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Electrical Maintenance Lusaka Ltd.

VALUE

SERVICE

QUALITY

LOYALTY

PRICE

SUPPORT



Sterling Steel Factory

Our modern, well equipped factory designs and manufactures a wide range of quality products for the electrical industry.

We manufacture in compliance with the highest safety standards by incorporating the latest available electrical technology.

2017-8

**COMPANY
PROFILE**

Name of the Company:

Electrical Maintenance Lusaka Ltd. - Sterling Steel Factory

Address:

Head Office

Plot 195
Luanshya Road, East End
Off Great North End
Lusaka, 10101
Zambia

Factory

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Lusaka, 10101
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SS Factory Employees with the Directors - 50 Years Anniversary

HISTORY: FOUNDER AND OWNER

Mr George Narder achieved electrical and mechanical engineering qualifications in Italy following which he worked in Switzerland for 6 years. In 1963 he arrived in Zambia as part of a testing and commissioning team for the newly built Kariba Power Station and has lived in Zambia ever since.

Mr Narder started an electrical engineering business in 1965, registered as Electrical Maintenance Lusaka LTD (EML). He has managed and run the company as its CEO for more than 50 years. Under his direct entrepreneurial management, EML has grown into one of the largest and most respected electrical and electronic engineering companies in Zambia.

The company benefits from more than 60 years of his passion, knowledge and expertise.

EML is proud to have participated in many facets of the social and economic development of the country



Mr George Narder, Comm

ELECTRICAL MAINTENANCE LUSAKA (EML) MOTO

*"Always with our customers"
To continue improving on our 50 years of
reliable quality service to the Zambian industry.*

OUR VISION

We strive to remain one of Zambia's leading and most diverse electrical contracting, manufacturing, retail and training companies.

We incorporate the best available local and international innovations and technologies in our services. Partnering with world leading brands, we supply our customers with the highest quality products and after sales service.

OUR MISSION

Our added value is to provide quality products, service and training for all electrical requirements across the country, even throughout Zambia.

We are renowned for highly skilled and experienced staff capable of managing complex projects in a timely manner. We strive to continue to innovate, provide support, while adapting to our clients' needs in a rapidly evolving environment.



LUSAKA - HEAD OFFICE

Plot 195, Luanshya Road, East End
Off Great North Road
P.O. Box 31189, Lusaka, 10101, Zambia

KITWE COPPER BELT

Plot 1023, Eshowe Road,
P.O. Box 22612, Kitwe, 10101, Zambia



An electrical installation and services business established by Mr. George Narder in 1964 and incorporated as **Electrical Maintenance Lusaka Limited (EML)** in 1965.

Mr. and Mrs. Narder, both Italian, are the Company's owner shareholders.

EML initially focused on electrical contracting services together with maintenance, however in 1968 this was expanded to include a production facility and in the 1970's a permanent presence on the Copper Belt was secured by the registration of Electrical Instrumentation Services limited (EIS) as a sister company to EML, where Mr. and Mrs. Narder are the company majority shareholders.

Both companies continue to operate successfully in both Lusaka and the Copper Belt. The company's main business today is electrical construction, manufacturing, wholesale supply of electrical products and materials, the supply and service of state of the art healthcare equipment, the supply and installation of solar products, telephone and switchboard systems, the supply and installation of power factor correction (PFC) equipment at both LV and MV voltages and all electrical customer service and training. Today the company has a

sizeable labour workforce of around 400 staff comprising professional engineers, technicians, artisans, trainees, cable jointers, linesmen, fitters, salesmen, students, etc. and includes the factory, retail store and administration staff.

EML has successfully undertaken various electrical construction projects ranging from power plants, substations, building and industrial electrical, overhead lines, solar through to power quality projects. In addition it also maintains an installed base of over 80 medical systems at 30 clinics and hospitals, and has completed and maintains rural solar installations throughout Zambia.

EML has been active in the Healthcare Sector (diagnostic imaging and related fields) in Zambia since the late 1980's with the world class solutions of

Siemens and Agfa.

