Mechanical Maintenance Department Responsibility & Authority

Roles, responsibilities and authorities of the staff for the implementation, maintenance & continually improving the QEHS system are described below. Staffs are accountable for all the activities carried out in their respective area either by company or contractor employees.

***Head Mechanical Maintenance (BFI and BFII)***

* Ensuring proper planning of annual maintenance budget based on production for the year.
* Implementation of routine maintenance activities, planning & execution with Proper distribution of Manpower & Material.
* Follow up of regular maintenance activities, overall supervision of erection work, if any.
* Checking of bill of material for major works/ modifications etc.
* Overall responsibility for execution of maintenance works with in allotted time frame with Quality under safe working condition & considering environmental aspect.
* Co ordination laterally and vertically & Ensuring smooth co ordination of activities of Maintenance Dept with Other Departments
* To monitor inventory for smooth maintenance.
* To monitor allocation of resources (Man power, material etc).
* To check and ensure structural stability of plant equipment.
* Responsible for planning jobs related to control environmental hazards.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* Implement of *IMS* system, AO in the department.
* To identify training needs of personnel and ensuring the same being given.
* Equipment modification to improve reliability and maintainability.
* To review & Plan Capital Proposals and ensure successful commissioning.
* Failure Analysis of Breakdowns and corrective actions.
* Co ordination of activities with Operation Electrical Projects Dept.
* Implementation of points noted in different management/production review meetings.
* To ensure Identification, Evaluation of Aspect Impact and HIRA of mechanical activities
* To monitor Key environmental parameter and ensure suitable controls.
* To ensure maintenance of records - specify mandatory legal record.
* Overall responsibility for smooth and efficient maintenance of blast furnace and

Associated equipment.

* Responsible for planning & execution of major works like relining of blast furnace within allotted time frame with Quality under safe working condition & considering environmental aspect.
* To ensure proper planning & successive following up of the Preventive/breakdown maintenance.

***I/C Utilities & Rotating equipments (BFI and BFII)***

* Plan a systematic maintenance schedule for rotating equipment, Raw material handling & Stoves and implement the same in day to day maintenance.
* Condition monitoring of high speed rotating equipment and ensure smooth functioning.
* To study the requirement of any CAPEX, improvement projects and reviewing the implantation of same for quality as well as safety improvements.
* Assist Mechanical In charge in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Allocation of manpower for routine and specific works.
* To carry out activities related with corrosion prevention.
* To Plan manpower for day today Jobs.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* Implementation of IMS system,AO in the department.
* Co ordination of activities with Operation Electrical Projects Dept.
* To ensure Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* To ensure maintenance of records - specify mandatory legal record.
* Coordinate with the Workmen for allocation of the jobs and ensure the Jobs being carried out smoothly with in time frame ensuring safe working condition.
* Review lubrication schedule & ensure the functionality of the same considering Quality, Environmental and health aspects
* To monitor Key environmental parameter and ensure suitable control.
* To comply with legal requirement by Ensuring testing of lifting machines, Gasholder and pressure vessels as per statutory requirements.

***I/C Blast Furnace and Hot Metal Handling (BFI and BFII)***

* Plan a systematic maintenance schedule for Blast furnace & associated equipment.
* Condition monitoring of Blast furnace equipment through check lists etc.
* Assist Mechanical In charge in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of manpower for routine and specific works.
* To implement activities related with IMS,AO system. Failure Analysis of Breakdowns and ensuring the implementation of the corrective actions.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* Co ordination of activities with Operation, Electrical, Projects Dept.
* To ensure Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* To monitor Key environmental parameter and ensure its controls.
* To ensure maintenance of records - specify mandatory legal record.
* Ensure disposal of the Hazardous material develop during the activity.
* To attend production/management review meeting and ensure necessary action being taken from mechanical side as per suggestions/requirements.
* To Ensure preparation of contracts, evaluation and forwarding the same to Contract Cell for release of contracts.
* To ensure standardization of spares, develops STD specifications for material etc. considering Quality, safety and Environmental aspect
* To ensure analyzing and reviewing the handling of hazardous waste and its possible controls.
* Plan a systematic maintenance schedule of furnace top equipment’s.
* Condition monitoring of drives, chains, through checks lists etc.
* Assist Incharge Furnace proper in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of spares & material, judicious control of raw material.
* Maintenance of structural, Hydraulic and pneumatic equipment of Top charging, equalizing equipments.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Ensuring proper housekeeping the Concern Area.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.
* To carry out in-house overhauling of Assemblies of Mud gun, Tap hole drill machine, Equalization valve etc and ensure smooth functionality of the same.

