# GALVANIZED STEEL WIRE

# HOT DIPPED









### ROOFINGS KENYA LIMITED (RKL)

Founded by Dr. Sikander Lalani, Roofings Group launched operations in 1994 as a small but determined business. Today, Roofings is a trusted brand and a crown jewel in the manufacturing sector having a far-reaching influence across the East and Central African steel and plastic market space.

Roofings divided its pioneer establishment in Uganda into Roofings Limited (RL) and Roofings Rolling Mills Limited (RRM), in order to specialize and focus on producing world class steel and plastic products. This proved to be successful and led to the birth of Roofings Kenya Ltd.

Due to the growing rates of urbanization, industrialization and infrastructure development, the construction sector is maturing at a very fast pace. Therefore, the availability of high-quality construction products is very important. The decision for Roofings to enter the Kenyan market was guided by this growing demand for quality products. Roofings Group has grown exponentially over the last 26 years on the back of our ethical business practices, high level of technology deployed and continuous investment in capacity expansion. It is with the same promise in mind that we bring to you Roofings Kenya Limited (RKL).

RKL is set to become the pinnacle of the construction industry in Kenya. It is currently in phase one of setting up a game-changing steel complex on 70 acres of land in Mazeras. Upon completion of phase one, RKL's Steel Complex will produce 40,000MT of Galvanized Steel Wire per annum.

ROOFINGS KENYA LIMITEI



### **PRODUCT QUALITY ATTRIBUTES:**

The Company is leveraging on Roofings Group experience of over 10 years in producing quality galvanized wire. Employing the latest cutting edge European technology from Belgium and Italy, the plant is capable of producing galvanized wire with the following parameter ranges hence meeting a variety of applications:

- Zinc coating mass ranging from 40GSM to 350GSM.
- Diameter range from 0.8mm to 6.0mm.
- Tensile strength of between 450MPa to 2000MPa.

Manufacturing will contribute 200% of the country's GDP

# RKL'S CONTRIBUTION TO THE ECONOMY

Roofings Kenya Limited is establishing an innovative tech-driven manufacturing plant that seeks to enhance the manufacturing capacity of the country; when appropriately managed, this plant will eventually contribute towards enhancement of Kenya's GDP.

It will also create a wealth of employment opportunities, increase tax revenue, support the ongoing investment in electricity, earn foreign currency and enhance value addition within Kenya.

Source: https://www.president.go.ke/



We promise our stakeholders that we are **"The Strength** of the Nation". It is through this that we will endeavour to strengthen Kenya in a number of ways:

On full production of about 4,500 tons per month, that is, 54,000 per annum, the country will save an import bill of Galvanized wire of close to USD 60,000,000. The value addition to this effect of approximately USD 21,000,000 that is about 35%. This is in addition to job creation, tax contribution as well as supplying other manufacturers in the country and East Africa.

### PLANNED NUMBER AND CAPACITIES STAFF TO BE EMPLOYED

At full capacity the company projects to directly employ 100 people for phase one.





### Corporate Social Investment (CSI)

At Roofings, Ubuntu – the African philosophy of community over self, defines our approach, focus and thinking within the CSI framework. Through the Forever Foundation, our CSI Framework focuses on rewilding, education, and health; and are greatly aligned with the United Nations Sustainable Development Goals (SDGs); SDGs 3, 4, 6, 9, 11, 12, 13, 15, and 17.

As part of our DNA, we are also socially invested in systems that ensure sustainable manufacturing and business management. We have heavily invested in having state-of-the-art machinery and systems that do not only deliver quality work out-put but also ensure environmental safety and compliance to international standards. We focus on and ensure recycling for all waste: - steel, plastics, and even elements like acid through acid regeneration. We have Effluent Treatment, Air Pollution Control, and Energy Management Systems.



#### FOREVER FORESTRY – Rewilding

This portion of Forever Foundation emphasizes the need for sustainable co-existence with nature by recognizing the impact of our operations on the environment and finding collective ways to create awareness, train communities, offer rewilding options, while still leading on by example.

Currently we distribute over 30,000 seedlings monthly, free of charge, to different communities, focus on urban farming trainings with communities.



#### FOREVER HEALTH - In love with life

This program aims at showing our leadership in contributing to better wellness and healthcare in the societies where we operate. For example, our Chairman Dr Sikander Lalani, an executive board member of Uganda Sickle Cell Rescue Foundation, is spearheading efforts to create a Sickle Cells Management Centre in Uganda. In response to the COVID challenges, we took lead on providing free oxygen to hospitals. In Uganda and Kenya, we have supported communities to access cleaner water.



