



**TENUGHAT VIDYUT NIGAM LIMITED**  
**2x210 MW Tenughat Thermal Power Station**  
**Jharkhand**  
**Dry Fly Ash Collection & Disposal System**



## **09.00 Layout Requirement**

- 09.01 The general layout indicating location of compressor cum dryer house, main silos, intermediate silos and disposition of various hoppers are shown in the scheme drawing and the typical layout of dense phase pneumatic conveying pipe routine from ESP hoppers to main silo are shown in the existing layout drawing attached with this technical specification.
- 09.02 All conveying air compressors, dryers, blowers & heaters (for intermediate silos) shall be installed inside compressor Air Station. MCC / switch gear and control room shall be provided in a separate building adjacent to the compressed air station. Main silo utility building will be provided near main silos. This building should have MCC / switch gear and control room for main silos. Blowers & heaters required for fluidization of main silos preferably be located inside this utility building with hoisting & handling facilities. Bidder must prepare & submit the layout with the offer accordingly.
- 09.03 Compressor house shall be provided with under slung cranes as specified in the relevant clauses of TS.
- 09.04 Cooling tower shall be provided at a suitable location near compressor air station. Cooling water pumps & other facilities shall be located as indicated elsewhere in this specification with suitable hoisting & handling facilities.
- 09.05 The Bidder shall offer the best layout to accommodate the equipment covered in this specification within the space shown in the enclosed drawings as far as possible avoiding any congestion at various operating and maintenance premises and optimise on the space and at the same time render necessary access for operation and maintenance. Bidder may visit the site for the same before submitting their offer.
- 09.06 All piping layout shall be finalised in accordance with approved flow diagrams and general arrangement drawings. All the pipelines shall be laid properly to avoid congestion and restriction of access / passages.
- 09.07 Pipelines shall be routed in such a way to avoid interference with existing facilities and other pipes, supporting structures, equipments, electrical conduits, cables tray etc. The pipe routing shall also take into the account



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- the availability of structural members for providing suitable supports and hangers.
- 09.08 The pipelines shall be arranged to provide clearance for removal of equipment requiring maintenance and for easy access to valves and other accessories required for operation and maintenance. Availability of access to valves and specialties shall be properly indicate on the layout drawing.
- 09.09 Overhead piping shall have a minimum vertical clearance of 2.3 m above walkways and working areas, 6.0 m above roadways and 6.5 m above railways unless otherwise approved by the purchaser.
- 09.10 All local instruments shall be so located on the pipelines as to render them observable from the nearest platforms.
- 09.11 Suction piping of compressor shall be as short and straight as possible to minimize pressure loss.
- 09.12 All necessary platforms and access stairways for the operation and maintenance of equipment and valves shall be provided.
- 09.13 For ash disposal total four outlets shall be provided from each main silo. One opening is for closed tankers, second opening is for open trucks and the third & fourth opening are for future purpose. The height of fly ash silos shall be determined in such a way so that the trucks / lorries can be loaded conveniently.