In over 50 years of operation EML has employed and trained many hundreds of Zambian men and women through its ranks. Many have moved on, some have remained with the Company for over 30 years.

Returning customers have expressed their high regard for EML's commitment to quality, service and efficiency through their repeat business, referrals and recommendations to other potential clients.

“...create products that offer enduring quality, cost-effective installation and minimum maintenance...”



Examples of our range of panels:
From left to right: Motor Control Centre for Limeco,
Power Control Centre for a shopping mall, Power Factor Correction panel for Trade Kings,
Power Control Centre for Big Tree Investments

Since 1968, **Sterling Steel Factory** has been an integral part of EML's core structure.

We manufacture low voltage panels, feeder pillars and distribution boards for an extensive range of applications to supply the contracting and maintenance departments.

Sterling Steel Factory is EML's main supplier of industrial and domestic light fittings.

Many of these items are on display in our head office and regional sales departments for clients to view and make enquiries.

The products manufactured at our Sterling Steel Factory meet the highest international standards of quality and finishes.



EML offers a complete and flexible approach to designing and manufacture, thus ensuring a timely completion to customer's diverse electrical needs.

We operate computerised CAD/CAM systems to aid and enhance both the design and individuality of each project to suit any particular requirements.

Whatever the requirement, we have the experience, technology and know-how to meet customer's demands. As an independent company with an extensive network of reputable and dependable suppliers, we offer a responsive approach paired with the most appropriate components.



Our switchboards are built to the highest industrial standards. They are used in power generation systems, distribution and transmission systems and are suitable for residential, industrial and commercial installations. They can be used for power distribution in receiving, feeding, metering situations in residential buildings, factories and industrial complexes.

Our panels are manufactured with 2.0 mm thick steel and are available in four standard sizes for both surface and flush mounting. They are finished utilizing a modern powder coat painting system to the client's colour requirement. All fitted electrical components are purchased from reputable suppliers and manufacturers.



We are furthermore able to design and manufacture specific sizes required by our customers.



FEEDER PILLARS

Single or double door units can be fitted with either steel or paxolene mounting trays.

Meter Boards

Lockable surface mounting meter boards are available in the following standard sizes:- Kitwe, 1m, 2m and 3m. Special sizes can be designed to suit specific customer requirements.

Control Desks

We design and manufacture any type of control desks [control console].

Motor Control Centres

Motor control centers are produced for DOL, star-delta, soft-start and variable speed motors to meet the needs of any industrial applications.

Automatic Changeover Switch Panels

We manufacture automatic changeover panels to maintain essential electric supplies produced by standby generators in case of mains failure.

Main Distribution Panel

We design, manufacture, install and commission panels.

Power Factor Correction

We offer both MV and LV options.

Modifications and Repairs

We offer a wide range of panel modification and on site repair services throughout Zambia.

Investigation and Audits

We have qualified and trained staff who can conduct on-site audits and investigations related to electrical panels and infrastructure.



Steel Poles

Steel poles are designed and fabricated to any height and thickness and can be made to client's design. The ease and efficiency with which steel poles are erected and installed is unmatched.



Solar LED light

- Various pole options available
- Various LED light options available
- Available in Kit form or installed by us.
- Substantial energy savings for a limited investment
- Lockable and ventilated battery box
- All metal components are powder coated



Lighting Fittings

We are able to offer a broad range of locally designed light fittings suitable for domestic, commercial and industrial use, security, garden and street lighting.



Electrical Maintenance Lusaka Ltd (EML) is engaged in a number of energy saving projects, particularly in the power factor correction environment to ensure a stable and efficient power grid, as promoted by the Zambia Electricity Supply Company (ZESCO).

The graph clearly shows significant cost savings in the real world case study of a PFC installation working in real conditions in Zambia.

By installing Power Factor Correction (PFC) equipment, Large Power Users (LPU) can enjoy KVA savings and other associated benefits, including but not limited to:

1. Real cost savings in maximum demand offering short payback periods for power factor correction equipment
2. Stability in power supply, particularly where there are voltage fluctuations
3. Reduced equipment temperature, for example motors and transformers - reduced temperatures result in longer life of the equipment.
4. A reduction in the current (A) / KVA drawn from the supplier ZESCO due to equalization of magnetizing currents
5. More KVA's becomes available for use in other parts of the plant
6. Minimal maintenance required if kept in a clean environment

The new design features offer a high level of safety so that capacitors will just expand on failure.

