



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



**05.00 PERFORMANCE REQUIREMENT**

- 05.01 Ash evacuation capacity from each unit shall not be less than 47 t/h. There are total six streams of ash pipelines from each unit upto intermediate silos and two streams of ash pipelines with interconnection from intermediate silos to main silos for both units so that coarse & fine ash can be segregated as per requirement of purchaser. The bidder must specify the maximum ash evacuation capacity of each stream. However, the system along with equipment i.e. compressors, dryers, blowers, heaters, cyclone separators cum bag filters, piping, valves etc. shall be designed keeping in view the requirement as specified in clause no. 7.03 & 7.04 of the technical specification.
- 05.02 Below each main RCC silo two nos. discharge outlets with complete piping, expansion joints, valves, rotary feeders / air slides shall be provided to unload the ash in open or closed trucks / dumpers. In one of the outlets of each main silo one rotary ash conditioner shall also be provided. The capacity of each discharge chute including all piping valves, rotary feeder / air slide, rotary ash conditioner shall not be less than 150 t/h.
- 05.03 Gross holding capacity of fly ash of each main RCC silo shall be 1500 m<sup>3</sup> .
- 05.04 Suitable margin not less than 10% on capacity and pressure shall be provided while selecting the centrifugal compressors, dryers, fluidising air blower, vent fan, exhausters, cooling water pump, cooling tower, etc. to satisfy the requirement of clause no. 05.01 above.
- 05.05 The design of the proposed ash handling system should be such that it can meet the stringent statutory pollution control regulations of CPCB & SPCB and be capable to handle the excess ash generation from ESP & other flue gas hoppers to restrict the dust emission to atmosphere less than 50 mg/nm<sup>3</sup>. Bidder must design all the systems & indicate clearly the margin provided in the systems to handle the excess ash. All associated facilities / systems such as compressed air system, blower system, piping, silo system, etc. will be designed & supplied accordingly.

**05.06 Ash densities to be considered for design of plant & equipment of fly ash handling system:**

Type of ash	Bulk densities ( Tonnes per cum)		Particle density ( Tonnes per cum)
	For Load Calculations	For Storage Volume Calculations	
Fly Ash	1.6	0.6	2.0 ( This is to be further analysed/ tested by the successful tenderer during detailed engineering)