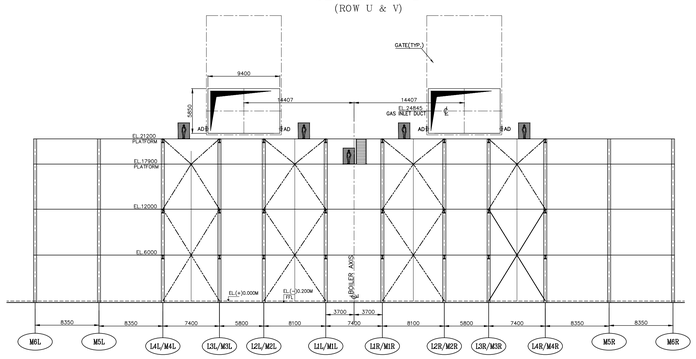
ड्राॅइंग संख्या/DRAWING NO. 0-00-020-78329

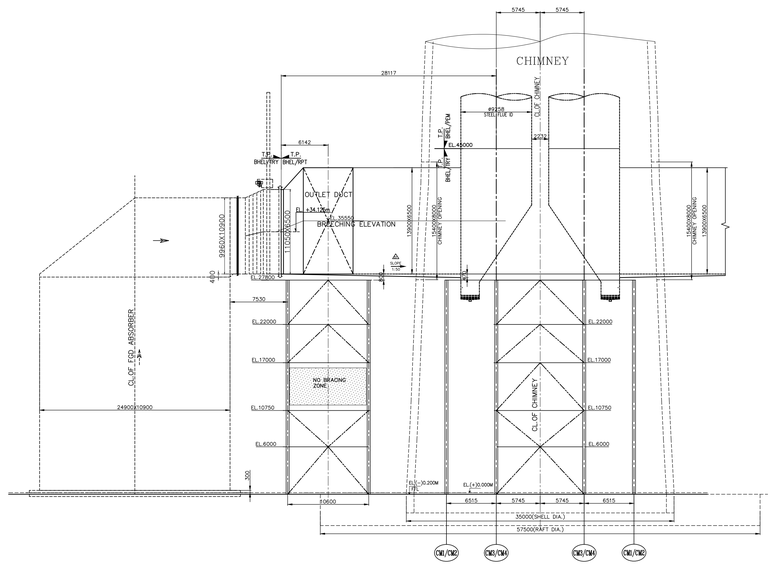












NOTES:

1. ALL ELEVATIONS ARE WITH RESPECT TO EL. (+)0.00m, FINISHED GROUND FLOOR LEVEL OF TG BUILDING AND MILL BAY, WHICH CORRESPONDS TO RL(+)373.50M.
   FINISHED GROUND FLOOR LEVEL (PAVING LEVEL) OF BOILER AND ESP AREAS ARE AT (-)0.200m, WHICH CORRESPONDS TO RL-(+)373.30M.
   FINISHED GROUND FLOOR LEVEL (PAVING LEVEL) OF MILL BAY AND CHIMNEY AREA(INSIDE) ARE AT (+)0.00m,WHICH CORRESPONDS TO RL(+)373.50M.
2. AD – ACCESS DOOR SIZE– 450x450 mm.
3. ALL THE DUCT SIZES ARE TO INSIDE ONLY UNLESS SPECIFIED.
4. ALL INNER CORNERS OF DUCT TURNING ARE 600 MM RADIUS UNLESS NOTED.
5. THE ACCESS DOORS ARE LOCATED 600 MM FROM EDGE OF DAMPER, DUCT & EXP. JOINT AS SHOWN. SUITABLY ERECTED ACCORDING TO FLOOR PLAN
6. ALL PLATFORM ELEVATIONS ARE TO TOP OF GRATING, UNLESS NOTED.
7. CENTERLINE OF ALL DUCT ACCESS DOORS TO BE LOCATED 600mm ABOVE BOTTOM INSDE OF DUCT PLATES UNLESS NOTED.
8. ALL GATES SHOWN ARE PROVIDED WITH FLOOR AT BOTTOM OF DUCT. THE APPROACH , FOR ACTUATORS & ALLIED ITEMS WILL BE PROVIDED BY INTEGRAL LADDERS & GRILL AS PART OF GATES.
9. ALL SIZES AND DIMENSIONS SHOWN ARE IN MILLIMETERS.
10. 600 MM UPSTREAM AND DOWNSTREAM NO DUCT INTERNALS TO CLEAR BLADE MOVEMENT.REFER DAMPER DRGS
11. FOR ALL INFORMATION & DIMENSIONS, SEE REFERENCE DRAWINGS.

LEGEND:

LOS	– LUBE OIL SYSTEM
VL	– VERTICAL LADDER
TYP.	– TYPICAL
ESP	– ELECTROSTATIC PRECIPITATOR
T.P.	– TERMINAL POINT
AD	– ACCESS DOOR

REFERENCE DRGS:

1. REFER GA DRG. NO. DVC DRAWING NO.3112-102-PVM-B-018/BHEL DRAWING NO.0-00-022-78322 FOR BOILER PARAMETERS, LEGEND, NOTES, REFERENCE DRGS. & UNIT DESCRIPTION.

DESCRIPTION	BHEL DRAWING NO.	DVC DRAWING NO.
GA OF BOILER SECTIONAL SIDE ELEVATION – SECTION "E–E"	0-00-022-78322	3112-102-PVM-B-018
GENERAL ARRGT. OF BOILER SECTIONAL PLAN–SECTION "B–B"	0-00-022-78324	3112-102-PVM-B-020
LAYOUT OF ID SYSTEM – PLAN	0-00-020-78330	3112-102-PVM-B-026
LAYOUT OF FLUE GAS DUCTING – GAS DUCT FROM AIRHEATER	0-00-020-78341	3112-102-PVM-F-033
MAIN EQUIPMENT PLAN	PE-DG-519-100-M002	3112-110-PVM-F-006
GA OF ESPs INCLUDING PLATFORM & STAIRCASE	0-00-111-89147	3112-107-PVM-B-001
GA DRAWING FOR ID FAN WITH FOUNDATION PLAN AND LOADING DETAILS	1-00-099-29519	3112-102-PVM-B-139
DATA SHEET & GA FOR ABSORBER ALONG WITH STAIRS & PLATFORMS	0-FW-000-13543	3112-122-PVM-Y-003
GENERAL LAYOUT OF FGD DUCTING	0-FW-000-13542	3112-122-PVM-F-009
GA OF CHIMNEY	PE-DG-519-620-C001	3112-101-PVC-B-094

CUSTOMER No.:1848 & 1849

ग्राहक ड्राॅइंग संख्या CUSTOMER DRAWING NO.	3112-102-PVM-B-025
परियोजना PROJECT	2X800 मेगावाट डीवीसी कोडरमा ता. वि. के. चरण-II 2X800 MW DVC KODERMA TPS PHASE-II
ग्राहक/CUSTOMER	दामोदर घाटी निगम DAMODAR VALLEY CORPORATION
	भारत हेवी इलेक्ट्रिकल्स लिमिटेड BHARAT HEAVY ELECTRICALS LTD BOILER PLANT UNIT; TIRUCHIRAPALLI – INDIA–620014
DEPT CODE	—
शीर्षक/TITLE	LAYOUT OF ID SYSTEM – ELEVATION

