

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

East London Industrial Development
Zone - Auria - Building GE1

Complete

Client/Site Name

East London Industrial Development Zone - Auria - Building GE1

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC..9084

Prepared by

Keith van Onselen

Conducted on

18.06.2024 12:37 SAST

Site Location

Ikhala Road
East London
EC
5201
South Africa
(-33.05872133311132,
27.85389900846458)

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

1407 IMBALI
CNR LOUIS BOTHA AND
TUDHOPE AVENUES
BEREA
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2198

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E-MAIL: asib@asib.co.za
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HOUGHTON
2041

INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

C - Full Protection, Clearance
Certificate not Issued

Clearance certificate withheld due to the following:

Storage - See Report



Sprinkler System - Excessive Fault



Standard

12th Edition

ASIB Contract No

UNC..9084

Client Order No

004203

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.

Was the storage in order

No

2. Hand Fire Appliances

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

Hand fire appliances date of the last service:

11/2023

Are the hand fire appliances due for their service.

No



Photo 1

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

3. Occupancy & Storage Guidance

Percentage Hazard.

% Ordinary Hazard

10
From 0 to 100

% High Hazard

90
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**

High Hazard

► **Select Occupancy / Process Risk**

Process Risk

Storage Risk

Specify Process

Moulding of automobile carpets

Category

CAT II

Design Density (mm/min)

ESFR

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**

Moulded automobile carpets
Raw materials

Category

CAT III

Storage

Method

Method 1

Storage Method	Free Standing / Block Storage
Design Density (mm)	ESFR
ESFR K-Factor	
36	
Roof Height (m)	15,7
Storage Height (m)	
10,6	

4. Sprinkler System Design

Building

Building 1

Building Name

East London Industrial Development Zone - Auria - Building GE1

Date of First Inspection

2021

Original Installer

Fire Sprinkler installation

Extension By

NA

Building Area m²

11500

Height of Building in meters

15,702

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Canopy Sprinklers

Number of Sprinklers

2070

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

7500 l/min @ 575 kPa

Area of Operation 3

► **Area of Operation**

Roof Most Favourable Area of
Operation

Flows & Pressures

7345 l/min @ 495 kPa

7. Installation Control Valve(s)

7.1 Sprinkler control valves accessible

Yes

Valve Cabinet

Valve Cabinet 1

Location:

South side



Photo 2

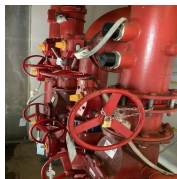


Photo 3

Number of Alarm Valves Installed

2 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

Yes

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

No

Installations must be fitted with fire brigade booster connections which will enable the fire brigade to pump water into the installation using their own equipment.

It is recommended that the fire brigade pressure booster inlets must be repositioned so that they are located external to the installation control valve cabinet and easily accessible.



7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet

Yes

7.10 Flow Switch Installed Correctly

No

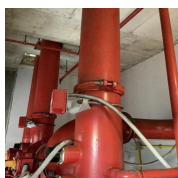


Photo 4

The flow switch must be fitted downstream from the alarm valve with a 25mm test pipe installed at least 2 pipe diameters downstream of the flow switch.

7.11 Manifold Correctly Supported

Yes

7.12 Riser Mains Correctly Supported

No

The riser main must be properly supported in accordance with the rules.

7.13 Riser Mains Externally Located

No

7.14 Flow Measuring Device Installed.

Yes

Flow Test Results

Fail

Recorded Flow and Pressure

Not installed as per manufacturer's specifications. To be corrected

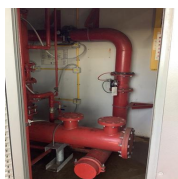


Photo 5

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)

1080

7.23 Installation Pressure (kPa)

1200

7.24 ASIB Overhaul Date Tag No

No

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

No

All valves must be secured in their correct operative positions with light chains and padlocks that are keyed alike.

Non Compliance - Items

Recommendation Items

8. Storage

Are the storage heights exceeded.

Yes

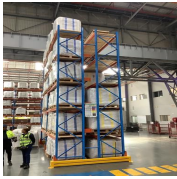


Photo 6

The storage heights must be maintained in accordance with the maximum allowable stack heights as detailed in this report. Should this not be possible, intermediate level protection is deemed to be mandatory.

