

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

East London Industrial Development
Zone - Bushveld Energy

Complete

Client/Site Name

East London Industrial Development Zone - Bushveld Energy

Billing Address

East London Industrial Development Zone SOC Ltd P O Box 5458 GREENFIELDS 5208

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.9855

Prepared by

Keith van Onselen

Conducted on

18.06.2024 14:52 SAST

Site Location

East London IDZ EC 5201
South Africa

Disclaimer

We have pleasure in attaching our inspector's report.

Whilst every care is taken in the preparation of the report which describes the conditions as found, such report is not a guarantee carrying responsibility for results and neither this Company nor any of its employees or agents shall be liable for any loss or damage of whatsoever nature and howsoever caused, (whether by actual or alleged negligence or otherwise), in any way arising out of the acts or omissions of the Company and/or its employees or agents aforesaid.

The report is based upon the visual inspection of the external condition of the equipment where accessible without having to provide scaffolding, ladders, staging, lighting and not requiring the removal or displacement of any temporary or permanent structure, fitting or fixture.

If there are any points arising on which you require clarification, kindly communicate with the undersigned. Assuring you of our best attention at all times.

Confidentiality

In order to maintain the integrity and credibility of the inspection processes and to protect the parties involved, it is understood that the inspectors will not divulge to unauthorized persons any information obtained during this inspection unless legally obligated to do so.

Yours faithfully,

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



Nico van Loggerenberg
Managing Director

1. Report Summary

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



REGISTRATION NUMBER: 1970/010833/07

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INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

B - Full Protection, Clearance
Certificate Issued

The platforms and walkways as highlighted in section 9 must be attended to.

Please Note:

The Clearance Certificate is issued subject to the items in the report being attended to.

Standard

12th Edition

ASIB Contract No

UNC.9855

Client Order No

UNC.9855

Was the sprinkler system design in order

Yes

Was the water supplies in order

Yes

Was the pump room in order

Yes

Was the installation control valves in order

No

Refer to Installation Control Valves - Section 7.

Item No. 7.4. Block plan.

The storage section on the left of the building has a higher design density. This must be indicated on the block plan

Was the storage in order

Yes

2. Hand Fire Appliances

Hose Reels - 30 metres ☒

Number:

9

Hand Fire Appliances - One unit per 100 m² of floor area.

DCP 9 kg ☒

Number:

11

CO² Gas 5 kg ☒

Number:

5

Clear access to the hand fire appliances must be maintained at all times.

3. Occupancy & Storage Guidance

Percentage Hazard.

% Ordinary Hazard

25
From 0 to 100

% High Hazard

75
From 0 to 100

Stack height signs not less than 500 mm by 500 mm in size must be prominently displayed at the maximum level of the allowable storage height in all storage and process risk areas.

Occupancy / Process Risk

Occupancy/Risk

Occupancy/Risk 1

► **Ordinary Hazard / High Hazard**

Ordinary Hazard

► **Select Occupancy / Process Risk**

Life Safety

Specify Occupancy

Offices

Specify Occupancy / Process

Offices

Category

CAT I

Design Density (mm/min)

5 mm/min

Occupancy/Risk 2

► **Ordinary Hazard / High Hazard**

High Hazard

► **Select Occupancy / Process Risk**

Process Risk

Storage Risk

Specify Process

Manufacture Modified Vanadium Oxide (MVO)

Category

CAT II

Design Density (mm/min)

7,5 mm/min

Where goods of differing categories are stored within the same area, it is the stack height limitations of the goods with the highest category that will apply.