	नाम NAME	हस्ताक्षर SIGNATURE	दिनांक DATE
तैयारकर्ता/DRN	R.SASIKUMAR	RSK	28.03.2025
डिजाइनकर्ता/DESN	R.SASIKUMAR	RSK	28.03.2025
जाँचकर्ता/CHD	M.HARIDASAN	MHD	29.03.2025
मंजूरीकर्ता/APPD	A.BERTRELLINA	AMI	30.03.2025

कार्य संख्या- JOB NO.	519
स्थिति STATUS	CONTRACT
मुद्रण स्केल मीटर में PRINT SCALE IN METRE	0 1 2 3 4 5 6 8 10 20 30 40 50

संशोधन REV.	दिनांक DATE	परीक्षीकर्ता ALTD	जाँचकर्ता CHD	मंजूरीकर्ता APPD
01	25.06.2025	RSK	RSK	MHD

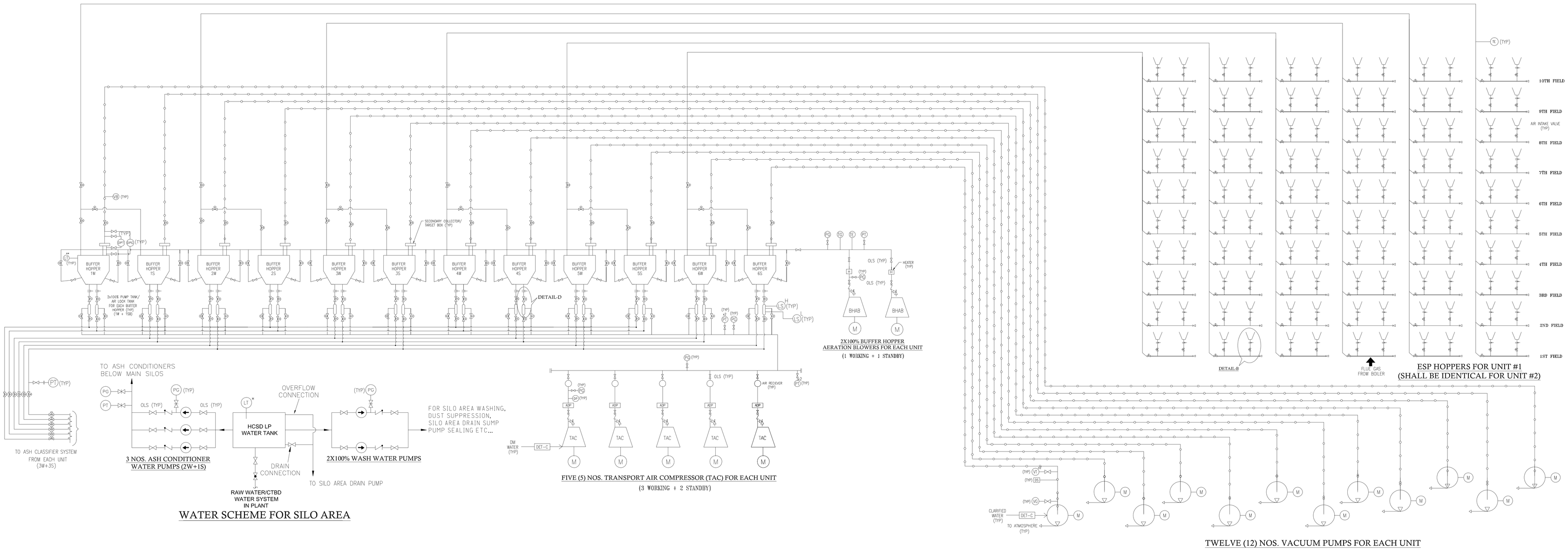
• CUSTOMER COMMENTS UPDATED.
• DUCTING TO METHANOL ISLAND T.P. UPDATED.
• FGD OUTLET DUCT SLOPE IS SHOWN IN E-E VIEW.

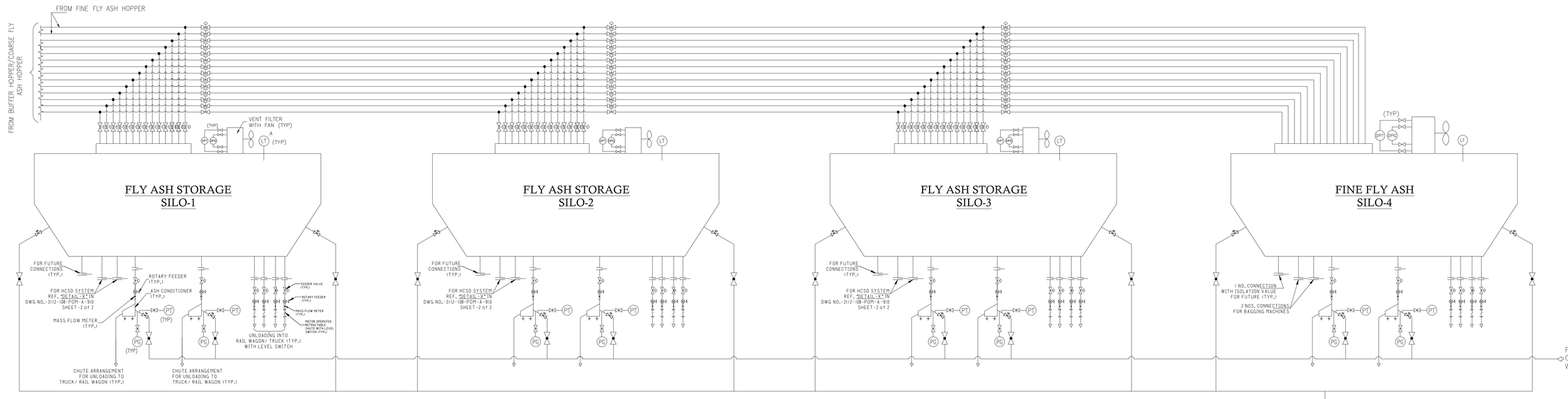
प्रयोगित MPL	सिविल CIVIL	इलेक्ट्रिकल ELEC	सीएंडआई C&I	प्रायोजकर्ता MSE	टैंक MAX	डिज़ाइन DEPT.	स्केल – SCALE– 1:275
						हस्ताक्षर SIGN	
						दिनांक DATE	

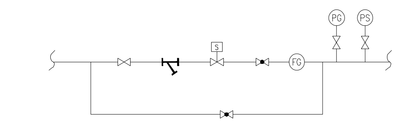
ड्राॅइंग संख्या / DRAWING NO.
0-00-020-78329