#### FOREVER EDUCATION – Putting children first

Train a child, train the nation! In our push to be at the forefront of strengthening nations, this is pivotal. We focus on supporting schools, skilling projects for young adults, and involving staff to support these arrangements. We are currently supporting a primary school in Mukono, as a pilot case. We have several skilling projects including knitting, pad making for the girl child, yoga, and carpentry yet to be set up. We will seek to continue such engagements in Kenya.

**Forever Foundation** – because we believe that together we should aim for a nation that thrives for generations to come.



### **PRODUCT QUALITY SCOPE:**

We offer galvanized wire as per the quality scope below:

Wire Diameter Range:	0.80 - 6.00mm
Tensile Strength:	420 - 2000MPa
Zinc Coating Mass on Wire:	40 - 350GSM

#### MARKET AND APPLICATION OF PRODUCT:

Our quality galvanized wire has a wide range of applications both as a final product and majorly used as a raw material for manufacture of finished products.

Below are examples of common applications and use:

1. Cable Industry:

#### a) Armouring Electric Cables

Galvanized wire is added to electric cables to provide an armouring that increases mechanical strength and protection of the cables.



1. Conductor (Cu/ Al) 2. Insulation (XLPE) 3. Bedding (PVC) 4. Armouring (Al / Steel) 5. Sheath (PVC)

### b) Aluminium Conductor Steel Reinforced (ACSR) Conductors

Overhead ACSR conductors add galvanized wire at their core to improve on their mechanical strength and also support weight of cable



2. Construction:

#### a) Gabions

Retaining gabions are constructed out of woven galvanized wire.

### b) EPS panels

Modern building techniques that use EPS technology involve use of EPS panels which are a combination of galvanized welded mesh and expanded polystyrene. Welded mesh is fabricated using galvanized wire.

#### 3. Fencing:

Conventional and standard fencing options involve use of galvanized wire fabricated to different products. Fencing products made from galvanized wire include:

- a) Chain link
- b) Barbed wire
- C) Razor wire
- d) Welded mesh



## WIRE DRAWING PROCESS Process Flow



# HOT DIPPED WIRE GALVANIZING LINE

Hot-dip galvanization, a form of galvanization, is the process of coating iron and steel with zinc, which alloys with the surface of the base metal when immersing the metal in a bath of molten zinc. This serves to protect the steel from rusting and corrosion. Galvanized wire is used for a wide range of applications such as fencing (barbed wire, chain-link, razor wire), armoring electric cables and reinforcing/increasing mechanical strength of over-head aluminium electric conductors.



Chain link



Barbed wire



Cable wire



### GALVANIZING PROCESS Process Flow



#### QUALITY CHECKS/ LABORATORY CHECKS

TEST	DESCRIPTION
Tensile strength test	This is a measurement of the force that the wire can take before breaking.
Yield stress test	This tests the magnitude of the stress at which the wire permanently deforms.
Elongation test	Is a test of the degree to which the wire may be bent, stretched, or compressed before it ruptures.
Zinc stripping test	This is a measurement used to ascertain the zinc coating mass (grams per square meter).

#### STANDARDS/ ISO CERTIFICATIONS

STANDARD CODE	DESCRIPTION	
KS 190: PART 1: 1987	Specification for stranded aluminium conductors steel-reinforced and galvanized steel wires for reinforcing aluminium conductors.	
KS 04-290: 1981	Specification for galvanized mild steel wire for armouring of electric cables.	
DEAS 135:2019	Steel wire products for fencing – Specification.	

Our manufacturing plant in Mombasa is the largest in East Africa.

#### ISO MANAGEMENT SYSTEMS CERTIFICATION

ROOFINGS LIMITED	
ISO 9001:2015	Quality Management System
ISO 14001:2015	Environmental Management System
OHSAS 18001:2007	Occupational Health and Safety Management System

#### ROOFINGS ROLLING MILLS - PHASE 03

ISO 9001:2015	Quality Management System	
ISO 14001:2015	Environmental Management System	
OHSAS 18001:2007	Occupational Health and Safety Management System	

#### ISO MANAGEMENT SYSTEMS CERTIFICATIONS

**ROOFINGS ROLLING MILLS - PHASE 02** 

ISO 9001:2015

ISO 14001:2015

BS OHSAS 18001:2007

ROOFINGS ROLLING N	/ILLS - PHASE 01
ISO 9001:2015	Quality Management System
ISO 14001:2015	Environmental Management System
ISO 45001:2018	Occupational Health and Safety Management System

Quality Management System

Environmental Management System

Occupational Health and Safety Management System

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#### Investor of the Year Award 2014 Authorized Economic Operator (AEO) 2008 – 2020





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