***\*\*Engineer RMHS (BFI and BFII****) -*Plan a systematic maintenance schedule for Raw material handling plant & associated equipment.

* Condition monitoring of drives through check lists etc.
* Assist In charge utilities in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of spares & material, judicious control of raw material.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities
* Overall responsible for disposal of the Hazardous material develop during the maintenance activity.
* Ensuring Proper housekeeping the Concern Area.

***\*\*Engineer -Cast house and de dusting -***Plan a systematic maintenance schedule Cast house, Hydraulic System, Graphite Extraction system & associated equipment.

* Condition monitoring of drives, chains, through checks lists etc.
* Assist Incharge Furnace proper in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of spares & material, judicious control of raw material.
* Maintenance of structural, Hydraulic and pneumatic equipment.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Ensuring proper housekeeping the Concern Area.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.
* To carry out in-house overhauling of Assemblies of Mud gun, Tap hole drill machine, Equalization valve etc and ensure smooth functionality of the same.
* Plan a systematic maintenance schedule for PCI.
* Condition monitoring of PCI compressors.
* Assist In charge blast furnace proper in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of Spares, judicious control of raw material.
* Timely attention to arrest any type of leakage like coal or air leakages.
* Responsible for reduction in consumption of air leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Ensuring proper housekeeping the Concern Area.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity
* To Carry out in-house overhauling of Assemblies of equipments.

## *\*\*Engineer –Pumps & pipelines*

* Plan a systematic maintenance schedule for pumps, pipe lines, structures & associated equipment.
* Condition monitoring of pumps, through check lists, CBM etc.
* Assist Incharge Utilities in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of spares, judicious control of raw material.
* Conditioning of Hydraulic oil through Electro static cleaning for reuse.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities
* Ensuring proper housekeeping the Concern Area.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity
* To carry out in-house overhauling of Assemblies Pumps.

## *\*\*Engineer –Cranes and SGP*

* Plan a systematic maintenance schedule for hot metal crane, structures & associated equipment.
* Condition monitoring of cranes through check lists etc.
* Assist Incharge Furnace Proper in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of spares, judicious control of raw material.
* Conditioning of Hydraulic oil through Electro static cleaning for reuse.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identify, Evaluate the Aspect, Impact and HIRA of mechanical activities.
* Ensuring proper housekeeping the Concern Area.
* Maintenance of HMC Crane, Bag house crane, Ladle transfer car & Thickener Crane.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.
* To carry out in-house overhauling of Assemblies, Crane Gear boxes.

## *\*\*Engineer- Blowers & HBS*

* Plan a systematic maintenance schedule for Blower and HBS.
* Condition monitoring of blowers and Fans.
* Assist In charge Utilities in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* To keep check on consumption of Spares, judicious control of raw material.
* Conditioning of Hydraulic oil through Electro static cleaning for reuse.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities
* Ensuring proper housekeeping the Concern Area.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity
* To Carry out in-house overhauling of Assemblies of blower monoblocks, dampers and stove valves.

## *\*\*Engineer - Pig Casting Machines & DS*

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* Plan a systematic maintenance schedule for Pig casting machine & desulphurization.
* Condition monitoring of Pig casting machine through check lists etc.
* To control and maintain the dust emitted from the DS within acceptance limit.
* Assist In charge furnace proper in planning preventive maintenance works.
* Execute monthly maintenance works within specified duration.
* To enhance reliability of equipment by adhering to suitable and standard work practices.
* Documentation.
* Allocation of man power for routine and specific works.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* Implementation of preventive & corrective maintenance and ensuring smooth functioning of the equipments in the area.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Ensuring Proper housekeeping the Concern Area
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.

***\*\*Engineer - Planning, Mobile cranes, Machine shop, Testing tools and tackles***

* To check the consumption of spares and indent accordingly in consultation with Manager & Asst Manager.
* Plan a systematic maintenance schedule for Lifting Tools and tackles.
* To carry out internal structural inspection in the plant.
* Assist in charge Rotating Equipment in planning preventive maintenance works.
* Documentation.
* Allocation of man power for routine and specific works.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.
* To inspect the material received at the stores considering quality, environmental & Safety aspects
* Liaison with purchase department for follows up of spares.
* Planning annual maintenance budget based on production for the year.
* Maintenance of service vehicles, ambulance etc.
* Documentation.
* Preparationofmaintenance work orders, checking bills of contractors.
* Preparation of work done report.
* To keep track of IMS documentation for the department.
* To keep control over the drawings of plant utilities
* Plan a systematic maintenance schedule for Vehicles & associated equipment.
* Standardization of spares, develops STD specifications for material etc.
* Preparation of contracts, evaluation and forwarding the same to Contract Cell for release of contracts.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Coordination with the contractor.