Are Excessive Height Conditions Applicable

No

The longitudinal and/or transverse flue spaces are not being maintained



The minimum longitudinal and transverse flue spaces shall not be less than 150 mm.

Location:

Racks

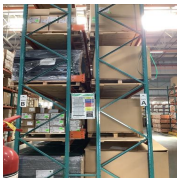


Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12

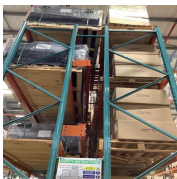


Photo 13

Shelves exceed 1,0 metre in width.



The shelves must be reduced to a maximum width of 1,0 metre or intermediate sprinkler protection will be mandatory at each shelf tier level.

Location:

Warehouse

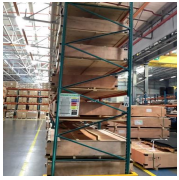


Photo 14



Photo 15

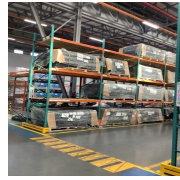


Photo 16

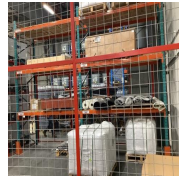


Photo 17

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Offices

System Issue

Issue

Issue 1

Finding

Pipe Support

Sprinklers dropped below level of the ceiling.



Sprinklers must be re-fixed to their original intended operating position. The hanger supporting it must be checked and, if necessary, re-secured.

Location of Finding.

Kitchen

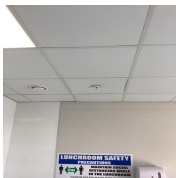


Photo 18

Issue 2

Finding

Sprinkler Spacing

Sprinkler protection must be extended in order to provide correct coverage.



Location of Finding.

Outside toilets
Boardroom

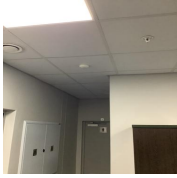


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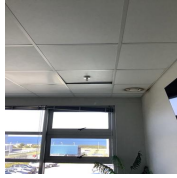


Photo 20

Issue 3

Finding

Partial Protection /
Communicating Areas

Portion of premises sprinkler protected with communicating sections that are not.



Partial protection can lead to a fire originating in the protected area radiating heat into the unprotected portion of the premises and starting secondary fires. The heat from these fires radiates or spreads back into the protected area causing excessive sprinkler operation.

Conversely, a fire originating in the unprotected portion will radiate heat or spread into the protected portion rapidly causing unnecessary sprinkler operation and overwhelming the sprinkler system installed.

Location of Finding.

Server room. It does have a 2 hour fire door fitted.

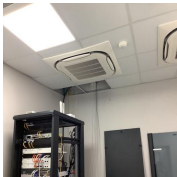


Photo 21

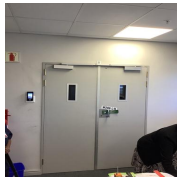


Photo 22

Area 2

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Partial Protection /
Communicating Areas

Portion of premises sprinkler protected with communicating sections that are not.



Partial protection can lead to a fire originating in the protected area radiating heat into the unprotected portion of the premises and starting secondary fires. The heat from these fires

radiates or spreads back into the protected area causing excessive sprinkler operation.

Conversely, a fire originating in the unprotected portion will radiate heat or spread into the protected portion rapidly causing unnecessary sprinkler operation and overwhelming the sprinkler system installed.

Location of Finding.

Warehouse offices/spares store and meeting room



Photo 23



Photo 24

Issue 2

Finding

Exposure Hazards

Storage too close to building.



Drencher heads required which are purpose made sprinklers designed to spray water over a surface to provide protection against fire exposure. It is not acceptable to use standard sprinkler heads with the fusible elements removed for the purpose of providing wall or face wetting. The drencher system must extend along the walls of the protected building to a distance of 15.0 metres beyond each end of the stored goods. The feed for the drenchers must be taken from the underside of the valves and not from the downstream side of the installation. The stop valve controlling the drencher installation shall be located near to the sprinkler control valves, but must be at least 10,0 metres from the goods stored or from the area where they are expected to operate.

