

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

East London Industrial Development
Zone Building HE1 (Polytech)

Complete

Client/Site Name

East London Industrial Development Zone Building HE1 (Polytech)

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.9263

Prepared by

Keith van Onselen

Conducted on

18.06.2024 11:53 SAST

Site Location

East London Industrial
Development Zone
East London 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

C - Full Protection, Clearance
Certificate not Issued

Clearance certificate withheld due to the following:

Water Supplies - See Report



In relation to the flow test arrangement

Sprinkler System - Excessive Fault



Standard

12th Edition

ASIB Contract No

UNC.9263

Client Order No

004203

Was the sprinkler system design in order

No

The roof height for this building exceeds what is allowable for ESRF sprinkler protection.
This must be addressed

Was the water supplies in order

No

Refer to Installation Control Valves - Section 7.

Item No. 7.14. Flow Measuring Device.

Was the pump room in order

Yes

Was the installation control valves in order

No

Refer to Installation Control Valves - Section 7.

Item No. 7.14. Flow Measuring Device.

Was the storage in order

No

- Refer to Storage - Section 8.

2. Hand Fire Appliances

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

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

Injection moulding

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**

Plastic components and 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)	Approximately 16
Storage Height (m)	
10,6	
Method 2	
Storage Method	Beam Pallet Racking
Design Density (mm)	ESFR
ESFR K-Factor	
36	
Roof Height (m)	Approximately 16
Storage Height (m)	
10,6	

4. Sprinkler System Design

Building

Building 1

Building Name

East London Industrial Development Zone Building HE1 (Polytech)

Date of First Inspection

2021/02/10

Original Installer

Fire Sprinkler Installations

Extension By

NA

Building Area m²

Approximately 7000

Height of Building in meters

Approximately 16

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Void Sprinklers

Cold Room Sprinklers

Canopy Sprinklers

Number of Sprinklers




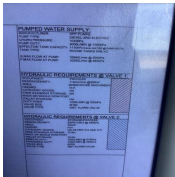
1025

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	
Additional Sprinkler System Designs Required	No

7. Installation Control Valve(s)	
7.1 Sprinkler control valves accessible	Yes
Valve Cabinet	
Valve Cabinet 1	
Location:	
South side	
<div>   </div> <div> <div>Photo 1</div> <div>Photo 2</div> </div>	
Number of Alarm Valves Installed	1 x 100 mm, 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	Yes
<div>   </div> <div> <div>Photo 3</div> <div>Photo 4</div> </div>	
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

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

Yes

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.
This must 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

No

The drain and test pipes discharge within the valve cabinet. This must be revised so they discharge externally to the valve cabinet.



Photo 6



Photo 7

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)

880

7.23 Installation Pressure (kPa)

1360



Photo 8

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

Yes

Non Compliance - Items

Item

Item 1

Non Compliance Items

► Description

Other

Maximum 1200 kPa

The system pressure has exceeded the maximum allowable pressure of 1200 kPa, this must be investigated and rectified by your installer.



Photo 9

Recommendation Items

8. Storage

Are the required clearances being maintained.

Yes

Are the storage heights exceeded.

No

At the time of inspection the storage heights were being adhered to and found to be in order.

Are Excessive Height Conditions Applicable

Yes

Does the system design cater for the excessive height condition.

Yes

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

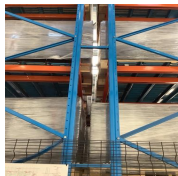


Photo 10

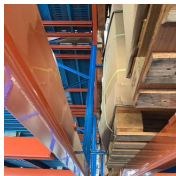


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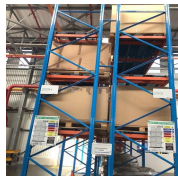


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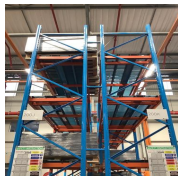


Photo 13

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

Risers to roof monitors



Photo 14

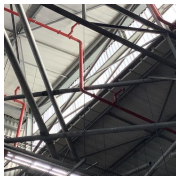


Photo 15

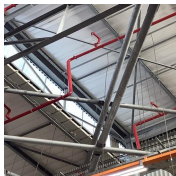


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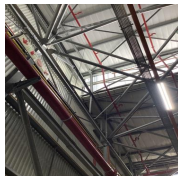


Photo 17

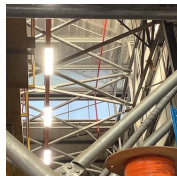


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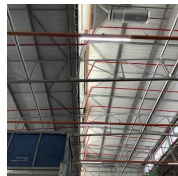


Photo 19

Issue 2

Finding

Pipe Support

Belt-to-belt hangers utilized.



