**WORK INSTRUCTIONS FOR** **MAKING THE HYDROUS CLAY**

**Criteria: Safe making of hydrous clay.**

**Responsibility: General-shift engineer**

**Identified Hazards:**

1. Trapping
2. Fall of a person (Slipping)
3. Nonadherence to PPE
4. Improper house keeping
5. Inadequate local illumination.
6. Throwing clay at some other person
7. Electric shock
8. Dust generation
9. Loose clothing causing entangling in the roller
10. Jamming of fingers/hands.
11. Improper way of holding the chisel (close to striking point)

**Significant Aspect**:

1. Usage of water.
2. Spillage of clay
3. usage of electricity

**Procedure:**

 Person doing the activity should wear tight clothing and all PPE’s (Safety goggles, dust mask, safety shoes, hand gloves etc.) before starting the activity.

1. Unauthorized operation or repair of any equipment is a punishable offence
2. The activity should be carried out in the general shift by trained workmen.
3. Start and rotate the pug mill to ensure smooth working.
4. Ensure pug mill rotation is stopped. Remove the safety guard, Add 10-12 no. ghamellas of plastic clay in the pug mill.
5. Add approx. 10L of water, put back the safety guard and then start the pug mill till the water and clay mixes properly for 10~15 minutes.
6. Stopped the pug mill, remove the safety guard add approx. 12-15 no. of ghamellas of plastic clay and 15L of water and start the pug mill to allow the mixture to take place for 10~15 minutes. Ensure pug mill guards are in place during starting of pug mill.
7. Stopped the pug mill, add approx. 15 no. of ghamellas of coke fines in the same mixture with approx. 10-15L of water and run the pug mill in order to mix it well for 10~15 minutes. Ensure pug mill guards are in place during starting of pug mill.
8. Again, stopped the pug mill, add another 15- 20 no. of ghamellas of coke fines and then add sufficient amount of water such that the mixture should be of desired consistency.
9. Then run the pug mill for 1 – 1.5 hr. so that the whole mixture mixes properly. Ensure pug mill guards are in place during starting of pug mill.
10. Stop the pug mill and check the mixture if it is mixed properly and plasticity, if not than run the pug mill till it mixes well, if required add sufficient water.
11. Once the mixture is ready, open the bottom gate to remove the mixture and store it at designated place.
12. Keep the pug mill rollers and the surrounding area clean.
13. Longer Poking rod to be used to maximum extent for removing clay jam to avoid hammering

**Don’t s**

1. Rotate the machine without safety guards in place.

2. Put hand in the running machine for any activity.

3. Use loose clothing on body.

4. Use loose clothing around neck.

5. Try to retrieve any things from the machine when it is rotating.

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| **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** |

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| **Amendment Record** | | | |
| **Revision date** | **Manual Section ref. and para** | **Brief details of revision** | **New Revision No.** |
| 15.07.2022 | Change in format |  | 04 |
|  |  |  |  |