Location of Finding.

Between canopy and transformer room



Photo 25



Photo 26



Photo 27

Issue 3

Finding

Partial Protection / Communicating Areas

Portion of premises sprinkler protected with communicating sections that are not.



Partial protection can lead to a fire originating in the protected area radiating heat into the unprotected portion of the premises and starting secondary fires. The heat from these fires radiates or spreads back into the protected area causing excessive sprinkler operation.

Conversely, a fire originating in the unprotected portion will radiate heat or spread into the protected portion rapidly causing unnecessary sprinkler operation and overwhelming the sprinkler system installed.

Location of Finding.

Plant rooms. To be Verified



Photo 28

Issue 4**Finding**

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

Main feed
Distribution mains

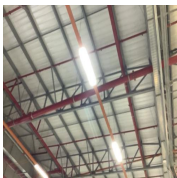


Photo 29

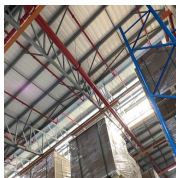


Photo 30

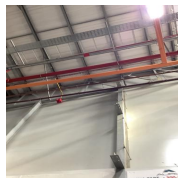


Photo 31

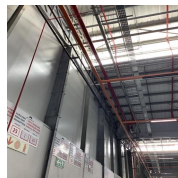


Photo 32

Issue 5**Finding**

Other

Specify Other.



ESFR Mechanical Ventilation (to be verified

Ventilation has been installed in conjunction with ESFR sprinkler protection.

It is imperative that the mechanical vents do not open automatically in a fire situation as the ESFR sprinkler system will be adversely effected which could result in the ESFR system failure.

It is important that the mechanical vents be manually operated and that the Fire Chief in charge of operations during a fire be able to make the decision whether it should be opened or remain closed.

It might also be advisable to zone the mechanical vents so as to have the option of opening all the vents at the same time or only certain zones.

Location of Finding.

Roof

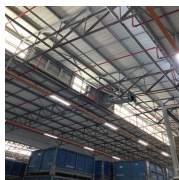


Photo 33

Issue 6

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.

Mezzanine platforms



Photo 34



Photo 35



Photo 36

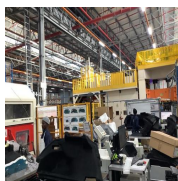


Photo 37

Issue 7

Finding

Other

Extraction Canopies.



Extraction canopies where these are designed to extract grease laden vapours or heat through a ventilation system must be fully sprinkler protected, inclusive of exhaust ducts and exhaust plenum chambers, using 141° Celsius operating temperature spray pattern type nozzles unless alternative protection is installed.

Location of Finding.

Assembly bays



Photo 38



Photo 39

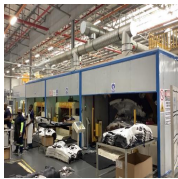


Photo 40

Issue 8

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.

Location of Finding.

Push through racks

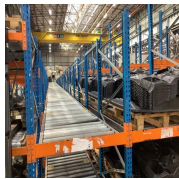


Photo 41



Photo 42

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
20.06.2024 12:32 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:33 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

