**Work instruction for adding skull to empty ladle by Magnet Crane**

**Criteria:** Safe operating practices, recycling

**Responsibility:** Bag House in charge

**Identified Hazards:**

1. Fall of Magnet in ladle
2. Fall of skull jam out of ladle
3. Contact with chips
4. Damage of ladle bricks
5. Damage of power cable
6. Contact with metal/slag

7. Fire and explosion.

**Significant Aspect: 1.** Dust generation

**Procedure:**

* Unauthorized operation or repair of any equipment is a punishable offence.
* Persons involved in the activity should wear safety goggles, hand gloves, safety shoes and safety helmet.
* Before starting activity Bag House in charge and operator should ensure that the ladle bottom is clean. If bag house crane is down and ladle cannot be tilted and cleaned completely, skull should not be added.
* Bag house in charge and Operator both should ensure that persons are not around the ladle.
* Operator should wear safety goggle, dust mask, helmet, and shoes.
* Check for healthiness of magnet crane wire rope, power cable.
* Skull added to ladle should be a thin jam for better melting. & avoid ladle bottom brick damage
* Approximately 150 kgs of skull per ladle is to be added.
* Operator should stand at safe distance, Put on the magnet and lift two to three pieces of skull jam at a time and slowly adjust magnet just above ladle and then de-magnetize to fall jam exactly in the ladle. Ref and follow WI/PROD/15 for magnet crane operation guidelines.
* Bag house in charge and the operator should ensure that skull is not added to the ladle when ladle is on the transfer car.
* Do not charge the skull into the ladle directly with wheel loader.
* PCM/Baghouse in charge should ensure Ladle which have skull addition should be kept below main runner metal spout.
* It should never be used to transfer hot metal from one ladle into another when skull is added, as this could bubble out hot metal due to boiling action.
* Ladle should not be filled above the bottom of the top most ring.

|  |  |  |
| --- | --- | --- |
| **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 | Work instructions for **adding skull to empty ladle by Magnet Crane** | Change in format | 08 |
|  |  |  |  |