

**NISHU KHAN**

**Associate manager- Mechanical,** Vedanta Resources Plc

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**Professional Profile**



A goal-driven professional with nearly 11 years and 5months of extensive experience in managing Plant Maintenance - Power plant and metal industries

Presently associated with Vedanta Resources, Hindustan Zinc Limited 1x80 MW CPP in Zawar Mines, Udaipur, Rajasthan

Demonstrated excellence in initiating, implementing, and managing the plant maintenance program based on best practices in the industry, with an emphasis on planning/scheduling and preventive/predictive maintenance.

Extensive experience in mechanical maintenance in power sector and metal industries

Experienced in inventory control and minimizing maintenance costs for improving plant maintenance-related problems.

In-depth knowledge about maintaining and enforcing the safety program up to the mark during maintenance activities; reviewing safety records to uphold standards of maximum safety for all Maintenance Technicians.

An excellent communicator with fair analytical and problem solving skills.

**November 2015 to Present**

**Designation- Associate manager- Mechanical1x91.5 MW Captive power plant Hindustan Zinc Ltd. Zawar mines, Udaipur**

Daily Mechanical Maintenance planning with associate Asst. Managers, Sr. Engineers and Engineers.

Conducting daily meeting, weekly meeting and monthly meeting with team for tracking of jobs and planning the same for closing.

Daily tracking of Defect Notification in SAP system and planning the same for flawless maintenance of equipment.

Daily tracking of PM and CBM notification in SAP for maintenance.

Preparation of RCA Report and implementation of action plan to prevent recurrence of defect from same cause.

Involving maintenance personnel’s in SGA’s and Kaizen for improvement.

Analysing of CBM, Oil Analysis and NDT reports for reducing MTBF of Equipment.

Hiring of External services for AMC and Major Shutdown Jobs with respect to cost and quality with safety on utmost priority.

War Room Meeting with contractors and execution of MOM.

Preparation of MIS reports, analysing data & making recommendations for improving plant operations and solving maintenance-related problems.

Preparation of Asset Optimization Reports(MTTR and MTBF of Equipment; PM-BD Ration; Preventive Maintenance Planning; FMEA; CBM Cost Analysis; Spare Refurbishment Planning; Spare Planning; Reduction of SMI and NMI, Condition Appraisal of Equipment, LAM) and Playing active role as an Auditor.

Preparation of Monthly Action Plan.

Mechanical Maintenance in Turbine, Turbine Auxiliaries, Boiler, Boiler Mountings, Fan, Blowers, Pumps, Compressors, Mill, Centrifuge, EOT cranes, Hoists, Cooling towers etc.

Preparation of Shutdown Planning and execution of same.

Preparation and Review of SMP and JSA.

To conduct Audit of High Risk SOP’s, SSP’s and Doing Job Cycle check of High Risk SOP’s.

Doing VEDI Analysis of Spare Parts.

Preparation of Purchase Requisition; Required for Quotation; Technical Review; Inspection of New Material in SAP.

Logging Near Miss Report, demeanour Safety Interaction and Conduct Contractor field safety Audit and Closing of same with proper planning.

Maintaining and enforcing the safety program for the Maintenance Department; reviewing safety records to uphold standards of maximum safety for all Maintenance.

**June 2012 to November 2015**

**Designation- Associate manager- Mechanical**

**Silver Refinery – Hindustan Zinc Ltd. Pantnagar,** Here I am looking after mechanical maintenance of pyro section, hydro section and utility. which includes Noble lead furnace, Cupel furnace, BBOC furnace, induction furnaces, EOT cranes, electrolyte cells, tanks, filters, filter press, electrolyte handling pumps, DM water pumps with PHE, Cooling

tower, Belt and chain conveyors, ID fan, FD fan, Compressor, Air dryers, ETP, FTP, RO, STP, Diesel transfer pumps, Root blowers, Bag filters, Hydraulics and Pneumatics system and Monorail hoists etc. Moreover I am also looking

after the planning department like spare planning, manpower planning, Compliances of PMI and notifications in SAP (I am end user of SAP- PM Module). Plan, coordinate, and supervise corrective and preventive maintenance and overhaul of the Plant and its equipment. Adherence to the applicable maintenance procedures, permit to work, and safety standards. Perform pre-engineering and provide technical support and guidance to the technicians in various maintenance activities including troubleshooting & repair as per corrective work order instructions. Supervise replacement, servicing of equipment as required. Maintain adequate spare parts inventory of the Plant's equipment, tools, tackles, etc .Carry out received material inspection for acceptance in line with specifications. Assist in budgeting & monitor plant O & M & capital expenditures as per approved budget. Provide on the job training and transfer of knowledge & experience to subordinate technicians to enhance their skills. Maintain team spirit and good housekeeping. Supervise and record Plant shutdown activities. Perform other related tasks as required. Mark up the plant as built drawings for any field change implemented & arrange to get revised as built drawings from the Engineering department. Maintain equipment failure history file.

