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| A picture containing drawing  Description automatically generated | **VEDANTA LIMITED –**  **VALUE ADDED BUSINESS** | **Format No.:** | **FRMT/MR/10** |
| **INTEGRATED MANAGEMENT SYSTEM** | **Revision Date:** | **04.04.2022** |
| **HAZARD IDENTIFICATION** | **Revision No.:** | **02** |
| **Page No.:** | **1 of 1** |

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| **Departmental Use Only** | |
| **Revision No: 3** | **Unit: PP2** |
| **Revision Date: 05.08.2023** | **Dept.: MECHANICAL** |

A. Work activity information: FABRICATION DISMANTLING AND ERECTION OF STRUCTURAL JOBS

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| **Sr.No.** | **Details** | **Remark** |
| 1) | Task being carried out, their duration and Frequency: | Fabrication Dismantling and erection of Structural jobs  Frequently |
| 2) | Location (s) where the work is carried out. | Power plant , Contractors shed |
| 3) | Who normally/occasionally carried out the task | Engineer in charge  Maintenance fitter/welder on the job  Contractor workmen on job |
| 4) | Who else may be affected by the work (For example visitors, subcontractors, the public) | Workmen working nearby |
| 5) | a)Has the personnel trained for performing the task  b) Any special training required | Yes  No |
| 6) | Is the written systems of work mandatory. If yes state the procedure no. | **VL/IMS/PP2/MECH/WI/4** |
| 7) | Is the work permit required for the task | Yes as per the area of the Job |
| 8) | Plant and machinery that may be used:  Eg : crusher, conveyor, crane, heavy earthing equipment, Truck etc, | Crane, Truck, Hydra |
| 9) | Any electrically operated hand tools are used | Grinder, drill, welding machine |
| 10) | Manufacturer’s or supplier’s instructions for operation and maintenance plant machinery and powered hand tools are available or not: | Yes |
| **Sr.No.** | **Details** | Chain pulley block of rated capacity, slings, D-shackles, F -15 crane. |
| 11) | Chain block, tools and shackles such as wire rope, hydraulic jack etc are used. | Structural members  Cylindrical  Approx. 15000 kg max by F15 crane. Other depending on capacity of crane |
| 12) | What materials are handled? Size, shape, surface character and weight of materials that may be handled: | 5 kg by hand (tools & tackles) |
| 13) | Is the material is required to be moved by hand. If yes Distance and heights of the place where materials have to move by hand. | Yes – Welding electrode for welding  Oxygen, Acetylene |
| 14) | Services used Eg: compressed air, oxygen, acetylene,  LPG gas, hydraulic oil, welding electrode for welding | Solid ,gas |
| 15) | Physical form of substances encountered during the work (For example fume, gas, vapour, liquid, dust/powder, solid): | NA |
| 16) | Content and recommendations of safety data sheets relating to substances used or encountered:  ( this is applicable in case of chemical material) | Gas Cylinder rule 1981  Yes |
| 17) | a) Relevant acts, regulations and standards relating to the work being done, the plant and machinery used and the materials used or encountered:  b) Is the activity is reviewed for compliance to statutory requirement | NA  NIL |
| 18) | What is the data (s) required to be monitored during the activity and the frequency of monitoring. | .NA |
| 19) | Any information available from within and outside the organization on incident, accident and ill health experience associated with the work being done, equipment and substances used: | YES |

**Hazards identified**

**Mechanical hazard -**

* Failure of sling, D shackle, chain pulley block
* Trapping of hand between two objects
* Falling of material like hammer, tools, bolts, trolley, cylinder and steel items
* Fall of person from height
* Failure of full body harness due to improper clamping, damaged rope, hooking on weak structure
* Skidding of person due to poor housekeeping, oil spillage, uneven surfaces, broken bricks etc
* Back pain while handling heavy load and improper posture
* Cut injuries from sharp edges of items
* Getting trapped / skid material stacked
* Hitting of moving vehicles, and machinery in the plant
* Slipping/Rolling of trolley while loading/unloading
* Failure of the clutch / brake of hydra / material handling vehicles
* Sliding/rolling of the material from vehicle.
* Getting trapped below Hydra because of failure of brakes or sudden jerks.
* Getting trapped between the swing portion & the body of Hydra
* Getting hurt because of poor visibility
* Impact of other vehicles
* Skidding of wheel stoppers
* Overturning of vehicles due to uneven surfaces
* Overturning due to loosing the centre of gravity.
* Hitting of person while reversing
* Incidents due to poor illumination.
* Failure of the workmen basket structure, temporary platform
* Fall of person from height due to unbalance from workmen basket, temporary platform
* Trapping of the person between basket and structure.
* Fall of workmen basket, temporary platforms due to failure of the clamping
* Lifting of the truck due to unstable loading
* Hitting on surrounding structures, while negotiating a turn
* Fall of the Pal finger crane from the truck due to failure of mounting bolt
* Failure of hydraulic system
* Failure of hook of the crane
* Fall of “falka” of truck during movement.
* Fall of the extended boom from top.
* Damage of overhead structure during marching of crane / hydra
* Hitting / trapping of crane due to improper / non sequential operation
* Bending of chassis due to non levelling of stabilizers
* Failure of stabilizers
* Failure of crane / chassis due to non levelling of crane platform with water level
* Hitting of the boom due to fast operation.
* Scaffold collapse caused by instability or over loading
* Incident due to usage of mobile while driving / operation of crane / hydra / Palfinger/ Hiab basket
* Trapping due to Improper jacking during crane maintenance
* Fire due to fall of sparks welding / gas cutting
* Back fire during gas cutting
* Failure of welding hook due to improper / inadequate welding
* Failure of welding hook due to welding on hard faced plates / unknown plates
* Fall of material from height , such as angles, channels , beams, plates , bolts , nuts etc due to poor housekeeping .

**Physical hazard**

* Pressure due to failure of air /hydraulic system
* Temperature

**Electrical hazard**

* Electric shock from overhead lines or welding
* Short circuit due to failure of electrical system
* Electric shock from battery terminal

**Chemical hazard**

* Fire & Explosion

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| **Prepared By:** Engineer– Operation – PP | **Reviewed By: Head - Power** |
| **Signature:** | **Signature:** |
| **Date: 05.08.2023** | **Date: 05.08.2023** |