**WORK INSTRUCTIONS FOR** **HOT METAL SAMPLING AT PCM RUNNER**

**Responsibility: PCM In charge**

**Criteria: Safe work practices in the PCM area.**

**Identified Hazards:**

1. Contact with hot Metal sample
2. Slipping of personnel in the runner
3. Improper house keeping
4. Inadequate local illumination.
5. heat
6. Burning due to contact of hot object
7. Slipping of hand tools
8. Contact with furnace blow

**Human Hazards**

1. Nonadherence to PPE
2. Nonadherence to Work instructions

**Significant Aspect:**

1. Heat generation

**PROCEDURE:**

1. Unauthorized operation or repair of any equipment is a punishable offence
2. Ensure that all personnel involved in the activity (Including contractor workmen) are trained in safe working procedures.)
3. Personnel working in the area (PCM runner operation) must wear safety goggle, safety helmet, safety shoes, leg guard and cotton wear uniform/safety overcoat while working.
4. PCM In charge should ensure that sample moulds available is having copper base thickness of plate piece of 8mm only and base plate used surface should be smooth and polished and if required polish paper to be used to maintain the surface smooth.
5. Sample spoon used to take sample should be coated with lime solution to avoid jamming with metal. Ensure the mould used to take sample is dry.
6. Place the mould on plain and clean copper base metal plate with ring.
7. After pouring about 10T metal from ladle collect the metal with the help of sample spoon from runner and pour it into the mould.
8. Once sample is solidified dismantle the mould and put the sample immediately in cold water tray provided at PCM.
9. Two no. of sample to be taken for normal metal and three no. for Desulphurization metal.
10. On direct loading PCM sample to be taken only after 2-4 tons of metal poured.
11. In case of sample is not proper other sample to be taken immediately and discard the old sample, do not keep any old sample at the platform.
12. PCM in charge should check the condition of sample mould once in the shift and replace the same if not proper.

|  |  |  |
| --- | --- | --- |
| **Prepared By:**  Head – Production PID I | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Head – Pig Iron Division |
| **Signature:** | **Signature:** | **Signature:** |
| **Date: 10.07.2023** | **Date: 10.07.2023** | **Date: 10.07.2023** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Amendment Record** | | | |
| **Revision date** | **Manual Section ref. and para** | **Brief details of revision** | **New Revision No.** |
| 15.07.2022 | Procedure for hot metal sampling at PCM runner | Change in format | 05 |
|  |  |  |  |