Belt-to-belt hangers must be removed and the pipe work correctly supported.

Location of Finding.

Main feed

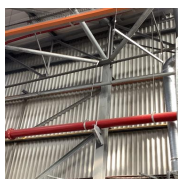


Photo 20

Issue 3

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.



Photo 21



Photo 22

Issue 4

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 monitors

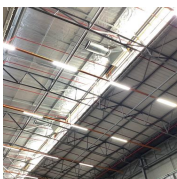


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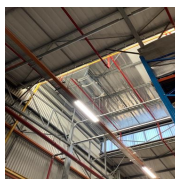


Photo 24

Issue 5

Finding

Sprinkler Heads

Distribution pattern of sprinklers affected.



Location of Finding.

Centre of cold room



Photo 25

Issue 6

Finding

Other

Specify Other.



The roof height for this building exceeds what is allowable for ESFR sprinkler protection.
This must be addressed

Area 2

Specified Area.

External Canopies

System Issue

Issue

Issue 1

Finding

Other

Specify Other.



Exposed / unprotected pipe work

Sprinkler pipe work must pass through a sprinkler protected area or be encased in a 2 hour fire rated enclosure.

Location of Finding.

Main feed



Photo 26

Issue 2

Finding

Other

Location of Finding.

ESFR combustibile roof sheets

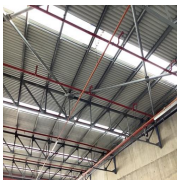


Photo 27

Issue 3

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

Distribution main

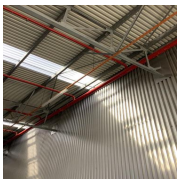


Photo 28



Photo 29

Issue 4

Finding

Other

Specify Other.



The installation of ESFR sprinklers in the canopies of this building are a non-compliance but will be accepted on this occasion on provision that these canopies are not allocated as storage areas. Only load and offload process to take place under these canopies.

Location of Finding.

Loading canopy



Photo 30

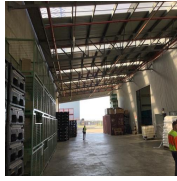


Photo 31



Photo 32

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
20.06.2024 12:34 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:34 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

