



MECHANICAL SOP

Issue No. 01	Rev. No: 02	Effective Date: 17.10.2017	SOP/MEC/023
Issued By: M.R		Approved By: HOD-Mechanical	
VERTICAL ROLLER MILL GENERAL INSPECTION			

Scope: General Inspection of VRM (Pfeiffer Mill)

Responsibility: General Fitter/ Millwright Fitter

Accountability: Mechanical-Section Engineer

PPE:

1. Safety helmet.
2. Safety shoe.
3. Nose Mask.
4. Hand Gloves.

TOOLS:

1. Box spanner set.
2. Ring spanner set.

Hazard Analysis:

Risks associated:

Mitigating Measures

Material or Gases entry	: 1) Ensure Emptied / don't engage other gangs to clear Cutes. : 2) Ensure all material incoming Drives & Ducts Isolated.
Oxygen deficiency	: Confined space permit is essential to enter in to the mill.
Heat	: Confined space permit is essential to enter in to the mill

SOP FOR VRM GENARAL INSPECTION

1. Open the mill manual inspection door, scrapper chamber manual door, classifier manual inspection door and torque support buffer cap inspection doors.
2. Cool the mill to ambient temperature.
1. Take the Electrical line clearance for the following. (Fallow LOTO)
 - a) Mill feed RAL
 - b) Mill main drive
 - c) Classifier drive
 - d) Mill booster (Hot Air)fan
 - e) Mill fan
 - f) Hydraulic tension unit (optional)**
 - g) Inlet damper for hot gas entry (Should in close condition).



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3) Attain the confined space Permit

- a) The temperature inside the mill should not be more than 5⁰C to the ambient 45 Deg . temperature
- b) Oxygen % should be 20(+ 0r-1)
- c) The roller position should be ZERO. Ensure from CCR.

4. The following entities must be checked.

- a) Top & bottom pins and Lock washers in its position for INNER strap.
- b) Check for wear in the Torque support bolts, Liners & Grease.
- c) Check the Gas chamber & Scrapers condition.
- d) Check the Body Liners & Bolts Condition.
- e) Check the all the false air Entry Sources & arrest.
- f) Check the Roller for Oil leakage from seal.
- g) Check the Feed chute & Grit cone discharge pipe (feed pipe).
- h) Check the pressure frame liners & Bolts condition.
- i) Check the Classifier drive station condition & Oil level.
- j) Check the seal air pipe condition.
- k) Check the accumulator pressure as specified. (Ensure Hydraulic pressure '0" before check)
- l) Check Dam ring condition
- m) Nozzle ring dummy plate condition
- n) Water injection Nozzles Jam / condition

5) If any of the above have some abnormality to be rectified.

6) Conform Man/Material not left inside the Mill / scraper chamber & discharge chute, before . BOXUP THE MILL

- 7) Clear Permits & Electrical Line Clearance.**
- 8) Take Trial runs if required.**
- 9) Give Clearance to start the Mill.**



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Emergency / Emergency Shut OFF:

1. If any injury takes place, provide First aid and inform to the Safety department or Call Emergency number 3108/9865152222

Annexures : LSA & Isolation Matrix.

Job Safety Analysis	Job: VRM Inspection	Date: 01/09/2014	Analysis by: Section Engineer	Reviewed by: Section Head
Title of employee doing job: Mill Internals inspection	Supervisor: Section Engineer	Department: Mechanical	Section: RVRM; CVRM; Coal VRM	Approved by: HOD Mechanical
Req'd/recommended PPE:				
Sequence of Basic Job Steps	Potential Hazards	Recommended Safe Job Procedure	What Could Go Wrong	Corrective Action



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Cool The Mill	For cooling the mill Doors to be kept in open condition.	Barricade the Mill inspection doors Way	Heavy suction from the Mill doors may suck you or your belonging	Keep yourself away from the Inspection doors during(Mill Cooling) Fan running condition
Hydraulic Tension Unit LOTO optional	People legs/Hands may entrap between Table& Roller	Always Keep yourself & Team away from NIP points(Table – Rollers)	Rollers May Down slowly	Keep always Rollers touch the table during maintenance.
Mill Internals Inspection	Burning injury	Always use hand Glove(must) during Mill internals inspection	Other parts of the Body may touch with Hot surfaces of the mill	Competent person only allowed for Mill inspection.
Mill Internals Inspection	Fall due to Slippery table surface.	Use Wooden Flanks on the(walking area) TOP of the table	-Nil-	