**David Konjopari**

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**PROFESSIONAL SUMMARY**

Detail oriented and solution driven electrical engineer with 4+ years’ experience in electrical power distribution systems, reliability engineering, maintenance engineering, small projects, and electrical compliance. Passionate to develop technically and professionally in electrical engineering through working together in solving problems and sharing knowledge and experiences for continuous improvements to achieve business goals.

**EDUCATION**

**Bachelor of Engineering in Electrical Engineering (BEng. Elec Eng. Power)**

PNG University of Technology

*2013-2016*

**EXPERIENCE**

**Electrical Reliability Engineer, Newcrest Mining Ltd, Lihir**

***2020- Current***

Providing technical support for electrical reliability engineering assignments at Lihir gold processing plant and its supporting utilities for better long-term reliability by:

* Providing visible leadership to verify hazards control at workplaces using Newcrest’s Field Critical Control Checks (FCCC) tool. Additionally, I was tasked in reviewing electrical maintenance procedures in line with electrical safety compliance to align with company’s commitment to electrical safety. For example, I was tasked in reviewing electrical inspections on Residual Current Devices (RCD) test procedures on where procedures didn’t cover the 180electical degree tests to prevent electric shocks associated using handheld devices. My contributions resulted in the company improving injury rate (TRIFR) from 3.8 to 3.1 in Dec 2021 Quarter.
* Conducting gap analysis and audit into electrical assets operational security and proposed recommendations to maintenance for improvements to minimise downtimes and improve reliability. For example, I audited control power supplies (24VDC/48VDC/110VAC) within gold processing plant and identified no redundancy on 48vdc for motor control circuit which has the potential to incur over 10hrs downtime to gold production should spare parts become nil stock in inventory. Hence, I proposed redundant 48vdc supply, designed and prepared scope of works, risk assessed risks associated with proposed change through Newcrest’s Management of Change (MoC) system and supervised installations to completion in compliance to site electrical design criteria, Electrical Safety Management Plan, AS/NZ3000 and AS/NZ3008 standards. My contributions have saved the company potentially over $500K in losses due to lack of redundancy based on risks assessed.

* Reviewing maintenance strategies and procedures in line with cost saving opportunities to save maintenance costs and budget over runs. In my role, I was tasked to review maintenance procedures on a mill motor heat exchanger system where I identified inspections would require using cranes to remove heat exchanger covers and extensive scaffold setup to inspect. Hence, I proposed a basic visual inspection to check for physical conditions of failure modes to trigger a more intrusive check. Hence my proposal saved cranes and scaffold costs at approximately over $20K
* Conducting Plant Maintenance Optimization (PMO) review into Lihir process plant electrical and instrumentation asset strategies to save maintenance costs and wastages. My contributions contributed to identifying over $700K worth of unworthy maintenance activities and flagged for deletion
* Conducting Failure Mode Effects Analysis (FMEA) into existing electrical and instrumentation assets to identify modes and causes of failure and proposed improvements where deficiencies are identified in the existing maintenance strategies to enhance reliability and availability the electrical and instrumentation asset.
* Performing Root cause analysis into asset defects and downtimes that costs the company over $1million dollars in losses and proposed corrective actions to eliminate defects and improve asset reliability. For instance, I was tasked to investigate an instrument 24vdc power supply failure that tripped the autoclave circuit in the gold processing plant which caused the company over $200K in losses. My findings revealed inadequate protection discrimination between the downstream and upstream protection fuses which I proposed an action to correct. I was further tasked to design, scope and manage risks through the company’s Management of Change (MoC) system to comply with site requirements for instrumentation and electrical design criteria, update spares in inventory for upgraded fuses and potentially save the company over $500K in losses due to inadequate protection discrimination between instrument supply fuses.
* Assisting Projects and Engineering Team in reviewing maintenance strategies for Lihir’s Front End Gold Recovery Project where I provided advise on maintenance activities, schedules and plans for instrumentation and electrical inspections. My involvements eased the projects team the overwhelming task of conducting FMEAs to develop maintenance strategies and bill of materials for inventory that in long term saves the company unwanted downtimes due to lack of maintenance plans and correct spares in inventory.
* Providing technical support to process plant support utilities (Power & Utilities & Oxygen Plant) to test transformers and produce reports and recommendations for maintenance, new installations, and refurbishments. In doing so, I used Insulation Test Meters (Meggar), Transformer Turns Ratio Tester (TTRU3), All Test Pro 5 (ATP5) instruments to perform tests and provide recommendations. In this, I helped saved costs associated in engaging external contractors to perform asset integrity tests.
* In my career duration, I have continually provided technical and professional mentorship to less experienced graduates and new hires within the team. That’s continually reviewing graduate projects in line with company’s electrical standards and relevant AS/NZ standards. My support has helped graduates appreciate understanding and application of standards in their projects. Also, when required, I assisted new hires to understand the maintenance business processes and responsible stakeholders’ maintenance team do business with. For example, I explained the As Built drawing processes to a new hire colleague when he required help to update electrical drawings to show changes to a circuit. Additionally, I provided insights to new hires on existing electrical systems within gold processing plants and the work processes the electrical and instrumentation teams undertake to perform maintenance activities.