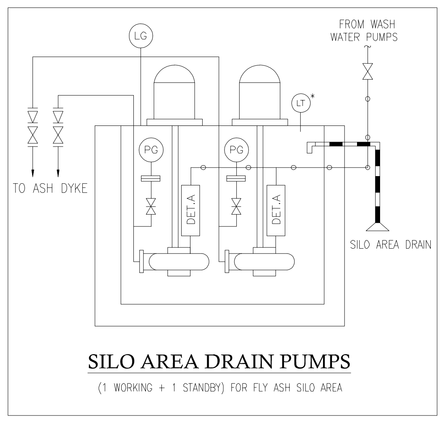
शीट SHEET 1 OF 1 पुनरीक्षण Rev. 01

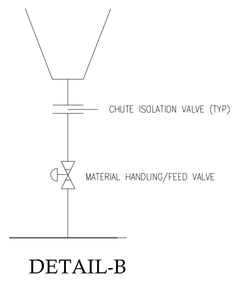
फॉर्मेट साइज़ A0
FORMAT SIZE A0

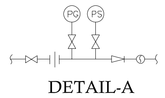


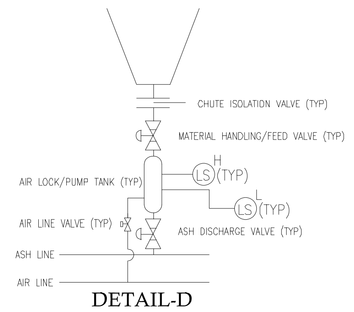






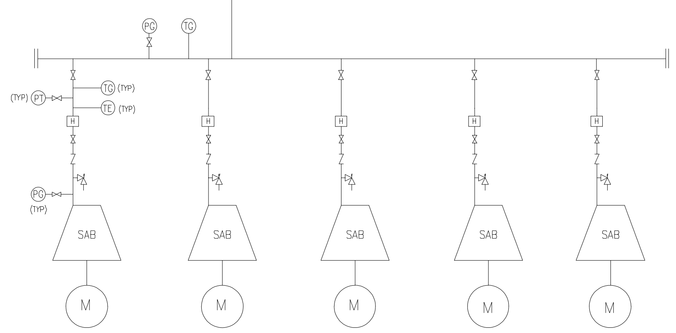






LEGEND:

VB	VACUUM BREAKER	DPT	DIFF PRESSURE TRANSMITTER
	SOLENOID VALVE	DPS	DIFF PRESSURE SWITCH
	GLOBE VALVE	DPG	DIFF PRESSURE GAUGE
	BALL VALVE	LT*	LEVEL TRANSMITTER (ULTRASONIC TYPE)
	GATE VALVE	LT**	LEVEL TRANSMITTER (RADAR TYPE)
	NON RETURN VALVE	LS	LEVEL SWITCH
	Y-STRAINER	LG	LEVEL GAUGE
	PRESSURE RELEASE VALVE	LI	LEVEL INDICATOR
	CHECK VALVE	TE	TEMP ELEMENT
	PNEUMATIC VALVE	TG	TEMP GAUGE
	ISOLATION VALVE	VT	VACUUM TRANSMITTER
H	HEATER	VG	VACUUM GAUGE
OLS	OPEN LIMIT SWITCH	DP	DEW POINT METER
DS	DUST SENSOR	LT-A	LEVEL TRANSMITTER-ACOUSTIC FREQUENCY BASED
	FLOW INDICATOR		
PT	PRESSURE TRANSMITTER		
PS	PRESSURE SWITCH		
PG	PRESSURE GAUGE		



NOTES:

1. FLY ASH CONVEYING SYSTEM FOR FLY ASH HOPPERS SHOWN IS INDICATIVE. COMPLETE ASH HANDLING SYSTEM SHALL BE DESIGNED & SUPPLIED MEETING FUNCTIONAL REQUIREMENTS FOR THE UNIT. BIDDER TO PROVIDE FOR SEGREGATION OF COARSE AND FINE ASH FROM ESP HOPPERS. THE NUMBER OF ESP HOPPERS SHALL BE DECIDED BY BIDDER.
2. MATERIAL OF SEAL USED IN MATERIAL HANDLING VALVE SHALL BE SUITABLE FOR CONTINUOUS OPERATING TEMPERATURE AND ALSO SUITABLE FOR OCCASIONAL EXPOSURE TO MAXIMUM TEMPERATURE. BIDDER SHALL ALSO PROVIDE SUITABLE ARRANGEMENT TO TAKE CARE OF HOT AIR COMING OUT OF BUFFER HOPPER. BAGS FILTERS SHALL BE SELECTED SUITABLE FOR TEMPERATURE SUITABLE UPTO 50°C MORE THAN THE PREDICTED TEMPERATURE AT BUFFER HOPPERS/MAIN STORAGE..
3. VACUUM PUMP, BUFFER HOPPER AERATION BLOWERS, TRANSPORT AIR COMPRESSORS SHOWN ARE TYPICAL.
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECH. SPEC. AND OTHER TENDER DOCUMENTS.
5. INSTRUMENTS SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL REQUIREMENTS AS SPECIFIED.
6. INSTRUMENT AIR PIPING IS NOT SHOWN IN THE DRG. IT SHALL BE ROUTED TO DIFFERENT VALVES, BAG FILTERS ETC. IN FLY ASH HANDLING SYSTEM AS PER SYSTEM DESIGN AND REQUIREMENTS.
7. SUITABLE DUST SUPPRESSION FACILITIES SHALL BE PROVIDED IN SILO AREA.
8. EACH TRANSPORT AIR COMPRESSOR SHALL BE PROVIDED WITH INDEPENDENT AIR DRYING PLANT (REFRIGERANT TYPE) AND AIR RECEIVER AS PER TECH. SPECIFICATION.

9a). EACH SILO AERATION BLOWER & BUFFER HOPPER AERATION BLOWER SHALL BE PROVIDED WITH INDEPENDENT AIR HEATERS AND ACCESSORIES AS PER TECH. SPEC.
b) HOT AIR LINE FROM DISCHARGE OF HEATER (HEATER IF APPLICABLE) OF BUFFER HOPPER AERATION BLOWER UP TO BUFFER HOPPER AND FROM HEATER OF SILO AERATION BLOWER UP TO SILOS SHALL BE INSULATED.