Mteteleli@elidz.co.za

Media summary



Photo 1



Photo 2



Photo 3

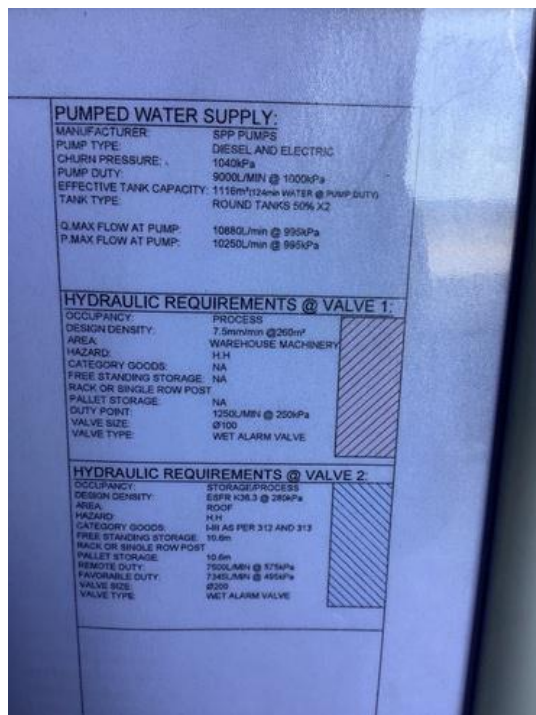


Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13

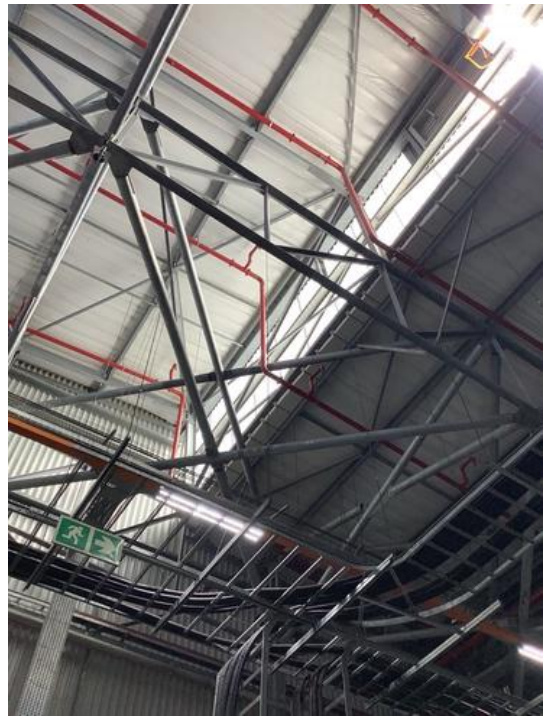


Photo 14



Photo 15

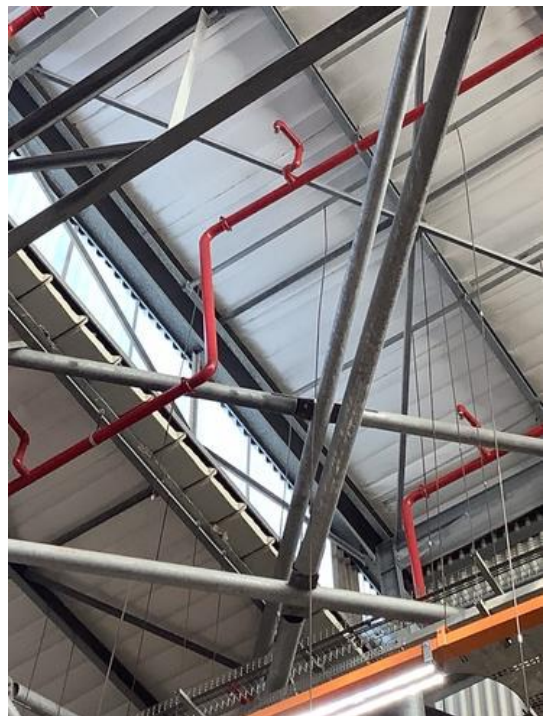


Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21



Photo 22



Photo 23

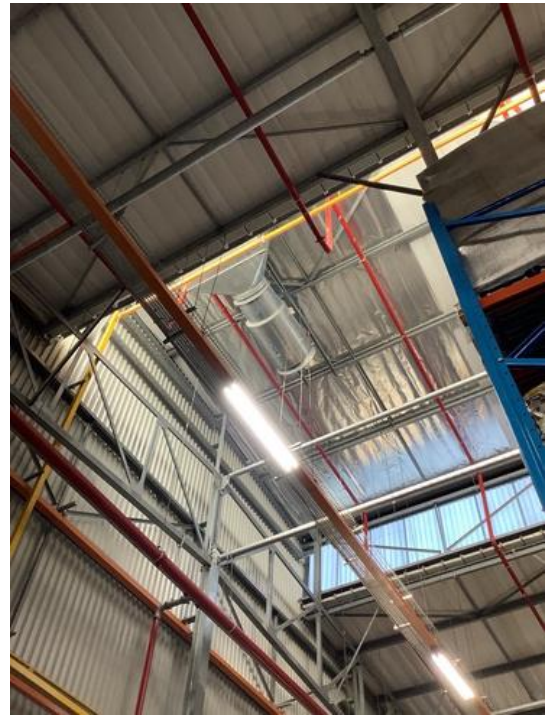


Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31



Photo 32