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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.:** | **02** |
| **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: | Movement in PCM / Baghouse area (vicinity) ,24 hrs. in a day |
| 2) | Location (s) where the work is carried out. | PCM area |
| 3) | Who normally/occasionally carried out the task? | Contractor’s laborers, company employees & supervisors. |
| 4) | Who else may be affected by the work (For example visitors, subcontractors? the public) | 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/19 |
| 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, | Wheel Loader/Truck/Backhoe |
| 9) | Any electrically operated hand tools are used | No |
| 10) | Manufacturers or supplier’s instructions for operation and maintenance plant machinery and powered hand tools are available or not: | NA |
| 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: | High pressure water pump, Remote  Control, tools etc. |
| 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. | High pressure hose pipe.  15mts long and at a height upto 10mts |
| 14) | Services used Eg: compressed air, oxygen, acetylene,  LPG gas, hydraulic oil, welding electrode for welding | High pressure water jet. |
| 15) | Physical form of substances encountered during the work (For example fume, gas, vapour, liquid, dust/powder, solid): | Steam. |
| 16) | Content and recommendations of safety data sheets relating to substances used or encountered:  (This is applicable in case of chemical material) | No |
| 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? | NIL |
| 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. On 1/08/2008 Mr Malvekar was walking to BF -1 crane, his left leg fell into PCM cooling water. As he could not see anything due to steam Coming out from PCM.
2. On 16.11.2009, at around 3.45hrs the injured, while descending from PCM 2 staircase, his left leg slipped from the steps and got twisted resulting in spraining of the leg. -Sajjan Sawant
3. On 14.01.2011 at around 04.57 am (Night shift) when the BF1 got slipped on forced check, bleeders got opened due to the increase of pressure in the furnace, hot coke was thrown out from the furnace which has fallen on the combustibles (cardboard boxes) kept near the crane which resulted in fire. The fire was immediately extinguished and no property damaged was found. The crane mentioned was on the job BF1 baghouse project and was under breakdown at the time of incidence.
4. On 14-01-2011 at 4:45 hrs in the morning while extinguishing fire which was caught on crane due to hot coke from furnace, fire hydrant hose was left by the worker due to high pressure. This hose pipe bounced and missed fellow workman. Immediately valve was closed. No injury or damage to property occurred.
5. On 5/2/2011, at 12.20 hrs while moving over PCM 2 runner platform plate welding of the small piece gave way and one leg of the person went below the platform. There was no injury.
6. On 20/06/2011.one of the workmen went to see the ladle, whether it is filled up or not during casting. While coming back, his left leg missed the step (near man cooler fan at PCM side) and he fell down having slight bruise in his left knee. Then he was sent to the dispensary for first aid immediately.
7. On 22/12/11 at 19:45 hrs in second shift, one contractor workmen of kudneshwar industries accidently slipped and his right foot felt in hot water between PCM2 and PCM 3 resulting in superficial burn injury above his right toe. He was then shifted to dispensary for first aid treatment.
8. On 27.01.12 at around 6.30hrs Mr. S K Mishra truck driver of M/s Bhavana Earthmovers stood close to an empty hot ladle for warming himself up. While doing so his righthand palm got superficial burn injury. He was given first aid in PID dispensary.
9. On 18/09/2012 at 13:25 hrs Mr. Satyajit Naik emp. Code 15353 met with a superficial burn injury while bringing a hot metal sample from PCM 4. During pouring on PCM -4 a spark through hot metal entered left side of his neck. He reported back to work after first aid.
10. On 26/12/2012, at around 20:45 hrs., truck no GA01/T9982 of Bhavana Earthmovers engaged in shifting production Pig Iron from BF to Dispatch yard reported with Pig Iron in the yard with net weight of 11.28 MT. While unloading Pig Iron in the bin the truck chassis got cracked. There was no injury to anyone.
11. On 28.03.13 at 20.20 hrs. truck no. 9985 when coming out from PCM2 discharge end after loading pigs of cast no. 2968 of BF#1, suddenly outside rear tyre got burst, its disc got cracked and tyre flew 25 mts. away from the truck and fell near HBS 1. There is no injury reported.

**Hazards identified**

1. Contact with hot metal
2. Exposed to heat
3. Hot metal Ladle falling
4. Exposure of hot steaming while passing through PCM pathway
5. Mech Impact Backhoe
6. Hot steaming while cleaning the Stickers on PCM
7. Contact with pig chips
8. Contact with metal spark while passing close to the operating PCM
9. Entanglement/trapping
10. Contact with metal spark, while dumping PCM consumable
11. Impact by PCM tools
12. Fall of a person /Slipping on platforms leading to injuries
13. Impact of wheel loader to the PCM Platform
14. Contact with hot ladle shell causing burns
15. Contact with lime powder
16. Impact or run over by moving machinery
17. Improper house keeping
18. Unwanted movement of equipments
19. Human Behavior -Nonuse of PPE
20. Inadequate local lighting resulting fall of a person
21. Human Behavior -Throwing PCM dam jam without looking person walking all around resulting injury to the passing person.
22. Puncture of ladle when it is full of hot metal
23. heat
24. Dust
25. Vision impairment due to flying chips
26. Impact/hazard due to both hot metal crane collision
27. Hazard / Fire due to external/unavoidable unsafe conditions.
28. Contact with hot water in PCM area
29. Cracking of truck chassis/improper maintenance of trucks
30. Bursting of tyre and fleeing with full force

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