10. NECESSARY HEAD ROOM (6.8M. MIN.) TO BE PROVIDED BELOW SILOS FOR TRUCK/RAIL WAGON MOVEMENT. THE SILO UNLOADING FACILITY SHALL BE SUITABLE FOR OPEN TRUCK/CLOSED TANKER/SIMULTANEOUS RAIL WAGON LOADING. HOWEVER, BIDDER SHALL ENSURE THAT THE CLEARANCE OF ASH SILOS OVER THE RAILWAY TRACKS SHALL BE AS PER RAILWAYS/RDSO GUIDELINES. THE SCOPE ALSO INCLUDES GETTING APPROVALS FROM RAILWAYS.
11. BOTH SILO AERATION AND BUFFER HOPPER AERATION BLOWERS SHALL BE AIR COOLED.
12. ALL DEVICES REQUIRING INSTRUMENT AIR SHALL BE PROVIDED WITH MANUAL ISOLATION VALVE IN IA LINE. THIS IS APPLICABLE FOR ENTIRE ASH HANDLING SYSTEM.
13. LIMIT SWITCHES ARE TO BE PROVIDED FOR MANUAL VALVES AS PER SYSTEM REQUIREMENTS & CONTROL PHILOSOPHY.
14. FOR ALL INSTRUMENTS AND DRIVES, SUPPLIER TO ASSIGN UNIQUE TAG NUMBERS FOR IDENTIFICATION. THIS TAG NUMBER SHALL BE INDICATED ON ALL DOCUMENTS/DRAWINGS/DATA SHEETS APPLICABLE FOR THE RESPECTIVE INSTRUMENT/DRIVE.
15. PRESSURE MEASUREMENT (TRANSMITTER) TO BE PROVIDED FOR INSTRUMENT AIR HEADER. PRESSURE MEASUREMENT AT BUFFER HOPPER TOWERS AREA OF EACH UNIT & IN SILO AREA.
16. ONE NO. PT AND ONE NO. PG SHALL BE PROVIDED IN PULSE JETTING INSTRUMENT AIR HEADER/MANIFOLD OF EACH BUFFER HOPPER AND SILO VENT FILTER.
18. TWO (2) NOS. (ONE AT ENTRY & ONE AT EXIT) PITLESS TYPE WEIGH BRIDGE SHALL BE PROVIDED AT MAIN FLY ASH SILO AREA COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS FOR WEIGHMENT OF TRUCKS/BULKER FILLED FROM SILOS. ONE (1) NO. PITLESS TYPE WEIGH BRIDGE FOR RAIL LOADING BELOW EACH MAIN FLY ASH SILO AND IN BETWEEN TWO FLY ASH SILOS COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS. FOR WEIGHMENT FROM SILOS. MASS FLOW METER /SOLID FLOW METER FOR ONLINE WEIGHMENT OF TOTAL LOADED ASH OF WAGON/TRUCK, DURING LOADING SHALL BE PROVIDED FOR EACH MAIN FLY ASH SILO, AS SPECIFIED.
19. ONE NO PT AND PG SHALL BE PROVIDED IN EACH UNIT SERVICE WATER HEADER USED FOR VACUUM PUMP SEALING/COOLING.
20. ALL ACCESSORIES, ITEMS OF WORK, THOUGH NOT INDICATED BUT REQUIRED TO MAKE THE SYSTEM COMPLETE FOR IT'S SAFE, EFFECIENT, RELIABLE AND TROUBLE FREE OPERATION AND MAINTENANCE SHALL ALSO BE INCLUDED IN BIDDER'S SCOPE UNLESS SPECIFICALLY EXCLUDED.
21. IN CASE OF DISCREPANCY IN QUANTITY, NUMBER OF LINES & EQUIPMENTS, BIDDER TO FOLLOW THIS FLOW DIAGRAM.

FOR TENDER PURPOSE ONLY

REV.	DESCRIPTION	DRAWN	DESIGN	CHKD.	C	M	E	C&I	APPD	DATE
1	RELEASED FOR TENDER	NAVEEN	RM							

CLEARED BY

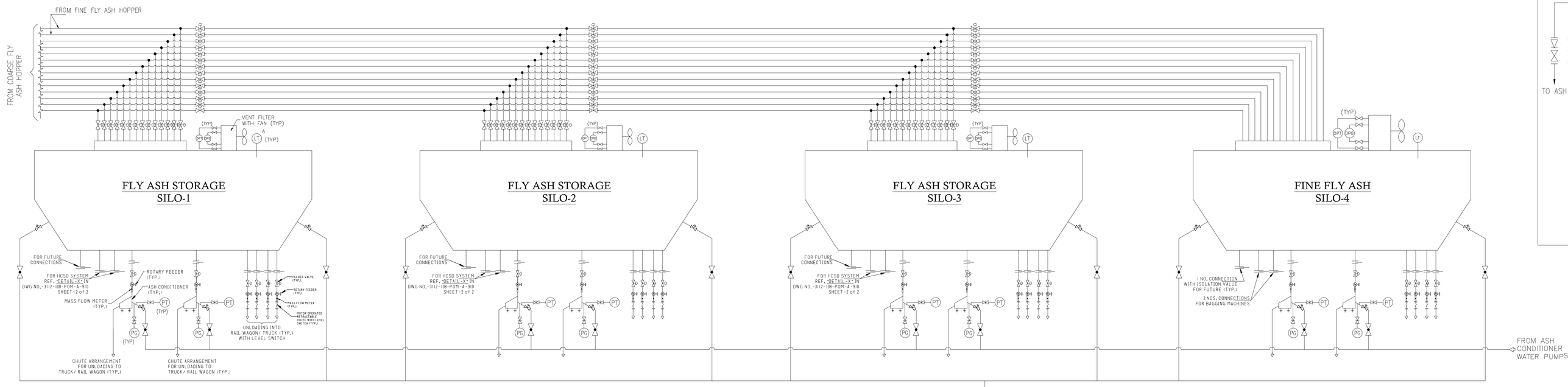
DAMODAR VALLEY CORPORATION
(Under the Ministry of Power, Govt. of India)

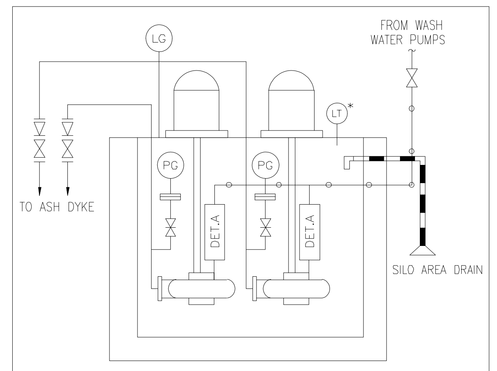
PROJECT: KODERMA SUPER THERMAL POWER PROJECT
STAGE-II (2×800MW)

TITLE: EPC PACKAGE
SINGLE LINE FLOW DIAGRAM FOR FLY ASH HANDLING SYSTEM (VACUUM SYSTEM)