EML recently manufactured and supplied six panels with 6 x 300 KVAR capacitors to the Food Reserve Agency (FRA). This allows the FRA to benefit from the improved power factor and contribute to ZESCO's aim of an improved power grid.

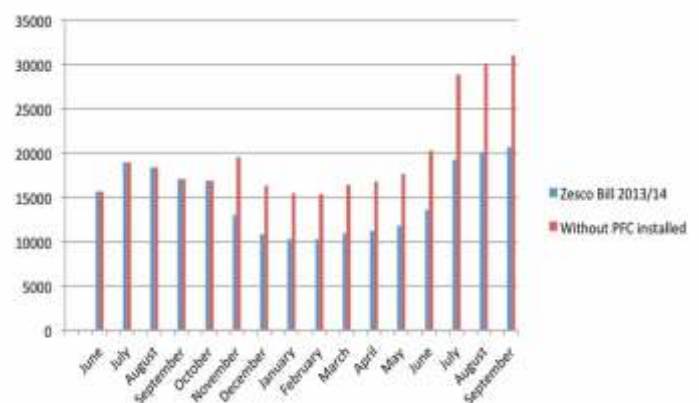
EML clients with Power Factor Correction (PFC) can reduce electricity consumption to up to 25%. This occurs because the KVA requirement is reduced by up to 20 to 25%. It also reduces heating of power cables and safe guards electrical equipment such as motors, etc.



Power Analysis

Electrical maintenance Lusaka (EML) offers the following on-site power analysis:

1. Calculate equipment size for power factor correction
2. Provide detailed recordings to ascertain equipment failure
3. Calculate generation capacity required in the event of load shedding
4. Identify equipment that might generate harmonics such as current that could cause failure of equipment



50 years of design and manufacturing experience enable us to create products that offer enduring quality, cost-effective installation and minimum maintenance.

Investment in technology, continuous quality control, and trained personnel contribute to guarantee our high standards of workmanship. Our services include maintenance contracts to comply with our customer's individual needs.

Our factory comprises the following:



Assembling Shops
Cater for light fittings and panel assembling



Paint Shops
Liquid stoving enamel paint and powder coating units



Tool Room
Equipped with lathes, power saws, surface grinders, shaping & milling machinery



Production Area
Guillotines, bending brakes, presses, spot and arc welding machines

La Farge - Power Factor Correction - Ndola
 11KV Supply to New KCM - East/West Mills - Chingola
 Ndola Engergy HFO 50MW Power Plant - Ndola
 Makoli Apartment Complex - Ndola

BRIEF SAMPLE OF PFC PANELS MANUFACTURED LOCALLY BY EML using LEGRAND, ABB or SCHNEIDER EQUIPMENT

Evergreen Farms/Balmoral/Kingdom Investments – PFC completed in 2016 - 1550kvar
 MakubaSteel Mazabuka – PFC installation in progress 2016 panel ordered – 500kvar

Oriental Quarries/Ndola Lime – PFC installation completed in 2015/16 – 5600kvar
 Quicksave/ Carribea/ BHPML/ Taj Pamodzi - PFC completed in 2015/16 – 1000kvar

Parmalat/Tiger Animal Feeds/Nampak/Trentyre – PFC completed in 2015 – 2400kvar

Agrilink/CMR Farms – PFC installation completed in 2014/15 – 1000kvar
 Mpongwe Milling/Olympic Milling – PFC completed in 2014/15 – 2050kvar

NMC – Malambo Road/Livingstone/Cairo Rd – PFC completed in 2013/15/16 – 25000kvar
 Quality/FVG /Shabco Milling - PFC installation completed in 2013/15 - 2150kvar
 Hi Protein foods/Savanna Beef – PFC installation completed in 2013/15 – 500kvar
 Choma Milling/Simba Milling – PFC installation completed in 2013 – 2250kvar

