1. **Purpose:** - To describe Safe and quality maintenance procedure of Filter bags cleaning and replacement
2. **Scope:** - Ram-Car 2 DES, CC3 DES, Coal Crusher house DES
3. **References.**: - Respective equipment manuals, SP45
4. **Responsibility**: - Engineer- in- charge, Maintenance fitter & Contract workmen on the job.
5. **PPEs to be used:** Helmet, Safety shoes , hand gloves, Reflector jacket, dust mask, safety goggle, Job specific PPEs Full body Harness, lifeline, fall back arrestor, CO detector etc.
6. **Aspect- Impact**

**Aspect: - coal dust/ spillage, waste filter bags (Generation of Hazardous waste)**

**Impact: - Land Contamination**

1. **Hazards Identified**

Physical Hazard : Pressure

Mechanical Hazard : Trapping/Crush, Cut/Impact, Contact, Entanglement, Ejection, Falling

Ergonomics Hazard : Insufficient work space

Health Hazard : Inhalation of coal dust

Human behaviour aspect of operators:

* Alcoholism.
* Casual approach.
* Horse play.
* Non usage of PPE’s
* Improper Housekeeping
* Height Phobia

1. **Procedure:**

**SAFETY PRECAUTIONS:**

* Ensure all Process, Electrical & Mechanical isolation prior to starting work on equipment. Follow documented isolation procedure as per Vedanta approved isolation standards.
* Seek Proper work permit if applicable.
* Safety briefing / Toolbox talk to be carried out and to be documented
* Follow one man one lock system and use of LOTO box.
* Wear PPE (Personal Protective Equipment)
* Use certified tools & tackles
* Ensure that workplace is clean and safe.
* Ensure all the planned jobs have been completed and release mechanical isolations if applied.
* Ensure all safety guards have been placed and secured properly as per guidelines & all unwanted material from the area to be removed before releasing the equipment electrical isolation.
* Follow proper documented procedure for releasing the electrical isolations as per Vedanta approved isolation standards.

**Activity 1: Ram car 2/ Coal crusher house bags cleaning/ replacement**

 Bring the inserts & bags and keep them as near as possible.

 Ensure isolation of the system (LT, Compressor, ID Fan) as per the group procedure with Lock out and tag out sytem.

* Drain air-receiver to ensure de-pressurising of line

 Open the compartment door

 Loosen the clamp bolts

 Remove the pulsing pipes.

 cleaning of pulsing pipes holes.

 Remove the inserts along with bags.

 Fix new insert & bag in position.

 Carry the procedure for entire compartment.

 Check /change rubber sealing if found damaged to ensure 100% sealing

 shut the compartment door back.

 Remove all the scrap from the area & shift to respective bays.

 Clear electrical shutdown

  Shift the removed cages from the platform to designated place for cleaning

 Cleaning will be done near settling pond shed.

  Contaminated water will flow in settling pond.

**Activity 2: Replacement of CC3 bags**

* Bring the bags and keep them as near as possible.
* Turn-off the dust collection system and shut off the inlet stream and ensure mechanical isolation. If required, drain air-receiver to ensure de-pressurising of line.
* Ensure isolation of the system (LT, Compressor, ID Fan) as per the group procedure with Lock out and tag out sytem.
* Open the clean gas plenum maintenance top covers
* Wait a few minutes to ventilate the clean gas plenum
* Disassemble the pulsing/ blow pipes. Release the two at both ends of the blow pipe and axially pulls out the pipe in the direction opposite to gas manifold
* Loosen the bolts & remove the clamps
* Cleaning of pulsing pipes holes.
* Remove/ Pull the bags out.
* Inspect the filter bags material for damage (burst, wearing through, etc.)
* In case of any filter bag damage dust is visible in the clean gas plenum, the bag has to be replaced immediately, otherwise you are likely to cause damage to the fan.
* Insert new bag in position.
* Carry the procedure for entire compartment (20 bags) & all compartments (4 nos).
* Check /change rubber sealing if found damaged to ensure 100% sealing
* shut the clean gas plenum maintenance top covers.
* Remove all the scrap from the area & shift to respective bays.
* Clear electrical shutdown

1. **REFERENCES: Operation and maintenance manual for above equipments, SP45, SP44G**

**7. RECORDS:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Record No.** | **Record Title** | **Maintained by** | **Soft/Hard form** | **Retention Time** |
| 1. |  | PM Checklist | Area in Charge | Hard | 1 Yr. |
| 2. |  | Notification Data | Area in charge | Soft | - |
| 3. | HI/10 | Hazard Identification | IMS | Soft | 1 Yr. |
| 4. | RA/10 | Risk Assessment | IMS | Soft | 1 Yr. |
| 5. |  |  |  |  |  |
| 6. |  |  |  |  |  |

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| **Date** | **Manual Section Ref. & Para** | **Brief details of Revision** | **New Rev.** |
| 13-08-2022 | Header | Company logo & Document no. | 6 |
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| **Prepared By:**  Head Mechanical Maintenance, Battery 1- MCD | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Head Mechanical Maintenance MCD |
| **Signature:** | **Signature:** | **Signature:** |
| **Review Date: 13.08.2022** | **Review Date: 13.08.2022** | **Review Date: 13.08.2022** |