**WORK INSTRUCTIONS FOR** **HOT METAL SAMPLING AT CAST HOUSE AREA**

**Responsibility: Furnace In charge /Foreman/Sr. Tap hole operator**

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

**Identified Hazards:**

1. Contact with hot metal& slag
2. Fall of Person
3. Non use of PPE &WI
4. Improper house keeping
5. Inadequate local lighting
6. Casting of metal sample in cold mould.
7. heat
8. Vision impairment due to glare of hot metal

**Human Hazards**

1. Non use of PPE
2. Non adherence 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 (TAPPING operation) must wear safety goggle, safety helmet, safety shoes, leg guard and cotton wear uniform/safety overcoat while working.
4. Furnace In charge /Foreman should ensure that sample mould available is having copper base thickness of plate piece of 8mm only and base plate used surface should be smooth and polished 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 if not warm the mould by pouring some hot slag on the surface.
6. Place the mould on plain and clean copper base metal plate with ring.
7. Warm the sample spoon by placing just above the runner to be free from moisture.
8. Collect the metal with the help of sample spoon from runner and pour it into the mould.
9. Once sample is solidified dismantle the mould and put the sample immediately in cold water tray provided at cast house area.
10. 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.
11. Cast house in charge should check the condition of sample mould once in the shift and replace the same if not proper.
12. In same manner SLAG SAMPLE & TEMPERATURE to be taken by wearing all mandatory PPE.

|  |  |  |
| --- | --- | --- |
| **Prepared By:**  Head – Production PID I | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Head – Pig Iron Division |
| **Signature:** | **Signature:** | **Signature:** |
| **Date: 15.07.2022** | **Date: 15.07.2022** | **Date: 15.07.2022** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Amendment Record** | | | |
| **Revision date** | **Manual Section ref. and para** | **Brief details of revision** | **New Revision No.** |
| 15.07.2022 | Work instructions for hot metal sampling at Cast house area | Change in format | 02 |
|  |  |  |  |