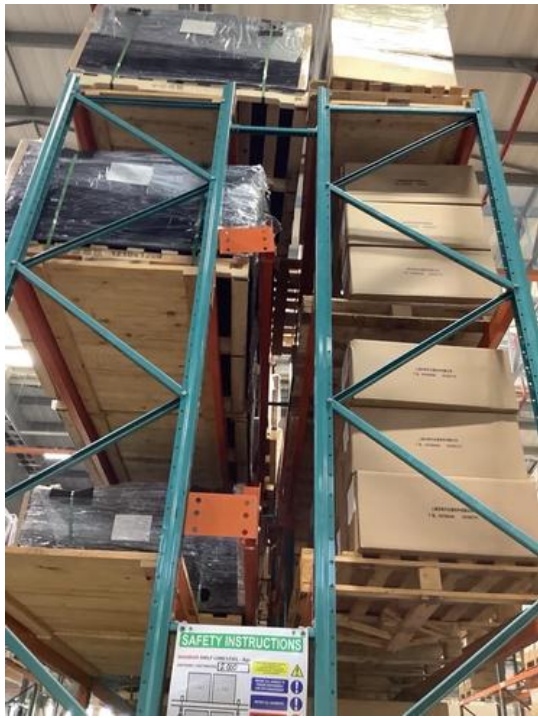


Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21

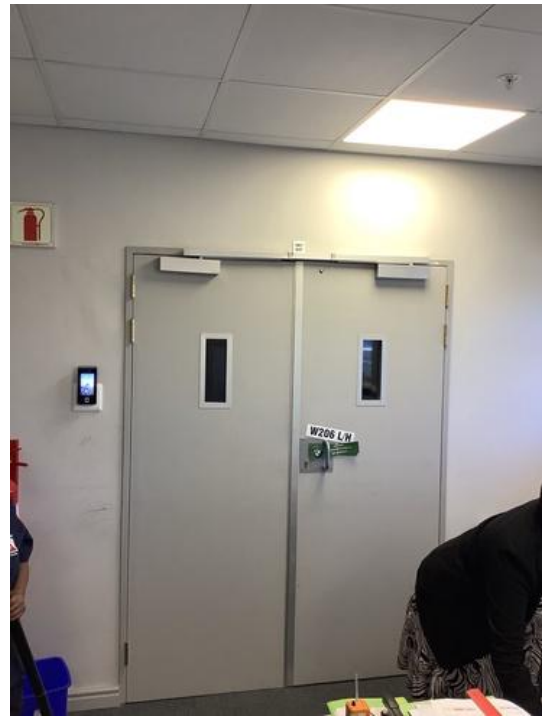


Photo 22



Photo 23



Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31



Photo 32



Photo 33



Photo 34



Photo 35



Photo 36

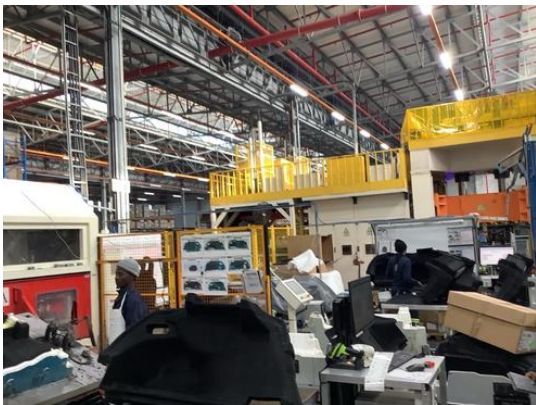


Photo 37



Photo 38



Photo 39

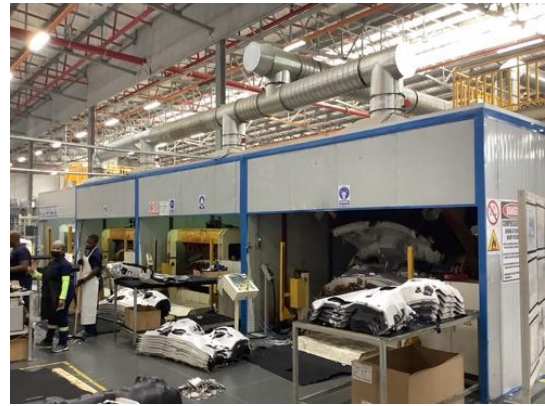


Photo 40

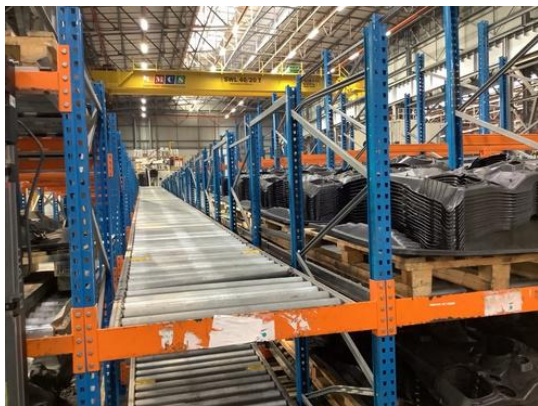


Photo 41



Photo 42