Zamanita/Novatek/Farmfeed – PFC installation completed in 2012/13 – 2250kvar
 La Farge – Ndola – PFC installation completed in 2012 – 3000kvar

Umcil – Trade Kings Kafue – PFC installation completed in 2011 – 2800kvar

Celebrating 50 years of
 manufacturing excellence in Zambia

2016

Tradeking

Main LV panel for Zimbabwe plant
800 kvar automatic power factor correction panel

Amf panels -2 lusaka

Maint LV panel modification works
Power panels

Shino Hydro Plant (Kafue Gold)
Main power distribution boards -06 units.

Yoyo Foods

Main LV panel
Power distribution boards -5 units.

Zams Milling

Main LV panel with amf panel
750 kvar automatic power factor correction panel

National Milling

Main LV panel (removed old panel and installed new panel at sight)
300 kvar capacitor panels -04 units.

Chilenge and Matero Hospital

Main LV panels
Power distribution boards – 75 units.
100 kvar power factor correction panels
Sub distribution boards
All light fittings prepared by EML.

Taj Pamodzi Hotel

300 kvar automatic power factor correction panels -02 units.
Main LV panel modification works

Accacia(New Plant)

Main power panel with amf
Power distribution panels -5 units.

Rekays Ndola Shopping Mall

Main LV panel
Sub distribution boards.





2015

BAXY Pharmaceuticals
250kvar Power Factor Panel

Quick Save
250kvar Power Factor Panel

Dangote Industries
LV Panels

Engen Chelstone Service Centre
Main LV panel
Power distribution panels

Shoprite Chingola
Main power distribution panel
Sub distribution boards

Shoprite Mongu
Main power distribution panel
Sub distribution board

Society House
Main LV panel
C/O panel

Power distribution d.bs

Olympic Milling Company
Power Factory Panel

Mopani Copper Mine
Shaft Hoist 550V Panel
550V SOB V52 Panel

Limeco Resources Ltd
Main LV panels
MCC panels -13 units.

Stanbic Bank Of Zambia
Main distribution boards
Submain distribution boards

Goldman Insurance
MV panel-1 and MV panel-2
Sub distribution boards

Zda-Henan GuojiDev.Co Ltd
Main feeder pillars-10 units.
Small feeder pillar -35 units.

Food Reserve Agency
300 kvar automatic powerfactor
correction panels -06 units
For mansa, mbala, kasama,
petauke, chipata, lundszi

2014

Tradeking
Power panels
Amf panels

Zambeef
Amf panel

Acacia
Amf panel

500kvar capacitor panel

Ae- Radio
Power distribution boards

Solwezi Civic Centre
Main LV panel
Sub distribution boards

Mopani Copper Mine
550V SOB Crusher Panel
400V Panel

Ndola Line Company
Emergency Panel for Genset

Mpongwe Milling
Power Factor Panel

Barrick Lumwana Mine
DB & Feeder Pillar

Limeco Resources Ltd
3200A busbar duct
MCC panels
Power distribution panels
Lighting c/o panel

Nanga Farm
750 kVA feeder pillar -2
500 kVA feeder pillar -1

Africonnect Zambia Ltd.
Battery charger enclosure-15 units.

Shoprite Kapiri Mphosi
Main distribution board
Sub distribution boards





Mindola change house 380 volts board for Mopani Mines Plc



Auxiliary distribution board for ZESCO Ltd.