SIZE	SCALE	DRG.NO.	REV.
A0	--	XXXX-001(R)-POM-A-027	2

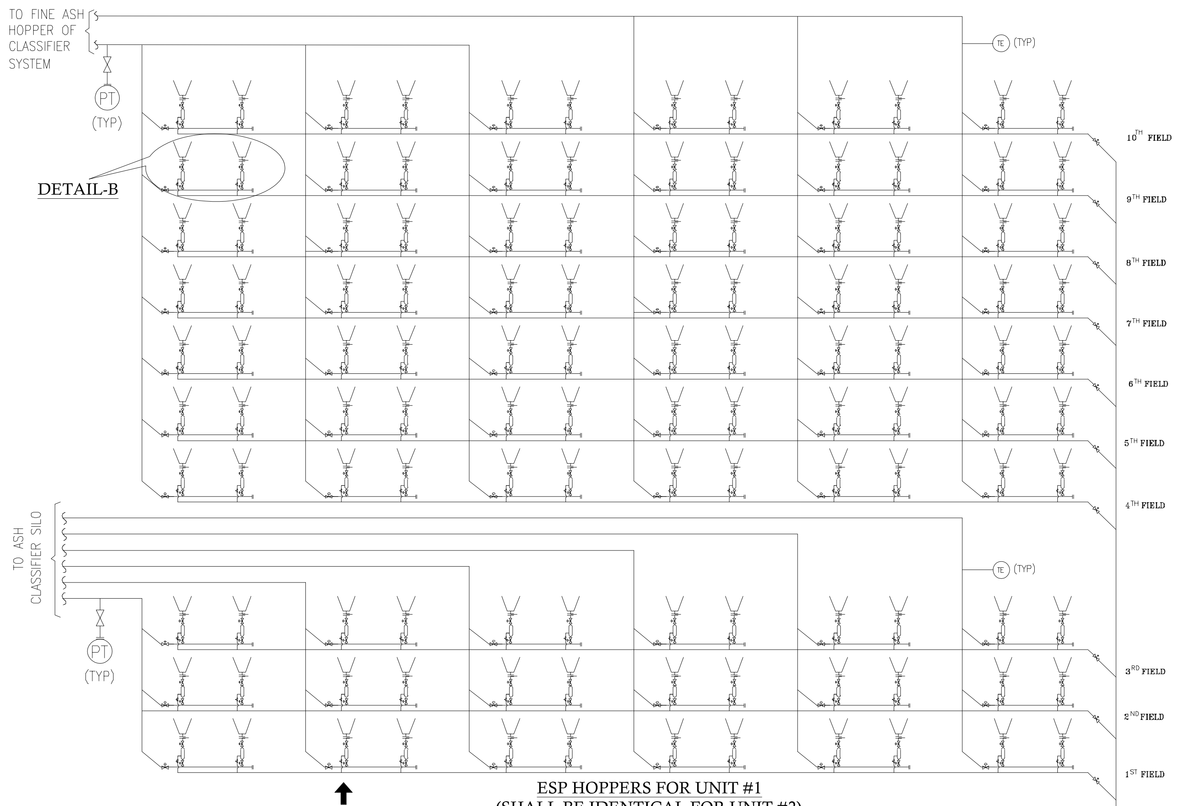
cad file name : XXXX-001(R)-POM-A-027.dwg



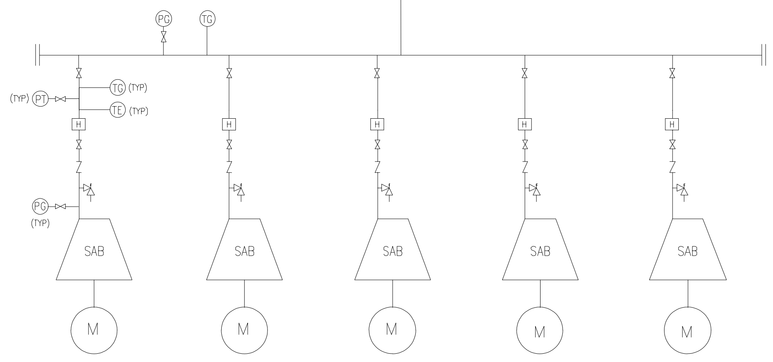


SILO AREA DRAIN PUMPS

(1 WORKING + 1 STANDBY) FOR FLY ASH SILO AREA

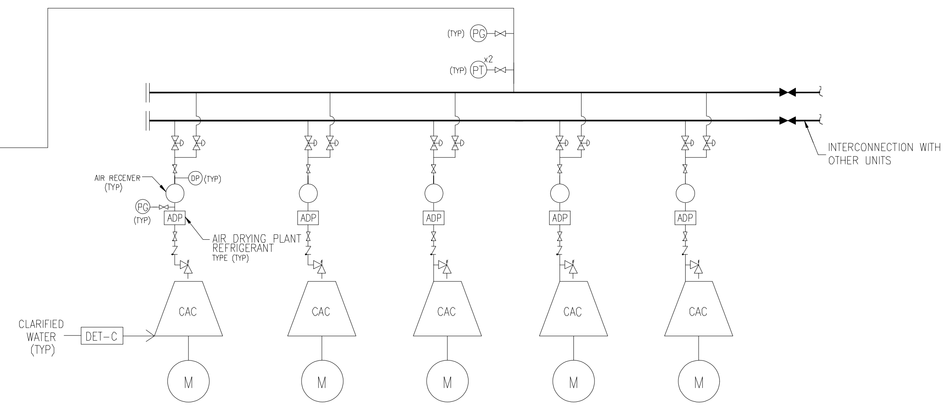


ESP HOPPERS FOR UNIT #1
(SHALL BE IDENTICAL FOR UNIT #2)

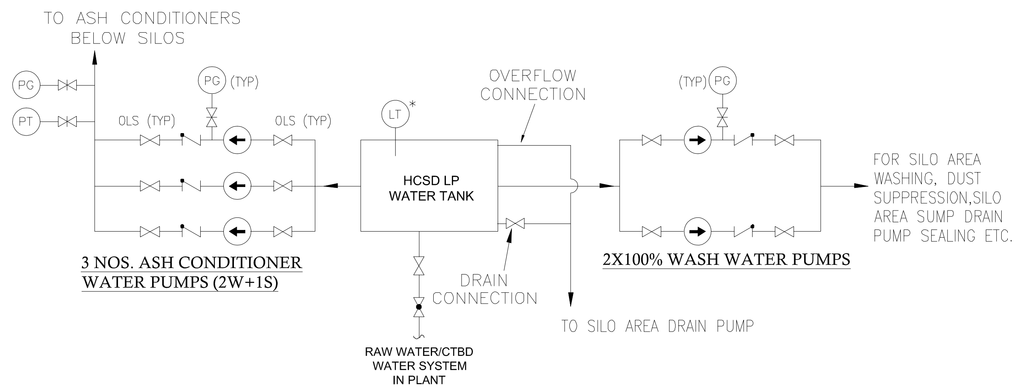


FLY ASH SILO-AERATION BLOWERS
(4 WORKING + 1 COMMON STANDBY)

TYPICAL INSTRUMENT AIR CONNECTION



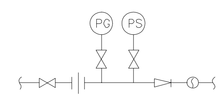
FIVE (5) CONVEYING AIR COMPRESSOR (CAC) FOR EACH UNIT
(3 WORKING +2 STANDBY)



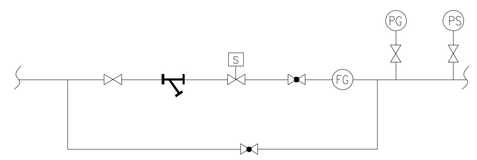
3 NOS. ASH CONDITIONER WATER PUMPS (2W+1S)

2X100% WASH WATER PUMPS

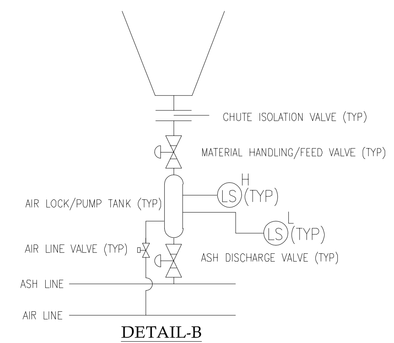
WATER SCHEME FOR SILO AREA



DETAIL-A



DETAIL-C



DETAIL-B

LEGEND:

VB	VACUUM BREAKER
SV	SOLENOID VALVE
GLV	GLOBE VALVE
BV	BALL VALVE
GV	GATE VALVE
NRV	NON RETURN VALVE
Y	Y-STRAINER
PRV	PRESSURE RELEASE VALVE
CV	CHECK VALVE
PV	PNEUMATIC VALVE
IV	ISOLATION VALVE
IV (CYL. OP.)	ISOLATION VALVE (CYL. OP.)
H	HEATER
OLS	OPEN LIMIT SWITCH
DS	DUST SENSOR
FI	FLOW INDICATOR
PT	PRESSURE TRANSMITTER
PS	PRESSURE SWITCH
PG	PRESSURE GAUGE
SFT	SLURRY FLOW TRANSMITTER
NDM	NUCLEONIC DENSITY METER
DM	DENSITY METER (CORIOLIS TYPE)
M	MOTOR
VFD	VARIABLE FREQUENCY DRIVE
DPT	DIFF PRESSURE TRANSMITTER
DPS	DIFF PRESSURE SWITCH
DPG	DIFF PRESSURE GAUGE
LT*	LEVEL TRANSMITTER (ULTRASONIC TYPE)
LT**	LEVEL TRANSMITTER (RADAR TYPE)
LS	LEVEL SWITCH
LG	LEVEL GAUGE
LI	LEVEL INDICATOR
TE	TEMP ELEMENT
TG	TEMP GAUGE
VT	VACUUM TRANSMITTER
VG	VACUUM GAUGE
DP	DEW POINT METER
LT	LEVEL TRANSMITTER-ACOUSTIC FREQUENCY BASED
FT	FLOW TRANSMITTER

NOTES

1. FLY ASH CONVEYING SYSTEM FOR FLY ASH HOPPERS SHOWN IS INDICATIVE AND IS FOR ONE UNIT ONLY AND THE SAME SHALL BE IDENTICAL FOR OTHER UNIT. BIDDER TO PROVIDE SEGREGATION OF COARSE AND FINE ASH FROM ESP HOPPERS. THE NUMBER OF ESP HOPPERS SHALL BE DECIDED BY BIDDER.
2. MATERIAL OF SEAL USED IN MATERIAL HANDLING VALVE SHALL BE SUITABLE FOR CONTINUOUS OPERATING TEMPERATURE AND ALSO SUITABLE FOR OCCASIONAL EXPOSURE TO MAXIMUM TEMPERATURE. BIDDER SHALL ALSO PROVIDE SUITABLE ARRANGEMENT TO TAKE CARE OF HOT AIR COMING OUT OF BUFFER HOPPER. BAGS FILTERS SHALL BE SELECTED SUITABLE FOR TEMPERATURE UPTO 50°C MORE THAN THE PREDICTED TEMPERATURE AT BUFFER HOPPERS/MAIN FLY ASH STORAGE SILOS.
3. CONVEYING AIR COMPRESSORS SHOWN ARE TYPICAL FOR EACH UNIT. TRANSPORT AIR COMPRESSORS SHOWN ARE FOR BOTH UNITS.
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH TECH. SPEC. AND OTHER TENDER DOCUMENTS.
5. INSTRUMENTS SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL REQUIREMENTS AS SPECIFIED.
6. INSTRUMENT AIR PIPING IS NOT SHOWN IN THE DRG. IT SHALL BE ROUTED TO DIFFERENT VALVES, BAG FILTERS ETC. IN FLY ASH HANDLING SYSTEM AS PER SYSTEM DESIGN AND REQUIREMENTS.
7. SUITABLE DUST SUPPRESSION FACILITIES SHALL BE PROVIDED IN SILO AREA.
8. EACH TRANSPORT AIR COMPRESSOR AND CONVEYING AIR COMPRESSOR SHALL BE PROVIDED WITH INDEPENDENT AIR DRYING PLANT (REFRIGERANT TYPE, IF APPLICABLE) AND AIR RECEIVER AS PER TECH. SPECIFICATION.

9a). EACH SILO AERATION BLOWER & BUFFER HOPPER AERATION BLOWER SHALL BE PROVIDED WITH INDEPENDENT AIR HEATERS AND ACCESSORIES AS PER TECH. SPEC.

b) HOT AIR LINE FROM DISCHARGE OF HEATER (HEATER IF APPLICABLE) OF SILO AERATION BLOWER UP TO SILOS SHALL BE INSULATED.

10. NECESSARY HEAD ROOM (6.8M. MIN.) TO BE PROVIDED BELOW SILOS FOR TRUCK/RAIL WAGON MOVEMENT. THE SILO UNLOADING FACILITY SHALL BE SUITABLE FOR OPEN TRUCK/CLOSED TANKER/SIMULTANEOUS RAIL WAGON LOADING. HOWEVER, BIDDER SHALL ENSURE THAT THE CLEARANCE OF ASH SILOS OVER THE RAILWAY TRACKS SHALL BE AS PER RAILWAYS/RDSO GUIDELINES. THE SCOPE ALSO INCLUDES GETTING APPROVALS FROM RAILWAYS.
11. BOTH SILO AERATION AND BUFFER HOPPER AERATION BLOWERS SHALL BE AIR COOLED.
12. ALL DEVICES REQUIRING INSTRUMENT AIR SHALL BE PROVIDED WITH MANUAL ISOLATION VALVE IN IA LINE. THIS IS APPLICABLE FOR ENTIRE ASH HANDLING SYSTEM.
13. LIMIT SWITCHES ARE TO BE PROVIDED FOR MANUAL VALVES AS PER SYSTEM REQUIREMENTS & CONTROL PHILOSOPHY.
14. FOR ALL INSTRUMENTS AND DRIVES, SUPPLIER TO ASSIGN UNIQUE TAG NUMBERS FOR IDENTIFICATION. THIS TAG NUMBER SHALL BE INDICATED ON ALL DOCUMENTS/DRAWINGS/DATA SHEETS APPLICABLE FOR THE RESPECTIVE INSTRUMENT/DRIVE.
15. PRESSURE MEASUREMENT (TRANSMITTER) TO BE PROVIDED FOR INSTRUMENT AIR HEADER PRESSURE MEASUREMENT IN SILO AREA.
16. ONE NO. PT AND ONE NO. PG SHALL BE PROVIDED IN PULSE JETTING INSTRUMENT AIR HEADER/MANIFOLD OF SILO VENT FILTER.
17. BIDDER TO FURNISH ALL INSTRUMENTS/CONTROLS AS PER SYSTEM REQUIREMENT. INSTRUMENT AND CONTROLS FOR AUTOMATIC OPERATION OF PUMPS & EQUIPMENTS ARE NOT SHOWN FOR CLARITY IN THIS DRG. THE SAME SHALL BE PROVIDED AS PER SYSTEM REQUIREMENT AND AS SPECIFIED IN TECH. SPECIFICATION.
18. TWO (2) NOS. (ONE AT ENTRY & ONE AT EXIT) PITLESS TYPE WEIGH BRIDGE SHALL BE PROVIDED AT MAIN FLY ASH SILO AREA COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS FOR WEIGHMENT OF TRUCKS/TANKER FILLED FROM SILOS. ONE (1) NO. WEIGH BRIDGE FOR RAIL LOADING BELOW EACH MAIN FLY ASH SILO & IN BETWEEN TWO SILOS COMPLETE WITH ALL ELECTRICAL, CONTROLS, CIVIL AND STRUCTURAL WORKS. FOR WEIGHMENT FROM SILOS. MASS FLOW METER /SOLID FLOW METER FOR ONLINE WEIGHMENT OF TOTAL LOADED ASH OF WAGON/TRUCK, DURING LOADING SHALL BE PROVIDED FOR EACH MAIN FLY ASH SILO, AS SPECIFIED.
19. ALL ACCESSORIES, ITEMS OF WORK, THOUGH NOT INDICATED BUT REQUIRED TO MAKE THE SYSTEM COMPLETE FOR ITS SAFE, EFFICIENT, RELIABLE AND TROUBLE FREE OPERATION AND MAINTENANCE SHALL ALSO BE INCLUDED BIDDER'S SCOPE UNLESS SPECIFICALLY EXCLUDED.
20. IN CASE OF ANY DISCREPANCY IN QUANTITY, NUMBER OF THE LINES & EQUIPMENTS, BIDDER TO FOLLOW THIS FLOW DIAGRAM.