**Electrical Engineer-Projects (Contractor), Newcrest Mining Ltd, Lihir**

***2019-2020***

Provided project design and electrical engineering support to Senior Electrical Engineer-Fixed Plant Maintenance on small projects and other electrical engineering tasks.

* Participated in and completed design and upgrade of 25 low voltage motor protection relays to GE Multilin MM300 relay in 2020 to below estimated project budget of $500K. In this, I have extensively reviewed electrical drawings in compliance to drafting requirements, reviewed protection discrimination using PowerCad5 software, ensured new installations captured on company’s new installation register and project risks assessed in compliance to company’s production, safety, and environment pollution specifications. My contributions have improved reliability of equipment to over 50hrs equipment uptime as the old motor protection relays were obsolete and vendor no longer provide technical support and manufacture spares.
* Optimized HGO mill motor overall effectiveness to over 80% monthly based on risk assessments by design and installation of 4x 3 phase lube pumps for mill motor bearings in 2019. From this, I have engaged multiple stake holders in project hazard analysis and installations to complete project. In this, I was actively involved in reviewing lube pump protection settings against main incomer circuit breaker protection settings to prevent nuisance tripping and arc flash mitigation. Also, I have worked alongside drafting team utilizing company’s Aconex’s workflow process to review all associated project drawings to final as built drawings and communicated final drawings to concerned teams for use and updated in drawings register
* Reviewed protection coordination settings of LV motors Eaton MCCB with main incomer Terasaki ACBs and provided feedback to Senior Electrical Engineer using PowerCad-5 software
* Reviewed Arc Flash Mitigation settings on Eaton MCCBs and Terasaki ACBs for new installations and process operational requirements

**Graduate Electrical Engineer-Projects (Contractor) – Newcrest Mining Ltd**

***2017-2019***

Provided junior electrical engineer support to Senior Electrical Engineer in design and maintenance engineering tasks.

* Designed, scoped, procure materials, and supervise electrical installations of small electrical and instrumentation projects in compliance to Lihir’s electrical and instrumentation design criteria, AS/NZ3000 and AS/NZ3008 standards plus other relevant standards as reviewed by senior electrical engineer
* Conducted load list audit of switchboards within gold processing plant to understand spare drives in motor control centres for future electrical installation
* Managed As Built electrical and instrumentation drawings by reviewing redline mark ups with field installations, initiated drafting process and followed through until completion of as built drawings and updated MCC drawings folder with updated drawing versions and communicated updated drawings to impacted maintenance teams.

**TRAININGS & CERTIFICATIONS**

* High Voltage Isolation and Access [CTE Australia Pty, Ltd]
* Low Voltage Rescue & CPR
* Confined Space Entry & Work
* Hazard Management
* Job Safety & Environment Analysis
* Working Safely at Heights
* Permit User

**TECHNICAL SKILLS**

* Reliability Engineering
* Maintenance Engineering
* RCA & Trouble Shooting
* Project & Design Engineering
* Condition Monitoring

**SOFT SKILLS**

* Deep listener with exceptional written and verbal communication ability
* Leadership
* Strong Time Management ability
* Ability to wok under pressure from tight time constraints and operational requirements
* Very good interpersonal aptitude

**SOFTWARE SKILLS**

* PowerCad
* SAP
* MS Projects
* MS Office Suit [Word, Excel, Visio, Planner, PP, Outlook]
* PPMS, Optimum, Power BI
* GE EnerVista MM300 Setup

**ADDITIONAL TRAININGS**

I have completed following trainings

* High Voltage Training
* Reliability Principles
* Interpersonal Communication
* Critical Thinking
* Inclusive Mindset

**REFEREES**

**William Togu**

a/ Senior Reliability Engineer

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Senior Electrical Engineer-Compliance

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**Deven Koppen**

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