Type tested design of a power control centre for Kafue Gorge Power Station

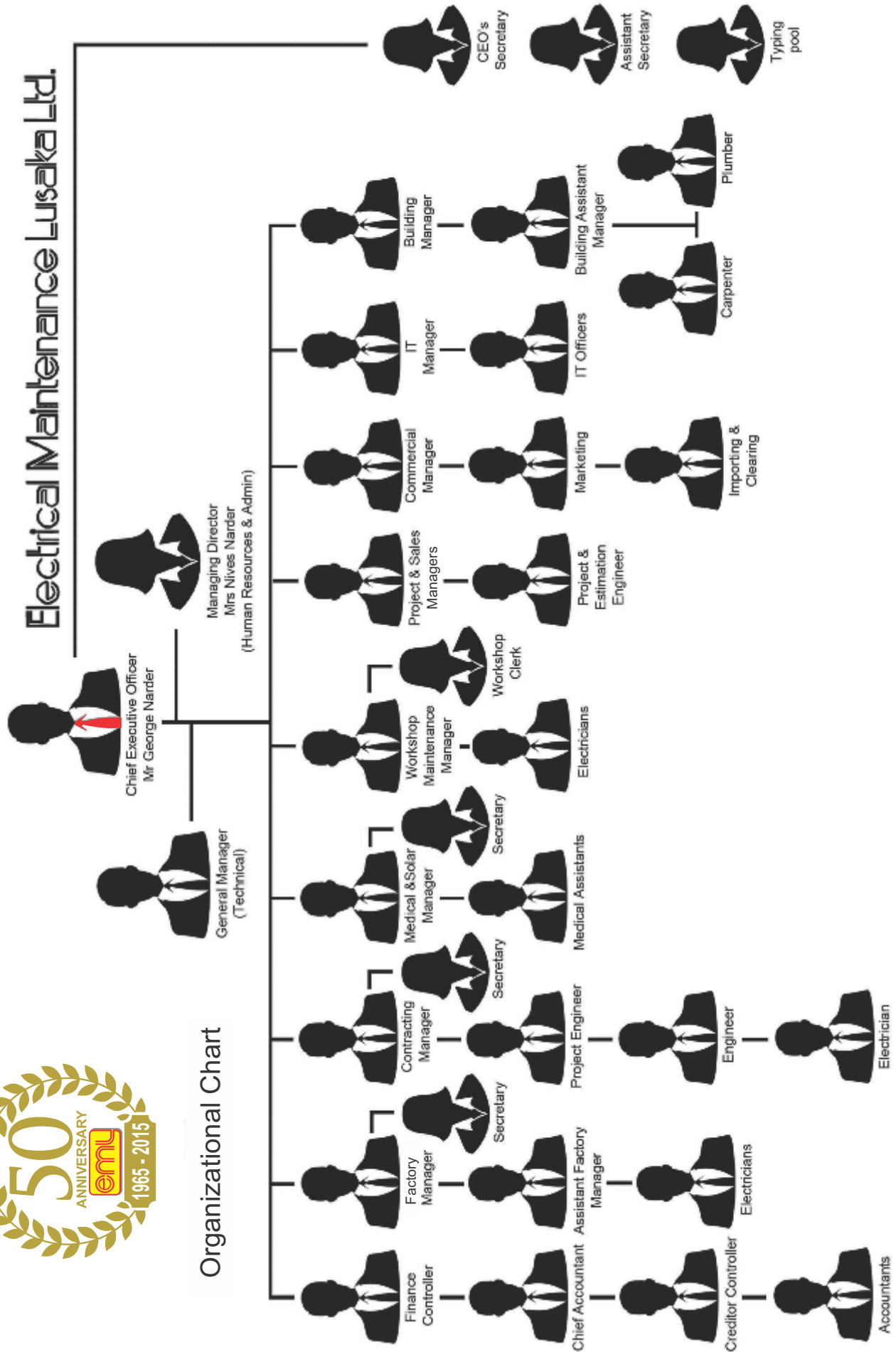


Power boards ready for delivery to Synohydro Ltd.



Electrical Maintenance Lusaka Ltd.

Organizational Chart



Electrical Maintenance Lusaka Ltd is a privately owned company with over 50 years' experience of doing business in Zambia. It is currently the most diversified electric and electronic engineering company in the country.

The company's main business continues to be manufacturing, construction, wholesale and includes solar, healthcare, control and instrumentation, motor repair and rewinding, light and panel manufacture and Power Factor Control solutions on both MV and LV.

EML has a strong focus on continuous improvement, offering innovative energy saving solutions (such as LED) and quality service to the client. The company's success is reflected in the growth of its client base, business expansion and stability in the market.

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