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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: | HBS Burner firing  Once in three years |
| 2) | Location (s) where the work is carried out. | Near HBS Burner of BF1 & BF2 |
| 3) | Who normally/occasionally carried out the task? | Company`s & contract employees |
| 4) | Who else may be affected by the work (For example visitors, subcontractors, the public) | subcontractors |
| 5) | a) Has the personnel trained for performing the task  b) Any special training required | Yes |
| 6) | Is the written systems of work mandatory? If yes state, the procedure no. | Yes  VL/IMS/PID1/PROD/WI/23C |
| 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, | No |
| 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: | No |
| 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: | Burner Assembly, oil & compressed air |
| 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. | 3-4meters |
| 14) | Services used Eg: compressed air, oxygen, acetylene,  LPG gas, hydraulic oil, welding electrode for welding | Yes-compressed air & oil |
| 15) | Physical form of substances encountered during the work (For example fume, gas, vapour, liquid, dust/powder, solid): | Fumes, oil & compressed air |
| 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? | 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 11.06.2020 at BF 2 while diesel firing activity of HBS#3, a small spark from torch fell on small pile of cotton waste which were dipped in diesel and caught fire. Fire extinguisher was already kept on diesel firing platform which was immediately used to completely douse off the fire. No injury or damage to property.

Root cause:

* The ‘Mashal’, which is being prepared for initial light up is dipped in diesel having Excess Diesel with loose cotton.
* During light up fire with loose cotton burnt and piece of burnt cotton fell down into the diesel wet cotton waste kept in working platform near by the lighting operation causes fire.
* As per SOP, all flammable materials need to be cleared before starting of any activity, which causes fire hazard. In this case, same was not followed up.
* Hazard identification was not done properly

CAPA:

* Awareness training to be given for such type of operation and strict adherence of SOP to be maintained.
* Housekeeping to be maintained before starting of any critical activity.
* Start-up/ Lighting up check list should have one point mentioning of hazardous & Flammable material removed from working site: Yes/NO

**Hazards identified**

1. Fire & Explosion
2. Mech: Pressure in the compressed air line
3. Contact with hot surface causing burn injury
4. Human Behavior-Nonuse of PPE / WI
5. Human Behavior-Improper house keeping
6. Inadequate local lighting
7. Human Behavior-Crowding at the job site
8. Human Behavior-Running in hurry & getting hurt.
9. BF gas poisoning
10. Backfire during changeover of the stove.
11. Backfire due to insufficient draft below -10mm
12. Human error, Human Behavior
13. Splash fluid

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