**ACTIVITY: COKE SHED GUTTER REPLACEMENT**

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* Objective : - Coke shed gutter replacement
* Scope : - Raw material handling system
* Ref. : -
* Responsibility : - Engineer In charge and contract workmen on the job

PPE –s to be used :

* Helmet, Safety shoes, Co monitor, Safety belt, dust mask and hand gloves.

**Aspet - impact**

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| Scrap generation | Resource Depletion |
| Fire | Air pollution SP42 |

**Hazards identified**

Mechanical Hazard:

1. Fall of material from height like rollers, coke pieces, sheets, hooks etc.
2. Trapping of hand, leg in between gutter.
3. Failure of lifting machines, handling machines such as chain pulley block, sling, D shackle etc.
4. Impact of moving / sling items.
5. Getting cuts, due to sharp edges, while working.
6. Vehicle getting stuck above gate opening or due to uneven surface.
7. Slip of person/equipment/material
8. Hitting of material while loading and marching
9. Entanglement between crane / hydra swing arm / counter weight
10. Hitting of crane hook
11. Burn injury during gas cutting & welding
12. Fall of material on crane cabin
13. Fall of object on person

Electrical Hazard

1. Electrical shock from welding machine.

**Chemical Hazard**:

1. Co gas poisoning
2. Fire in coke shed due to gas cutting and welding.

**Human behavior aspect of operator**: Operator nature, alcoholism, casual approach, back pain, horse play & non usage of PPE

**PROCEDURE FOR CHANGING COMMON WATER TROUGH OF COKE SHED**

1. Take clearance from Production and RMHS incharge and barricade the area below where gutter replacement is planned.
2. Shift the fabricated gutter from contractor yard to coke shed with truck & hydra. Follow work instruction WI/MAINT/12 for material shifting.
3. Remove the bottom roof sheet of centre part of coke shed where gutter has to be erected by at least ½ meter to enable dismantling/erection of new gutter.
4. Remove the 2 nos A.C sheets on either side of shed at the truss & column joining area & fix the pre fabricated channel frame, locking with the second purlin from bottom.
5. Weld the lifting hook or rod at both sides of trough which is to be cut & lowered.
6. Fix the chain block for the above frame at center &fix this to cleat on trough
7. Gas cut existing gutter from coke shed center (6 mtr span). Lower this part with the use of above chain block, also gas cut the tie rods of the gutter supporting angles.
8. Make V edge preparation on both sides of the new gutters prior to erection.
9. Erect the new fabricated gutter and support it with bottom angle and tie rod with minimum 2 supports at both the ends.
10. Remove the subsequent existing gutter and erect new gutter as per the above procedure as mentioned in Sr. no. 2.
11. Ensure proper welding of 2 gutters to avoid water leakage. Make V edge preparation on both sides of the gutters prior to welding.
12. Ensure that proper slope is maintained from centre to both ends. Cross check the same with an inclinometer.
13. Fix back the removed sheets with new SS hooks and check for welding and supports.
14. Ensure that removed roof sheets and gutters are fixed back at the end of the day to avoid water leakage due to unexpected rain.
15. Shift the removed gutter and all unwanted scrap at the end of the day. Ensure that all tools and tackles, gas cutting set and cylinder to be removed from the coke shed.

**Do:**

1. Keep hosepipe for water line connected to water pipe line for emergency fire fighting.
2. Check for any gas cut hot material in coke shed lying unnoticed, if so quench it immediately.
3. Normalize the coke shed after finishing the days work.
4. Ensure the old & new trough joint with proper welding/bolting so that no leakage should take place in case of sudden rain from this joint.

**Do not:**

1. Block / barricade the passage for wheel loader movement for shifting of coke.
2. Pass welding cable on passage.
3. Allow anyone to stand below the trough while erecting & dismantling.

**Amendement Record**

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| **Date** | **Manual Section Ref. & Para** | **Brief details of Revision** | | | **New Rev.** | |
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| **Prepared By:**  Area Engineer | | | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Mechanical Head | |
| **Signature** | | | **Signature:** | **Signature:** | |
| **Review Date: 12.12.22** | | | **Review Date: 12.12.22** | **Review Date: 12.12.22** | |