**WORK INSTRUCTIONS FOR FURNACE TOP SPRAY CHECKING**

Responsibility: Shift Superintendent

Criteria: Safe working

Identified Hazards:

1. Contact with hot water

2. Explosion

3. Human Behavior -Non use of PPE

4. Improper house keeping

5. Inadequate local lighting

6. Getting scared of heights

7. Contact with water in pressure

8. Contact with hot water & hot surface

9. Use of mobile phone.

10. Fall of loose material

Significant Aspect:

1. Emission of BFG

2. Usage of water

3. Generation of dust

All walkways leading to furnace top to be cleared of coke after shut down

1. Top spray checking:

* Use of mobile is strictly prohibited.
* Unauthorized operation or repair of any equipment is a punishable offence
* Ensure furnace top fire to be uniformly lit over the cross section & check for CO presence
* Close all the individual inlet valves.
* Do the activity in coordination with control room engineer.
* Operate the top spray manual mode valve situated in control room.
* Remove all the nozzles and check opening manual valve.
* Nozzle to be fitted back after checking
* Keep all valves open after checking
* close top spray valve after job got over.

2. Top platform cleaning

• Unauthorized operation or repair of any equipment is a punishable offence

• Ensure that the people are wearing all safety appliances, viz, safety helmet, shoes, dust protection goggle, dust mask & Hand gloves.

• Ensure furnace top fire to be uniformly lit over the cross section and check for CO presence before starting the job

• Before starting the job ensure that there is no overhang material and enough water is sprayed on the dust, to avoid dust pollution

• All collected dust should be disposed through the dust pipe

3. CB-5 Walkway cleaning

• Ensure that the furnace is taken complete shutdown

• Ensure that the CB-5 Conveyor is stopped by emergency pull chord

• Remove all the coke pieces spread on the walkway and dispose on CB5.

• Clear nylon nets below the belts of all accumulated mud, ensure area below is barricaded to avoid fall of material on the person passing below.

4. Equalization pipe cleaning

• Ensure that the all the gas line is purged with steam

• Slight overflow is maintained on all gas line drip pots

• Ensure top firing (fire should never extinguish)

• Ensure relief valve is kept open

• Ensure that the equalization pipe at saturator top is blanked

• Take lancing pipe with hook shape and clean the pipe by wearing all mandatory PPE.

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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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