Did various focus improvement projects to improve the efficiency of plant and also got the rewards for same.

Improvement projects-

Increased the life of BBOC furnace lid.

 Made hygienic conditions in slime charging area.

Reduced the vibration of cooling tower fan.

 Made free flow system for NaOH solution to feed in scrubber system.

Improved the suction of BBOC furnace.

 Maintained less NMI and SMI by proper spare planning.

Installed wesman burner in place of Chinese burner in Noble and cupel furnace to reduce the melting time and HSD cost.

 Installed metal transfer trolley to avoid manual charging in furnaces.

 Erection and commissioning of chain and drag conveyor for slime charging in noble furnace.

 Implemented “5S” in mechanical store, mechanical workshop and lubricant storage room.

 Timely inspection of central store to check the quality and quantity of spares.

 PR release & expediting for timely availability of spares, tools, consumables.

 RCFA for breakdown more than 2 hours and for any near miss and also implement the corrective action.

Kaizen jobs.

 Total productive maintenance (TPM) which includes increase the OEE, Autonomous maintenance, Planned Maintenance, Quality Maintenance, Focused Improvement, Early Equipment Management, Training and Education, Safety Health Environment, TPM in administration

FMEA- Failure mode and effect analysis

CSM- Responsible for contractor safety management.

 PSM- Responsible for process safety management.

SI- Doing safety interactions with contractors on fortnight basis.

 CMMS- Computerized maintenance management system in SAP-PM module.

**January 2012 to June 2012**

**Designation- Mechanical Engineer**

**Zinc and lead beneficiary plant- Hindustan Zinc Ltd. Dariba, Rajasthan** As mechanical maintenance engineer ,Responsible for mechanical maintenance of cone crushers, belt conveyors, vibrating screen, dedusting system etc.

My job responsibilities were-

Maintain inventory levels for spares and consumables and adjust as needed to meet monthly inventory goals.

Investigate and resolves problems resulting from material shortages.

PR release & expediting for timely availability of spares, tools, consumables.

Monitor quality, service, and delivery issues, and take corrective actions as needed.

Load & maintain master data information in SAP system.

 Coordinate and manage special projects as required.

 Erection and commissioning of bag filter (dedusting system).

Maintained the equipment failure history for proper planning of spare and to reduce the breakdown time.

9. Installation and commissioning of agitator in zinc thickener.

Implemented “5S” in mechanical store, mechanical workshop and lubricant storage room.

Timely inspection of central store to check the quality and quantity of store.

**August 2009 to January 2012**

**Designation- Mechanical Engineer**

**Alumina refinery and Aluminium smelter-**

**Alumina refinery-** Here production of alumina is 2.4 MTPA. Expansion of refinery is completed to produce 6 MMTPA. I managed all the fabrications (rolling of plates, welding of columns and beams, gas cutting) as well as erection of the tanks, structures, pipe racks, piping etc. and also responsible for quality issues of various structures. For the commissioning of plant I got the appreciation reward of INR 40,000.

Fabrication of tanks, structures, pipe and cable racks, maintenance and working platforms.

 Erection of precipitation tanks of height 40 meter- 22 nos.

 Erection and commissioning of ball mill.

 Achieved critical project milestone for expansion of alumina refinery to produce 6 MMTPA alumina within stipulated timeline praiseworthy and also got the unique reward of 40,000 INR along with appreciation certificate.

Planning & implementing preventive & breakdown maintenance schedules for improving overall reliability and safety of equipment & machinery.

Supervise replacement, servicing of equipment as required.

Maintain adequate spare parts inventory of the Plant's equipment, tools, tackles, etc.

Carry out received material inspection for acceptance in line with specifications.

Provide on the job training and transfer of knowledge & experience to subordinate technicians to enhance their skills.