FOR TENDER PURPOSE ONLY

REV.	DESCRIPTION	DRAWN	DESIGN	CHKD.	C	M	E	C&I	APPD	DATE
1	RELEASED FOR TENDER	NAVEEN	RM							

CLEARED BY

DAMODAR VALLEY CORPORATION
(Under the Ministry of Power, Govt. of India)

PROJECT: KODERMA SUPER THERMAL POWER PROJECT
STAGE-II (2x800MW)

TITLE: EPC PACKAGE
SINGLE LINE FLOW DIAGRAM FOR FLY ASH HANDLING SYSTEM (PRESSURE SYSTEM)

SIZE	SCALE	DRG.NO.	REV.
A0	--	XXXX-001-POM-A-028	2

cad file name : XXXX-001-POM-A-028.dwg

COARSE ASH FROM ESP HOPPERS

VENT FILTER WITH FAN (TYP)

(TYP)

DPT DPC

A

LT (TYP)

CLASSIFIER SILO

FROM AERATION BLOWER

TO 2ND CLASSIFIER

BY PASS LINE

FINE ASH FROM ESP HOPPERS

CENTRIFUGAL FAN

VENT FILTER

CYCLONE

CLASSIFIER (TYP)

FINE FLY ASH HOPPER

COARSE FLY ASH HOPPER

COARSE FLY ASH HOPPER

FOR FUTURE CONNECTIONS

TO FINE FLY ASH SILOS (1W+1S) LINES

TO FLY ASH STORAGE SILOS (3W+3S)

TO FLY ASH STORAGE SILOS (3W+3S)

PG TG TC TE PT OLS (TYP)

H

SAB

M

AERATION BLOWERS
(4 WORKING + 1 STANDBY)

AIR RECIEVER (TYP)

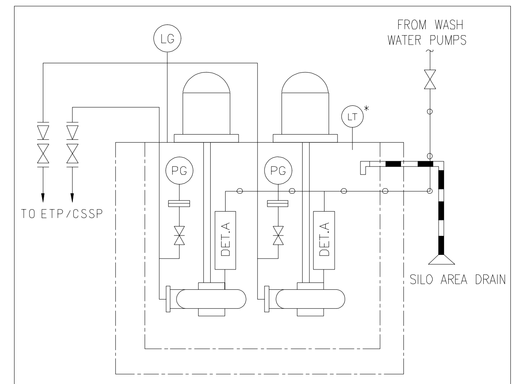
ADP

TAC

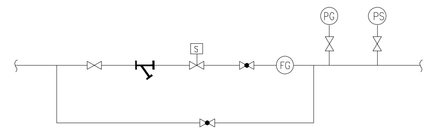
DMCW WATER (TYP)

DET-C

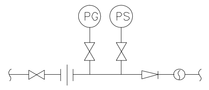
TRANSPORT AIR COMPRESSOR (TAC)
(7 WORKING + 4 STANDBY)



DRAIN PUMPS
(1 WORKING + 1 STANDBY)



DETAIL-C



DETAIL-A

NOTES

1. ASH CLASSIFIER SYSTEM SHOWN IS INDICATIVE ONLY. ASH CLASSIFIER SYSTEM SHALL BE DESIGNED & SUPPLIED MEETING FUNCTIONAL REQUIREMENTS FOR BOTH UNITS.
2. THE SCHEME & NO. OF EQUIPMENT SHALL BE FINALIZED IN CONJUNCTION WITH TECHNICAL SPECIFICATION & AS PER THE SYSTEM REQUIREMENTS.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH TECH.SPECS. AND OTHER TENDER DOCUMENTS. BIDDER MAY OPTIMIZE THE LAYOUT MEETING THE FUNCTIONAL AND TECHNICAL REQUIREMENTS.
4. INSTRUMENTS SHOWN ARE INDICATIVE ONLY. COMPLETE INSTRUMENTATION SHALL BE PROVIDED AS PER SYSTEM & FUNCTIONAL REQUIREMENTS SPECIFIED.
5. LIMIT SWITCHES ARE TO BE PROVIDED FOR MANUAL VALVES AS PER SYSTEM REQUIREMENTS & CONTROL PHILOSOPHY.
6. FOR ALL INSTRUMENTS AND DRIVES, SUPPLIER TO ASSIGN UNIQUE TAG NUMBERS FOR IDENTIFICATION. THIS TAG NUMBERS SHALL BE INDICATED ON DOCUMENTS/DRAWINGS/DATA SHEETS APPLICABLE FOR THE RESPECTIVE INSTRUMENT/DRIVE.
7. THIS OPTION IS APPLICABLE FOR SYSTEM WHERE ESP BUFFER HOPPER IS NOT ENVISAGED.
8. ALL ACCESSORIES, ITEMS OF WORK, THOUGH NOT INDICATED BUT REQUIRED TO MAKE THE SYSTEM COMPLETE FOR ITS SAFE, EFFICIENT, RELIABLE AND TROUBLE FREE OPERATION AND MAINTENANCE SHALL ALSO BE INCLUDED IN BIDDER'S SCOPE UNLESS SPECIFICALLY EXCLUDED.
9. IN CASE OF ANY DISCREPANCY IN QUANTITY & NUMBER OF LINES & EQUIPMENTS, BIDDER TO FOLLOW THIS FLOW DIAGRAM.
10. EACH COARSE FLY ASH HOPPER SHALL BE DESIGNED TO HANDLE ESP ASH FROM BOTH UNITS. IN THIS CASE, ALL SIX CONVEYING LINES FROM THE COARSE FLY ASH HOPPERS TO THE MAIN SILO SHALL BE IN OPERATION.