***\*\*Engineer - Gas Cleaning Plant, AO (BFI and BFII)***

* Overhauling of valves, Dampers, cylinders, piping, furnace spray system etc.
* Identifying critical spares for items in consultation with in charge utility.
* Preparation of spares internally at PIP workshop, Out sourcing machined components.
* Coordination of daily condition monitoring activities in PIP and to ensure adherence to CBM schedule.
* Review of vibration readings and spectra of rotating equipments, conveyors and gearboxes and coordination of corrective actions.
* Coordination and review of oil analysis and ferography of oil from power packs, critical gearboxes & fans and to co ordination of corrective actions.
* Ensuring implementation of recommendations from CBM activities during planned shutdowns and tracking of improvements in performance of equipments.
* Coordination and review of belt and wire rope thickness measurement activities during planned shutdown and implementation of corrective actions for same.
* Review meetings with consultants/suppliers/contractors for implementation of CBM related activities and to carryout necessary modifications to remove bottlenecks.
* Generation of monthly MIS report showing the overall condition of equipments in the month along with action plan for improvements.
* Machine shops around. Testing of Spares before use. Identifying new items for internal development etc.
* Reconditioning of spares removed from service such as stock rods, bells, wearing items etc.
* Maintenance of Gas cleaning System & Gas Holder.
* Assist field during monthly shutdowns.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To ensure analyzing and reviewing the handling of hazardous waste and its possible controls.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities
* Ensuring Proper housekeeping the Concern Area.

## *\*\*Shift Engineer (BFI and BFII)*

* To attend problems which appear during shift period promptly and immediately.
* Keep a check on spares required for general shift maintenance.
* To communicate with Manager in case of crisis during shift.
* Report shift activities, consumption of spares in the log book.
* Record / report follow up action if the work spills over to next shift.
* To carry out other works as assigned by superiors.
* Responsible for reduction in consumption of oil by attending oil leakage problem.
* To Identification, Evaluation of Aspect Impact and HIRA of mechanical activities.
* Ensure Proper disposal of the Hazardous material develop during the maintenance activity.
* To maintain housekeeping in Plant.

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## *For Workmen’s:-*

***Fitter:-***

* Completion of assign maintenance job with in the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Responsible for issued tools & tackles for the job.
* Ensuring complete safety of environment and facilities during executing assign job.
* Ensure proper housekeeping at work site & 5S.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff.

***Welder/Cutter:-***

* Completion of assign *maintenance/Fabrication* job within the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* Ensuring complete safety of environment and facilities during executing assign job.
* Responsible for issued tools & tackles for the job.
* Ensure proper housekeeping at work site & 5S.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff.

***Rigger:-***

* Completion of assign maintenance job within the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Responsible for issued tools & tackles for the job.
* Ensuring complete safety of environment and facilities during executing assign job.
* Ensure proper housekeeping at work site & 5S.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff.

***Helper:-***

* Completion of assign maintenance job within the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Responsible for issued tools & tackles for the job.
* Ensuring complete safety of environment and facilities during executing assign job.
* Ensure proper housekeeping at work site & 5S.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff.

***Vehicle operator:-***

* Completion of assign maintenance job within the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Taking care of vehicle and accessories while the vehicle is in operation/stand-by.
* Ensuring complete safety of environment and facilities during executing assign job.
* Ensure proper housekeeping at work site & 5S.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff.

***Painter:-***

* Completion of assign painting job within the specified limit of time and quality under the supervision of assigned engineer in conformance with the IMS work instructions.
* If any problem/inadequate facility to execute the assigned job, same to be reported to the in charge.
* Responsible for issued tools & tackles for the job.
* Ensuring complete safety of environment and facilities during executing assign job.
* Ensure proper housekeeping at work site & 5S.
* Ensure Proper disposal of the Hazardous material generated during the assigned activity.
* To contribute towards improvement of the Work System through communication with Staff

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| **Prepared By:**  IMS Incharge -Senior Officer | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Head - Mechanical |
| **Signature:** | **Signature:** | **Signature:** |
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