

POWER QUALITY COMPANY

(PTY) LTD.

2016

25 Years of Excellent Service



Scope of Operation

Diagnostic, Specification, Installation & Training

- Compliance certification & commissioning of systems.
- Current leakage cathodic protection.
- Earth electrode systems.
- Electrical bonding.
- Chemically activated earth electrodes & Concem™ Conductive cement.
- Survey, Testing & planned maintenance.
- Design/installation of SANS & IEC complaint earthing & lightning protection systems.
- Conductor towers & Tesla Air Terminals.

Industry Sectors

Industrial earthing & lightning protection, fully operational projects and greenfield sites, system rehabilitation, survey, testing, design, installation, compliance certification, maintenance & commissioning

- Mining facilities, explosive magazines, pump houses & drives.
- Utilities- power system facilities & distribution networks.
- Electronic communications hubs, IT installations and server rooms.
- Public infrastructure & hospitals.
- Heavy Industry.
- Rail & seaport infrastructure and airport terminals.
- Petrochemical & allied.
- Commercial/ retail & leisure facilities.

Core Business

Certifying and commissioning of industrial earthing & lightning protection systems

- Testing – surveys, diagnostics, forensics and analysis of data
 - Ω Soil resistivity testing, facilitate earth mat design, calculated as a value based on surface resistivity, earth fault current and the trip time of the protection equipment.
 - Ω Earth electrode inspections and resistance testing- resistance of earth mats should be tested regularly results indicate the status of earth mat resistance, whether there are changes in soil conditions or earth mat or if electrodes are corroding or damaged.
- Consulting- design & solutions proposals of systems connecting conductive elements together to power earths to form integrated equipotential zones
 - Ω Surveys/ status, reports on earthing, lightning and static protection systems including test results, hazards detected, as well as specification of remedial work, system upgrade designs, bills of materials and quotations required to complete the work are supplied.
 - Ω Planned maintenance programmes.
 - Ω Guidance on policies and procedures for testing and inspecting earthing and lightning protection systems.
- Certified systems installed
 - Ω Electrical bonding of structural components - turnkey service: Design, installation, testing, certification & commissioning.
 - Ω Earthing of power stations, substations & infrastructural distribution facilities- design & installation of earthing systems, defining the electrical potential of earthing conductors.
 - Ω Structural lightning protection – provision of code-of-practice-compliant systems where lightning discharge energy enters and leaves the facility without damage to structures or equipment.

- Device/ material supply
 - Ω Cables, earthing rods, lightning protection masts, inspection pits, busbars, electrical bonds.
 - Ω Electrochemical – chemically activated electrodes, concern™ conductive cement, cathodic protection elements.
 - Ω Early emission streamer systems, early warning systems (lightning), surge suppression barriers.
 - Ω Complete range of earth loss and continuity, resistance and resistivity testing instrumentation.
 - Ω Conductor theft investigation/ quantification of mines, industries and municipalities.
- Surge Suppression
 - Ω Analysis, supply and installation of surge suppression and lightning arrestors for reticulation and sensitive electronic equipment and data cables.
- SAIEE – Accredited training
 - Ω One or Two day scheduled or in-house training seminars covering:
 - Surveys/ status reporting on earthing, lightning and static protection systems including test results.
 - Soil Resistivity and resistance testing, practical session and also earthing termination design.
 - Structural lightning protection air termination and down-conductors design & implementation.
 - Static – understanding the causes, problems and solutions.
 - The Course includes comprehensive course notes, certificates of attendance issued and South African Institute of Electrical & Electronic Engineering CPD points earned.

EXOTHERMIC WELDING COURSE – ONE DAY R1500 PER DELEGATE



- Cathodic Protection

Ω (CP) – control of corrosion of metal structures by making it work as a cathode of an electrochemical cell by placing in contact with the metal to be protected, and another more easily corroded sacrificial metal to act as the anode of the electrochemical cell.

- Insurance audits, forensics, conductor theft, investigation/quantification for industry & municipalities.

Client – Centred Technology

End-to-end management and software solutions from technical analysis and design to customer relationship management

- Earthing and lightning protection risk assessment and design is executed via a suite of applications, including the Jupiter risk assessment tool, which accurately determines risk quantification, protection levels, installation parameters and best practice solutions.
- Deployment of the robust and stable Vtiger CRM relational database solution to enable peak performance management of customer relations.



