



**KAIRUKI PHARMACEUTICALS**  
**Industry LTD**

## PROGRESS REPORT



Oblique View of the Factory Building and Powerhouse; April 2022

**AS OF MAY, 2022**

## 1.0 INTRODUCTION

Kairuki Pharmaceuticals Industry Ltd (KPIL) based in Pwani Region started production and supply of pharmaceuticals products in December 2021 after securing TMDA permit.

TMDA licensed and registered pharmaceuticals products are:-

- |   |                         |
|---|-------------------------|
| i. Sodium Chloride                      | vii. Metronizadole 0.5% |
| ii. Compund Ringer Lactate              | viii. Paracetamol       |
| iii. Dextrose 5% & Sodium Chloride 0.9% | ix. Ciproflaxicin 0.2%  |
| iv. Dextrose 5% (D5)                    | x. Fluconazole          |
| v. Dextrose 10% (D10)                   | xi. Manitol             |
| vi. Dextrose 50% (D50)                  |                         |

## 1.1 PRODUCTS INFORMATION

With Prospective machines will be phased, starting with 6000 Polypropylene Bottles (PP Bottle) per hour for 500 milliliters and 7000 bottles per hour for 100milliliters.

2000 non pvcsoft bags per hour have been accommodated in the design for future expansion.

Initially the manufactured large volume fluids shall include; Sodium Chloride 0.9%, Ringers Lactate, Dextrose Saline, Dextrose 5% and Mannitol. Other products to be manufactured in the plant will include smaller volume (100ml) parenteral medicine, i.e Paracetamol, Metronidazole, Fluconazole and Ciprofloxacin during the first phase and medical products in the second phase.

Kairuki Pharmaceuticals Industry Limited (KPIL) is currently installing state-of-the art machinery for a pharmaceuticals factory in Kibaha District, Coast Region, Tanzania worth an investment of 16 million USD. Expected to come on stream in the first half of 2021, the factory will feature two production lines with annual production capacity ranging between 57 – 64 million units. Initially, the KPIL factory will involve itself with the production of parenteral (IV/Intravenous fluids) based pharmaceutical products. The company is slated to establish a strong presence for its products not only in Tanzania but also in the African sub-continent in general during the next three years. The Project is being implemented concurrently into two phases:

### a) Building structures

Petra Construction Co. Ltd was contracted under Design and Build for details designs and construction of the following structures:

- |                                   |                                      |
|-----------------------------------|--------------------------------------|
| (i) Factory warehouse             | (vii) Power House                    |
| (ii) Storage Godown               | (viii) Boiler                        |
| (iii) Office Block                | (ix) Waste Water Treatment           |
| (iv) Staff Hostel & Canteen       | (x) Power House                      |
| (v) 1000m <sup>3</sup> Water Tank | (xi) Outdoor Change rooms and shower |
| (vi) Boundary wall                | (xii) Guard post                     |

b) The internal factory design, pharmaceutical machinery and Clean Room production, installation validation and training carried out by IVEN PHARMATECH ENGINEERING COMPANY of Shanghai China under turnkey arrangement.

## 1.1 Phase I: Contract Information

<b>Employer</b>	<b>Kairuki Pharmaceuticals Industry Ltd</b>
<b>Designer &amp; Builder</b>	Petra Construction Co. Ltd
<b>Site Possession Date</b>	3 <sup>rd</sup> April 2018
<b>Commencement Date</b>	17 <sup>th</sup> April 2018
<b>Contract Period</b>	36 Weeks
<b>Original Date of Practical Completion</b>	16 <sup>th</sup> December 2018
<b>Defects Liability Period</b>	12 months
<b>Revised Date of Practical Completion</b>	10 <sup>th</sup> March 2020

**Figure 1:** Contract Particulars

## 1.2 Works Progress

<b>Building</b>	<b>Works in Progress</b>	<b>Percentage Progress</b>
<b>Factory Warehouse</b>	Finishing works on progress	95%
<b>Storage Godown</b>	Finishing works on progress	95%
<b>Office Block</b>	Finishing works on progress	95%
<b>Hostel &amp; Cafeteria</b>	Finishing works on progress	95%
<b>Waste Water Treatment Tank</b>	Foundation works	95%
<b>Boiler House</b>	Finishing works on progress	95%
<b>Changing Rooms (2nr)</b>	Finishing works on progress	95%
<b>Fence &amp; Gates</b>	Skimming and paint works	95%
<b>1000m<sup>3</sup> Water Tank</b>	Interior paint	100%
<b>Power House</b>	Natural gas piping incomplete	75%
<b>Security House</b>	Skimming and paint works	80%
<b>Landscape</b>	Base to receive paving blocks, garden,	46%

**Figure 2:** KPIL Superstructure construction progress in pictures





## 2.1 PRODUCTS INFORMATION

### *Products at the moment*

#### Registered Products

- Sodium Chloride (0.9%w/v) 500mls (NS)
- Compound Ringer Lactate 500mls (RL)
- Dextrose (5%w/v) & Sodium Chloride(0.9%w/v) 500mls(DNS)
- Dextrose (5%w/v ) 500mls (D5)
- Dextrose(10%w/v) 500mls (D10)
- Sodium Chloride (3%w/v)500mls

#### Registration in Progress

- Dextrose(50%w/v) 100mls (D50)
- Fluconazole (0.2%w/v)100mls I.V
- Ciprofloxacin (0.5%w/v)100mls I.V
- Metronidazole (0.5%w/v)100mls I.V
- Sterile water for Irrigation 500mls
- Mannitol 20%w/v 500mls

## 2.2 INSTALLATION OF MACHINES

Machine installation has been completed by 90% with some machines not yet imported like back steam boiler, CNG piping and daughter station installations, factory power back up systems and storage godown ventilation systems etc.



**Figure 1 Clean room work**





Figure 2 installation of 8tons boiler



Figure 3 Solution preparation tank at site



Figure 4 AHU ducts works on progress



Figure 5: Laboratory AHU at site

## 2.4 CHALLENGES

In the process of establishing a pharmaceutical factory in Zegereni area, Coast Region, we have had to contend with the following challenges:

### (i) Effect of Corona COVID -19

Corona pandemic has delayed the project for almost half a year, as machine installation was planned since February 2020 but started in September 2020 due to lockdown from various countries, flights limitations and international.

### (ii) Non-existent and or inadequate Infrastructure.

The nearly 5 km dirt road, that connects our factory to the main road, becomes impassable when ferrying construction materials, equipment and machines especially during the rainy season. This impeded progress, especially during the

transportation of highly sensitive and fragile equipment slated for transportation to the site between March and June.

**(iii) Lack of steady and adequate power supply.**

Though regionally designated as an industrial area, the Zegereni area, in which our factory is located and which already boasts the presence of more than 15 factories, does not have steady and adequate power supply.

**(iv) Lack of natural gas**

There are four natural gas generators at site with 350Kw each but can't operate as negotiation and discussion are going on with TPDC for natural gas. The pending matter has led to another importation of diesel as backup which will in turn requires more than twelve weeks for production and shipping.

**(v) Clearance of Pharmaceuticals Machines**

There were substantial delays on clearance of various machines like gas generators, Air handling unit (AHU), pharmaceuticals clean room materials which was caused by mis-conception of respective items hence their harmonized system (HS) codes. On top of time delays was a huge tax which was out of project budget.

**(vi) Challenges with regard to securing loans from our local banks.**

Most our local banks prefer to lend their money to ongoing/established projects rather than start-ups or green field projects, especially high-risk pharmaceuticals manufacturing projects in their attempt to minimize risk.