► **Product Stored**

Modified Vanadium Oxide (MVO)

Category	CAT I
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Storage

4. Sprinkler System Design

Building

Building 1

Building Name

Bushveld Energy

Date of First Inspection

Bushveld Energy

Original Installer

Fire Sprinkler Installations

Extension By

NA

Building Area m²

1933

Height of Building in meters

16

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Void Sprinklers

Canopy Sprinklers

Number of Sprinklers

473

Calculations

Hydraulic Calculations

Area of Operation

Area of Operation 1

► Area of Operation

Pump Duty

Flows & Pressures

9000 l/min @ 1000 kPa

Area of Operation 2

► Area of Operation

Roof Most Remote Area of
Operation

Flows & Pressures

8250 l/min @ 655 kPa

This flow appears extreme for 7,5 mm design density. To be checked and verified as correct

Area of Operation 3

Flows & Pressures

8300 l/min @ 325 kPa

This flow appears extreme for 7,5 mm design density. To be checked and verified as correct

Additional Sprinkler System Designs Required

Yes

The storage section on the left of the building has a higher design density. This must be indicated on the block plan

The following documentation is required and must be submitted to the ASIB

As the majority of the required documentation for the sprinkler system has yet to be submitted, we are unable to comment on the accuracy of the design.

7. Installation Control Valve(s)

7.1 Sprinkler control valves accessible

Yes

Valve Cabinet

Valve Cabinet 1



Photo 1

Number of Alarm Valves Installed

1 x 200 mm

7.2 Sprinkler Valve Location Plate Installed

Yes

7.3 Fire Brigade Booster Pressure Limitation Plate

Yes

7.4 Block Plan Installed

Yes

7.4.1 Is the block plan labelled in accordance with the areas fed by the sprinkler control valve assemblies

Yes

7.4.2 Are the correct installation details recorded on the block plan

No

The storage section on the left of the building has a higher design density. This must be indicated on the block plan



Photo 2

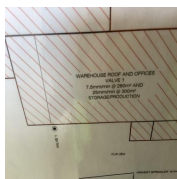


Photo 3



Photo 4

A block plan must be provided with the following indicated thereon:

Particulars of the water supplies.

The occupancy of each building.

The hazard class of the system.

The extent of the protection.

The calculated flow and pressure requirement of the system.

A cross-section of the full height of the building or buildings indicating the height of the highest sprinkler with respect to a stated datum level.

12th Edition Requirement

The flows and pressures for the remote and favorable areas of operation recorded on the block plans must reflect the maximum pressure (Pmax) and the maximum flow (Qmax) respectively.

7.5 Sprinkler Valve Instruction Chart	Yes
7.6 Is a sprinkler spares box present	Yes
7.6.1 Was the spares box contents accessible	Yes
7.6.2 Are the spares quantities correct	Yes
7.7 By Pass Arrangement Installed	Yes
7.8 Fire Brigade Booster Connections Installed Correctly and Accessible	Yes
7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet	Yes
7.10 Flow Switch Installed Correctly	Yes
7.11 Manifold Correctly Supported	Yes
7.12 Riser Mains Correctly Supported	Yes
7.13 Riser Mains Externally Located	No
7.14 Flow Measuring Device Installed.	Yes
<div data-bbox="181 1695 360 1872" data-label="Image"> </div> <div data-bbox="394 1695 571 1872" data-label="Image"> </div> <div data-bbox="177 1870 266 1899" data-label="Caption"> <p>Photo 5</p> </div> <div data-bbox="389 1870 478 1899" data-label="Caption"> <p>Photo 6</p> </div>	
Flow Test Results	Pass

Recorded Flow and Pressure

8500 l/min @ 1040 kPa

7.15 Correct Pressure Gauges Installed	Yes
7.16 Correct Gauge Cocks Installed	Yes
7.17 Flanges Short Bolted	No
7.18 Loose / Missing Bolts, Nuts & Washers	No
7.19 False Alarm Prevention Pump Installed	N/A
7.20 Drain & Test Pipes Installed Correctly	Yes

7.21 Weekly tests of the installation control valves alarm bell must be carried out with the alarms sounding for at least thirty seconds.

All water pressure gauge readings must be checked and recorded.

The testing and records should be carried out by a member of staff delegated to do this.

