**WORK INSTRUCTION FOR MAINTENANCE OF SINTER MACHINE TENSIONING DEVICE**

1.0 PURPOSE

Safe Maintenance of sinter machine tensioning device for Optimum performance.

2.0 SCOPE

Sinter Plant

This procedure applies to Sinter machine tensioning device /VL/IMS/SP/MECH/WI/15

3.0 RESPONSIBILITIES

Area Engineer / Shift Engineer

Workmen on the job

4.0 PROCESS DESCRIPTION

Maintenance of Sinter machine tensioning Device

**Do’s:**

* Always wear PPE’s
* Always ensure if equipment is isolated by starting in local mode
* Always ensure if proper shutdowns and work permits are taken where work is to be done
* Always clear area before clearing work permit
* Ensure tools and tackles are certified and are in proper condition before using for job

**Don’ts:**

* Do not start job unless shutdown of equipment and required permit for job is not taken
* Do not bypass SOP
* Unauthorized operation or repair of any equipment is a punishable offence

**POSSIBLE HAZARDS & MITIGATION MEASURES**

Trapping / entanglement between two objects like sinter machine pallet car, SRC, gravity movement, Fall of material like hammer, tools, slung items, bolts, wedges, etc,

Hazards related to usage of wrong tools

Failure of sling / chain block / hoist

Failure of hoist including rope failure, hoist coming out from beam etc

Hazards related to poor illuminations (fall hazard / tripping/ etc)

Fall of tools, metal pieces through grating

Hazards related to erection and dismantling

Hazards related to gas cutting and welding

Hazards related to material handling

Hazards related to improper electrical shutdown and non compliance of PTW.

**4.4 ISOLATIONS REQUIRED:**

|  |  |  |
| --- | --- | --- |
| **ENERGY SOURCE** | **HAZARDS PRESENT** | **ISOLATION** |
| **Electrical** | YES | Sinter Machine, SRC |
| **Mechanical/Kinetic** | NO | NO |
| **Hydraulic** | NO | NO |
| **Pneumatic** | NO | NO |
| **Steam** | NO | NO |
| **Chemical** | NO | NO |
| **Thermal** | NO | NO |
| **Radiation** | NO | NO |
| **Poor Illumination** | NO | NO |

**PPE’s & OTHER SAFETY EQUIPMENT REQUIRED:**

* Reflective Jacket
* Hand Gloves
* Safety Helmet
* Safety Shoes
* Safety Goggles

**PPEs to be used**

Helmet, Safety shoes, hand gloves, Dust mask and safety goggle, safety belts.

**Activity No 1  : Working on Sinter tensioning device**

1. Take work permit from the shift Superintendent / production in charge and obtain the shutdown clearance from Electrical Department with LOTO for equipment.
2. Lift counter weighs with help of chain pulley blocks from both sides.
3. Release tension on wire rope & support pulleys.
4. Reposition pulley, fixed it properly.
5. Check for any other abnormality. If any attend the same.
6. Release chain pulley blocks & normalize the system.
7. Clear electrical shut down.
8. Give clearance to operation.

**Mechanical hazard**

1. Inhaling of dust
2. Fall of material.
3. Accident due to improper shutdown
4. Flying of Chips during hammering
5. Failure of sling, chain pulley block
6. improper hooks welding
7. Fall of a person.

**Electrical hazard**

1. Electrical shock in welding

**Amendement Record**

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| --- | --- | --- | --- |
| **Date** | **Manual Section Ref. & Para** | **Brief details of Revision** | **New Rev.** |
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| Prepared By:  Ass. Manager – Sinter Plant | Reviewed & Issued By:  Management Representative | Approved By:  Head Sinter Plant |
| Signature: | Signature: | Signature: |
| Review Date: 30.09.2022 | Review Date: 30.09.2022 | Review Date: 30.09.2022 |