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|  | **VEDANTA LIMITED –**  **VALUE ADDED BUSINESS** | **Format No.:** | **FRMT/MR/10** |
| **INTEGRATED MANAGEMENT SYSTEM** | **Revision Date:** | **10.07.2023** |
| **HAZARD IDENTIFICATION** | **Revision No.:** | **03** |
| **Page No.:** | **1 of 1** |

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| **Departmental Use Only** | |
| **Revision No: 01** | **Unit: PID1** |
| **Revision Date: 10.07.2023** | **Dept.: Production** |

A. Work activity information

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| **Sr.No.** | **Details** | **Remark** |
| 1) | Task being carried out, their duration and Frequency: | Cleaning below the conveyor |
| 2) | Location (s) where the work is carried out. | B.F. Raw Material/Charging area. |
| 3) | Who normally/occasionally carried out the task? | Workmen/ supervisors & contract  workers |
| 4) | Who else may be affected by the work (For example visitors, subcontractors? the public) | Maint. Staff & Visitors |
| 5) | a) Has the personnel trained for performing the task  b) Any special training required | Yes  No |
| 6) | Is the written systems of work mandatory? If yes state, the procedure no. | Yes.  VL/IMS/PID1/PROD/WI/12G |
| 7) | Is the work permit required for the task? | No |
| 8) | Plant and machinery that may be used:  Eg : crusher, conveyor, crane, heavy earthing equipment, Truck etc, | Dumpers, wheel loaders etc. |
| 9) | Any electrically operated hand tools are used | NIL |
| 10) | Manufacturers or supplier’s instructions for operation and maintenance plant machinery and powered hand tools are available or not: | NIL |
| 11) | Chain block, tools and shackles such as wire rope, hydraulic jack etc are used. | No |
| 12) | What materials are handled? Size, shape, surface character and weight of materials that may be handled: | Lumpy |
| 13) | Is the material is required to be moved by hand. If yes Distance and heights of the place where materials have to move by hand. | NIL |
| 14) | Services used Eg: compressed air, oxygen, acetylene,  LPG gas, hydraulic oil, welding electrode for welding | NIL |
| 15) | Physical form of substances encountered during the work (For example fume, gas, vapour, liquid, dust/powder, solid): | Solid. Iron ore , Limestone , Dolomite & coke |
| 16) | Content and recommendations of safety data sheets relating to substances used or encountered:  (this is applicable in case of chemical material) | NA |
| 17) | a) Relevant acts, regulations and standards relating to the work being done, the plant and machinery used, and the materials used or encountered:  b) Is the activity is reviewed for compliance to statutory requirement | Factory Act  Yes |
| 18) | What is the data (s) required to be monitored during the activity and the frequency of monitoring? | Ambient air quality |
| 19) | Any information available from within and outside the organization on incident, accident and ill health experience associated with the work being done, equipment and substances used: | Yes |

2. From the above activity information hazards are to be identified and recorded below using Appendix 'A' of SP/41

1. At around 3.45 pm, during Fire hydrant inspection round near CB3-1, it was found that CB3-1 belt tail end drum side guard was removed from its position and belt was running. No person was seen near that area.
2. On 21.08.15, at around 9.30 hrs, Mechanical contractors were doing the job of gravity take-up at BF2 CB4 as well as contract workmen of M/s Shinde HR were clearing the spillages below gravity take-up during furnace shutdown. After observing immediately cleaning activity was stopped and people removed from the area.

Causes:

1. Lack of supervision.

2. Communication gap between two different depts.

3. Workers were not consciousness about hazard & severity for the job.

CAPA:

1. Job should be carried out under supervision

2. Training to be conducted for awareness

1. On 11.12.2019 during site round of 27Mtr it was observed that CB-12 Pull cord Rope was kept inside the side guard after maintenance and it may lead to safety incident in case of emergency.
2. On 24.12.2019 at about 19:00 hrs bf2 coke belt CB32 was overload due to excess coke, while Handling canopy in order to clear coke Mr. Lavkush Saroj of contractor Mukund Parab right little fingertip got trapped between canopy and frame due to slight imbalance. He was given first aid treatment and resumed work. He was wearing required PPE viz hand gloves. Belt was stopped and emergency pull cord was activated during this activity.

CAPA:

1. Gate widening on CB 2 to be explored with logic change for timing to prevent jamming.
2. Projection creating pinch point to be removed.
3. Hood covers to be plate welded/Bolted.
4. SOP and HIRA to be revised.
5. On 19.11.2021 t around 20:00 hrs at BF1 coke shed between coke gate 16& 17, smoke was observed at 2 places where coke briquette and Nut coke overlaps. On inspection it was observed that a small fire has took place on coke briquette, immediately fire extinguished with the help of nearby fire hydrant line. Situation brought under control and materials shifted to open yard at Transit 6.

Root cause:

1. Coke briquette stock was lying in shed more the 30 days.

2. Coke Briquette & nut coke stakes were overlapped.

3. Due to old age of material the quality might have disintegrated and may affected the quality & resulted in fire.

4.Possibility of fresh hot coke pieces falling from coke conveyor above the stockpile.

5. Lime, binder and Volatile matter present in coke briquettes. Can it lead to a self-fire needs to be checked

6.Contact of coke briquettes fines with hot nut-coke stock.

CAPA:

1. Only required quantity to be shifted from MCD.

2. Overlapping of heaps to be avoided at coke shed.

3. Coke briquette heap not to be kept for longer period,

4. Avoiding heaping of material below coke conveyor belt

**Hazards identified**

1. Mechanical (falling /trip) Fall of return rollers
2. Getting entangled with conveyor belt
3. Suffocation with dust
4. Fall of material from top
5. Human Behavior -Nonuse of PPE & WI
6. Human Behavior -Improper house keeping
7. Inadequate local lighting
8. Dust
9. Chances of entanglement of cleaning tools with running belts
10. Human Behaviour -Horseplay
11. Slippery Surface

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| **Prepared By:** | **Reviewed By:** |
| **Signature:** | **Signature:** |
| **Review Date: 10.07.2023** | **Review Date: 10.07.2023** |