7.22 Trunk Main Pressure (kPa)

1100

7.23 Installation Pressure (kPa)

1340



Photo 7

7.24 ASIB Overhaul Date Tag No

New Installation

The installation control valves must be overhauled three years after date of installation by an ASIB approved and registered installer, and once every 3 years thereafter. An ASIB valve overhaul date tag must be attached to the valve set after completion of the overhaul.

7.25 Alarm Motor & Gong Test	Passed
7.26 Are All Valves in the Correct Positions	Yes
7.27 Are All Valves Secured	Yes

Non Compliance - Items

Recommendation Items

8. Storage

No storage was taking place at the time of inspection.



9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Other

Surfaces exceeding 1,0 metre in width.



Surfaces which exceed 1,0 metre in width will obstruct the water discharged from the sprinklers above which could result in an ignition beneath these surfaces not being controlled or extinguished.

The general obstruction is classed as 1,000 mm therefore sprinkler protection is required beneath any such obstruction which includes, but is not limited to;



Walkways, solid or open grid, and Work tables.

Location of Finding.

All areas that are wider than a meter and any enclosures.



Photo 8



Photo 9

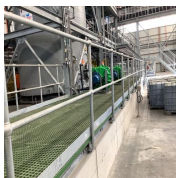


Photo 10

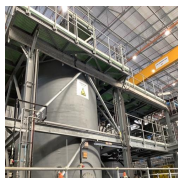


Photo 11



Photo 12



Photo 13

10. Proof of Inspection

Proof of inspection.

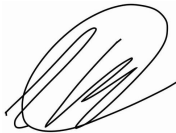
For and on behalf of client:



Camagwini Ngxokolo-Nomatye
20.06.2024 12:29 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:30 SAST

WARNING

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The primary function of the ASIB is to protect the interests of the end user and as a result, we constantly update the list of registered suppliers and installing companies.

These companies have proven that they are capable of installing, extending and servicing fire sprinkler systems to the correct standards.

We have had occasion to remove companies for valid reasons which are not confidential and include, but are not limited to, poor workmanship, design, fabrication, incorrect advice, lack of skilled staff, fraudulent quotations and financial instability.

It is important to note that if a company is not listed with the ASIB and carries out work on a sprinkler system we will not be in a position to issue a Clearance Certificate for the premises which, in turn, may place you at risk.

In selecting your service provider, it is important to appreciate that the ASIB is not seeking to infer that a non-listed service provider is necessarily not capable of offering the required service to an appropriate standard. What the ASIB is saying, is that the ASIB is not in a position to give you the assurance that a non-listed provider concerned has demonstrated that it complies with the ASIB standards. In addition, because the ASIB is unable to fully inspect an installation (which by its nature has many inaccessible components), you will appreciate that the ASIB is also unfortunately not in a position to issue a Clearance Certificate in relation to an installation done by a non-listed company.

We advise you to check the listing status of the service provider you choose especially if there is any uncertainty.

You can access our website at <http://www.asib.co.za> which is current or phone our offices at 011 642 1703 for verification.

Email:

Email: 1

Recipient

Mteteleli@elidz.co.za

Email: 2

Recipient

camagwini@elidz.co.za

Media summary



Photo 1



Photo 2

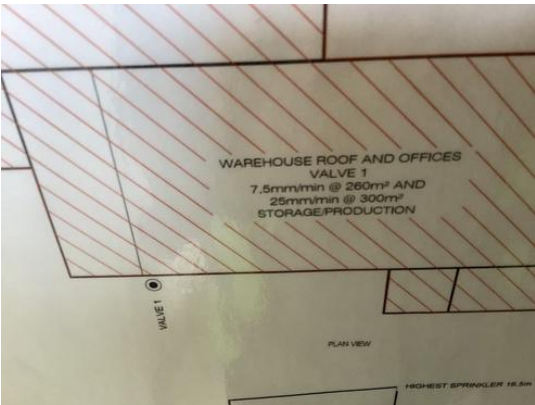


Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13