FOR TENDER PURPOSE ONLY

REV.	DESCRIPTION	DRAWN	DESIGN	CHKD.	C	M	E	C&I	APPD	DATE
1	RELEASED FOR TENDER	NAVEEN	RAJESH		CLEARED BY					

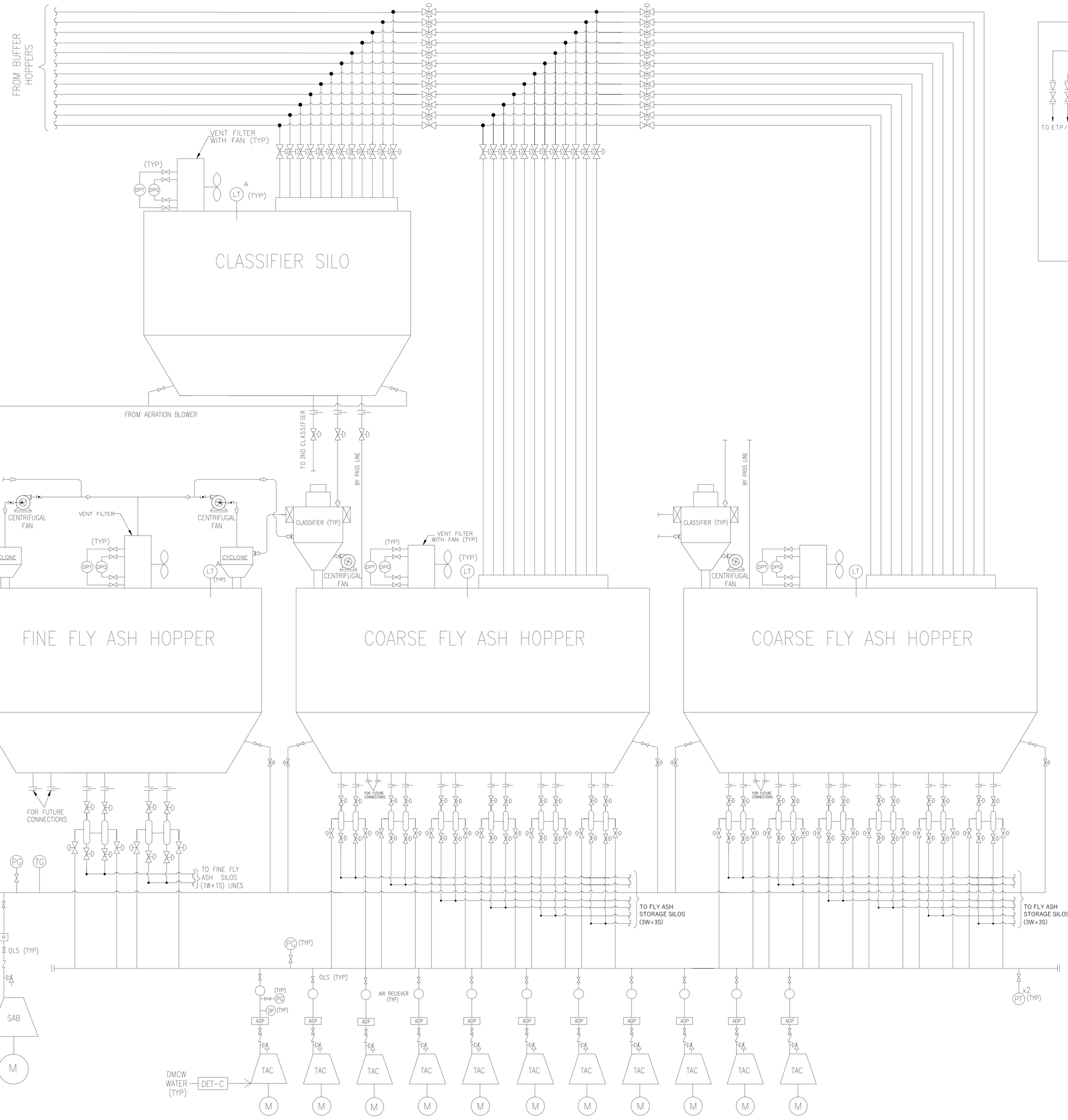
DAMODAR VALLEY CORPORATION
(Under the Ministry of Power, Govt. of India)

PROJECT: KODERMA SUPER THERMAL POWER PROJECT
STAGE–II (2x800MW)

TITLE: EPC PACKAGE
SINGLE LINE DIAGRAM FOR ASH CLASSIFIER SYSTEM
(FOR PRESSURE CONVEYING SYSTEM)

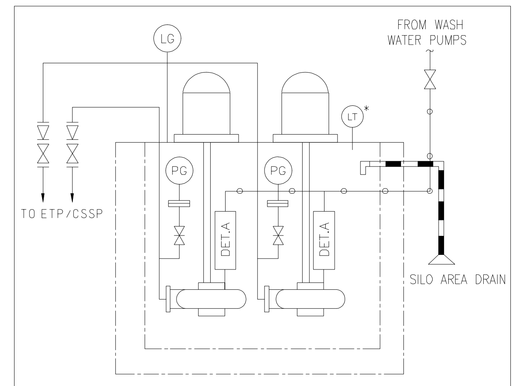
SIZE	SCALE	DRG.NO.	REV.
A1	––	XXXX-001(R)-POM-A-029	3

CAD FILE NAME : XXXX-001(R)-POM-A-029.dwg

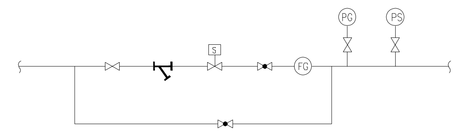


AERATION BLOWERS
(4 WORKING + 1 STANDBY)

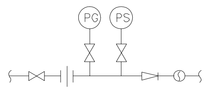
TRANSPORT AIR COMPRESSOR (TAC)
(7 WORKING + 4 STANDBY)



DRAIN PUMPS
(1 WORKING + 1 STANDBY)



DETAIL-C



DETAIL-A

NOTES

1. ASH CLASSIFIER SYSTEM SHOWN IS INDICATIVE ONLY. ASH CLASSIFIER SYSTEM SHALL BE DESIGNED & SUPPLIED MEETING FUNCTIONAL REQUIREMENTS FOR BOTH UNITS.
2. THE SCHEME & NO. OF EQUIPMENT SHALL BE FINALIZED IN CONJUNCTION WITH TECHNICAL SPECIFICATION & AS PER THE SYSTEM REQUIREMENTS.
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FOR TENDER PURPOSE ONLY

REV.	DESCRIPTION	DRAWN	DESIGN	CHKD.	C	M	E	C&I	APPD	DATE
1	RELEASED FOR TENDER	NAVEEN	RAJESH		CLEARED BY					

DAMODAR VALLEY CORPORATION
(Under the Ministry of Power, Govt. of India)

PROJECT: KODERMA SUPER THERMAL POWER PROJECT
STAGE-II (2x800MW)

TITLE: EPC PACKAGE
SINGLE LINE DIAGRAM FOR ASH CLASSIFIER SYSTEM (FOR VACUUM CONVEYING SYSTEM)

SIZE	SCALE	DRG.NO.	REV.
A1	--	XXXX-001(R)-POM-A-029	3

CAD FILE NAME : XXXX-001(R)-POM-A-029.dwg