Supervise and record Plant shutdown activities.

Maintain equipment failure history file.

Mark up the plant as built drawings for any field change implemented & arrange to get revised as built drawings from the Eng. Department.

Kaizen jobs.

RCFA for breakdown more than 2 hours and for any near miss and also implement the corrective action, Conducting failure investigation analysis to identify gaps & take corrective measures so as to reduce equipment downtime & maximize plant availability.

Implementation of the PM program with roots causes analysis techniques

**Aluminium smelter-** As a mechanical maintenance engineer I have good knowledge of hydraulics, pneumatics and mechanical drive units and I know well during breakdown how to reduce the breakdown time. I Also planned for spares, tools and tackles and consumables which helped me to know each and every parts used in rodding shop equipment. Here I was leading and managing 9

Engineers and 20 technicians. During start-up of plant I implemented ‘5S’ and safety rules in shop floor and did the planning for maintenance like manpower, PM Checklist PM schedule, identified vital, essential and desirable items for proper maintenance, Maintained store room and maintenance area. During commissioning of plant I was involved in commissioning and PSSR points of load unload auto bath butt press and shot blast.

Commissioning of butt press

Erection and commissioning of raw material treatment plant.

Also worked in bake oven

Got selection after written test for foreign training in CHALCO- GUANGXI branch CHINA in aluminium smelter training and got the diploma certificate.

Modified the suction line of Double roller crusher to improve the hygienic condition of work place and also got reward for the same as per shabbash scheme.

Erection and commissioning of raw material plant.

Installed and commissioned double roller crusher.

Installed and commissioned of power and free conveyor.

**Company profile**

Vedanta resources is a London Stock Exchange listed, globally diversified natural resources major interest in zinc, lead, silver, aluminium , iron , copper, gold and power. Geographically, Vedanta’s operations are cantered in India, Sri Lanka, Zambia, Namibia, South Africa, Liberia, Ireland and Australia with employee strength of over 30,000 people.

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| **EDUCATION DETAILS** |

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| **Exam Passed** | **Board/University** | **Year of passing** | **%age** | **Division** |
| B.Tech | A.M.U | 2009 | 68.08% | Ist |
| Xth | CBSE | 2003 | 66.66% | Ist |
| XIIth | CBSE | 2005 | 69.6% | Ist |

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| **COLLEGE PROJECT** |
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Ergonomically Design and Fabrication of Mechanism of Wheelchair that can smoothly move on stairs

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| **ACHIEVMENT** |
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1. My Project Paper has been published in Ergonomics for improved productivity (EIP 2009).

**PAPER TITLE**- Wheel Chair that can move on stairs.

2. Got excellent after probation period of my job.

3. Achieved critical project milestone for expansion of alumina refinery to produce 6 MMTPA alumina within stipulated timeline praiseworthy and also got the unique reward of 40,000 INR along with appreciation certificate in Vedanta Lanjhigarh alumina refinery.

4. Got selection after written test for foreign training in CHALCO- GUANGXI branch CHINA in aluminium smelter training and got the diploma certificate

5. Got 3000 INR reward for making the free flow system of NaOH solution from tank to scrubber to neutralize the NOX in Hindustan Zinc Ltd, Pantnagar Silver refinery.

6.Got 5000 INR reward to replace and aligned the cooling tower fan gearbox.

7.Got 1500 INR reward to uploading documents and O&M drawings in DMS.

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| **COMPUTER SKILLS** |

1. **Auto Cad**
2. **SAP- PM and MM module**
3. Proficiency in **Windows, Microsoft Office, Power Point**
4. Elementary knowledge of “C Programming

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| **INDUSTRIAL TRAINING** |

1. I.C. Engine (Diesel Engine) in Railway Workshop Izat nagar Bareilly (U.P).

Overhauling of engine

2. Aluminium smelter training in CHALCO GUANGZHOU- CHINA

3. Hydraulics and pneumatics training from CRISP

4. First aid training from RED CROSS SOCIETY

1. Advanced Excel by STEP SOLUTIONS
2. Certified from National Safety council.
3. Conveyor maintenance training from Martin
4. Hydraulics level 2 training from EATON
5. Coating and lining training by MARCEP
6. Air Pre Heater Technology from GEECO

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| **PERSONAL DETAILS** | | |
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**Declaration**

I hereby declare that all the above information are true and correct to best of my knowledge