Quality Control Systems

Ever mindful that the end objective of all our work is to achieve the highest standards of human safety, equipment and infrastructure protection. No compromise can be made to the compliance with defined codes of the practice and standards

- Integrated quality control which encompasses development, maintaining standards, rigorous/regular monitoring, inspecting and record keeping as required.
- Internal operational procedures and material/ equipment standards maintenance & certification.
- Continuous quality control plan, assurance anchored by the post-installation checkout (PICO) inspection procedure where every element and task is inspected and data (checklists & photographs) recorded as installation/ construction progresses.
- ISO 9002 compliance pending.
- Continuous and regular reappraisal of standards of improvement.
- Compliance with local (SANS) & IEC/ SIEEE standards are core to the quality control programme.



Project Highlights

- Gautrain Rapid Rail System, Gauteng.



Gautrain Midrand Depot

- De Beers Finsch Mines, Northern Cape.
- Omnia Group.
- Super Group.
- Sasol Nitro.
- Toyota Marlboro Head Offices.
- Eskom infrastructure & distribution.
- ASSMANG Beeshoek, Northern Cape.
- BHP Billiton.



Water Treatment Plants

Safety, Health & Environment

Electrical safety at the speed of lightning

Power Quality adheres strictly to all parameters of the Occupational Health & Safety Act 85 of 1993, mining, industrial safety legislation and is guided by a comprehensive in-house HSE manual including an all-encompassing safety plan, risk assessment procedures for all tasks, equipment items, accident reporting procedures, disciplinary codes of conduct, evacuation procedures and material safety data sheets.

To maintain these standards, Power Quality Company has a qualified safety officer. Due to the dynamic nature of its contracting schedule, a crew have access to a safety representatives.

Empowerment

In addition to being certified as BBBEE-compliant by a DTI certified evaluating body, Power Quality procures materials and services wherever possible from black-owned or BEE suppliers. A skills transfer program is also in place to improve communication, literacy and technical knowledge levels for our Staff.

Sustainable Development

The enterprise follows a preserve, maintain, develop' policy in ensuring that its impact on the natural environment is minimalized and responsible. To this end our operations are arranged in-conjunction with customer engineering and SHE staff and the work carried out with minimal disruption to the workplace.

In addition, emphasis is placed on awareness of gaseous/chemical elements in the environment, good housekeeping & waste disposal and safety standards with regard to environmental hazards.

Bona Fides

Mike Visser – CEO

After studying Computer Science Engineering at Bucknell University, USA, Mike returned to South Africa to work in the R&D Department (Software) to develop a number of engineering software packages.

From 1991 Mike attended numerous courses on earthing and lightning protection at Witwatersrand University, Stellenbosch University, Council for Industrial and Scientific Research (CSIR), South African Bureau of Standards (SABS) and in the United States at LEC.

His primary focus is to recommend code-of-practice-compliant earthing and lightning protection solutions for clients through testing, analysis and design. Mike Visser has been presenting seminars on earthing and lightning protection countrywide since 1993.

In addition Mike is the lead design engineer with 25 years of experience under his belt.

He has developed a number of system to ensure quality of workmanship in all areas.

As our Head of Department: Design Engineering he offers our customers an advance documentation of the ever increasing important aspect of electrical safety.

Kim Sinclair – Head Safety Officer

Active in the industry for twenty years, Kims' focus at Power Quality Company is the management of customer Health and Safety requirements and effectiveness of our health and safety department.

Kim is launching the Lightning Safety Policy for companies who want to integrate the Lightning Safety Company Health and Safety Program. Power Quality In-House Training Program co-ordinator.

Kim has developed in-house training to ensure safety is key to all work carried out on site.

Reuben Visser – Head of Drawing Department

Reuben has been mastering 3D-Drawings and modelling for 4 years now, he is very capable in understanding, creating and modifying DWG drawings with AUTOCAD for various mining and construction sites.

Site Supervisors

Stephanus, Lucky, Mike Greyvenstein and Calvin are our best site supervisors in the business, they are more than capable in inspecting, providing solutions and supervising on sites such as mines and construction sites.

Seminar Bookings

Jennifer Borrill works in the seminar booking and advertisements department at Power Quality Company, she is in charge to make sure customers know what we do and how we do it, Please send her an E-mail at Jennifer@powerquality.co.za or call us at **011 827 3270** if you need and information regarding what we do.

Accounts Management

Mary Anne Ritter works in the accounts and human resources department at Power Quality Company, and HR problems the workers they go to her and she is more than willing to help out.

Administration

The administration side of Power Quality Company is handled by Lydia Moreselwane and Richard Moreselwane, they handle all the calls that Power Quality Company get on the daily and help and assist you in any way possible. For any information please E-mail Lydia at lydia@powerquality.co.za or call us on **011 827 3270** if you need any Information.

For Technical Support Please Call 011 827 3270

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