

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

Martinrea SA BE2 East London Industrial
Development Zone

Complete

Client/Site Name

Martinrea SA BE2 East London Industrial Development Zone

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC8482

Prepared by

Keith van Onselen

Conducted on

09.05.2024 08:00 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

PC - Partial Protection, Clearance
Certificate not Issued

Partial clearance certificate withheld due to the following:

Sprinkler System - Excessive Fault



This especially to the exposure from the unprotected racks on the Linde Weimann side.

Standard

10th Edition

ASIB Contract No

UNC8482

Client Order No

PO-004203

Was the sprinkler system design in order

No

The block plans must be updated to indicate all of the relevant design requirements

Was the water supplies in order

No

Refer to report UNC.9478 conducted on 14.07.2023

Was the pump room in order

No

Refer to report UNC.9478 conducted on 14.07.2023

Was the installation control valves in order

No

Refer to Installation Control Valves - Section 7.

Was the storage in order

Yes

2. Hand Fire Appliances

Hose Reels - 30 metres ☒

Number:

2

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

DCP 9 kg ☒

Number:

4

DCP 4,5 kg ☒

Number:

3

CO² Gas 5 kg ☒

Number:

1

CO² Gas 2 kg ☒

Number:

1

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

3. Occupancy & Storage Guidance

Percentage Hazard.

% Ordinary Hazard	0 From 0 to 100
--------------------------	--------------------

% High Hazard	100 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**

Storage Risk

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**

Automotive Components Steel

Category

CAT I

Storage

Method

Method 1

Storage Method

Free Standing / Block Storage

Design Density (mm)

7,5 mm/min

Roof Height (m)

12,3

Storage Height (m)

5,3

Method 2	
Storage Method	Free Standing / Block Storage
Design Density (mm)	10,0 mm/min
Roof Height (m)	12,3
Storage Height (m)	
6,5	

4. Sprinkler System Design

Building

Building 1

Building Name

Martinrea SA BE2 East London Industrial Development Zone

Date of First Inspection

Unknown

Original Installer

Unknown

Extension By

NA

Building Area m²

6554

Height of Building in meters

12,3

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Canopy Sprinklers

Number of Sprinklers

950

Calculations

Hydraulic Calculations

Area of Operation

Area of Operation 1

► **Area of Operation**

Pump Duty

Flows & Pressures

7500 l/min @ 960 kPa

Area of Operation 2

► **Area of Operation**

Design Flow & Pressure

Flows & Pressures

4850 l/min @ 334 kPa

Additional Sprinkler System Designs Required

Yes

The block plans must be updated to indicate all of the relevant design requirements

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

Location:

South west corner of building

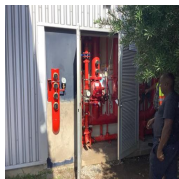


Photo 1



Photo 2

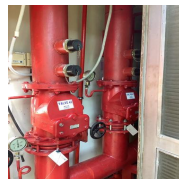


Photo 3

Number of Alarm Valves Installed

1 x 150 mm, 3 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

No

It is recommended a valve bypass assembly be provided at each installation control valve. This allows the alarm valve to be overhauled without isolating the system and prevents wastage of water.

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 appears that the booster connection piping to the main distribution riser is too long, which may restrict the opening of the booster plunger into the main distribution riser, this will prevent effective boosting of the sprinkler system and must be revised.



Photo 4

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

Yes

Sprinkler protection is required within the valve cabinet



7.10 Flow Switch Installed Correctly

N/A

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

Pass

Recorded Flow and Pressure

4400 l/min @ 1050 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)

900

7.23 Installation Pressure (kPa)

1180

7.24 ASIB Overhaul Date Tag No

Yes

Last Overhaul Date

11/2021

Next Overhaul Date

11/2024

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

High Hazard



In all High Hazard areas a clear space of not less than 1,0 metre must be maintained between top of stored goods and sprinkler deflector.

Free Standing Block Storage and aisle widths are not being maintained.



No block of storage shall exceed 150 m² of floor area and shall be surrounded by aisle widths of not less than 2,4 m.

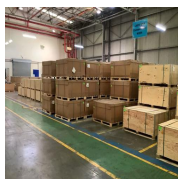


Photo 5

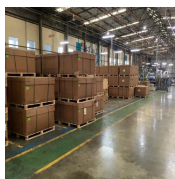


Photo 6

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.

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

External Canopies

System Issue

Issue

Issue 1

Finding

Other

Specify Other.



Corrosion is evident on the sprinkler pipe work and must be addressed by your installer.

Location of Finding.

External canopies

Area 2

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Partial Protection /
Communicating Areas

Enclosed structures not sprinkler protected.



A fire originating within an unprotected area will burn in an uncontrolled manner without alerting the sprinkler system unit until such time as it breaks out of the structure. The subsequent release of heat will operate multiple sprinklers at roof level above the fire area and remote from it causing massive damage.

Location of Finding.

Prefab office



Photo 7

Issue 2

Finding

Partial Protection /
Communicating Areas

Enclosed structures not sprinkler protected.



A fire originating within an unprotected area will burn in an uncontrolled manner without alerting the sprinkler system unit until such time as it breaks out of the structure. The subsequent release of heat will operate multiple sprinklers at roof level above the fire area and remote from it causing massive damage.

Location of Finding.

Engrotech enclosure



Photo 8

Issue 3

Finding

Partial Protection /
Communicating Areas

Enclosed structures not sprinkler protected.



A fire originating within an unprotected area will burn in an uncontrolled manner without alerting the sprinkler system unit until such time as it breaks out of the structure. The subsequent release of heat will operate multiple sprinklers at roof level above the fire area and remote from it causing massive damage.

Location of Finding.

Receiving office

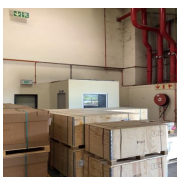


Photo 9

Issue 4

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.

Racks/shelves not protected at Linde Wieman section

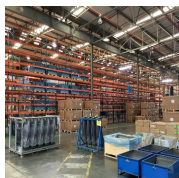


Photo 10

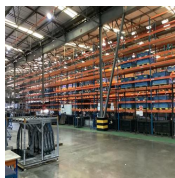


Photo 11

Issue 5

Finding

Sprinkler Heads

Sprinklers installed beneath open cell surfaces / translucent sheeting.



All sprinklers located beneath open celled floors or stairwells and translucent sheeting must have approved water shields fitted above the sprinklers.

Location of Finding.

Roof

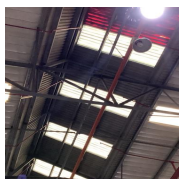


Photo 12

Issue 6

Finding

Pipe Support

Hangers have come adrift and must be re-fixed to their original positions.



Location of Finding.

6th range from loading door

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
25.06.2024 10:57 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:42 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

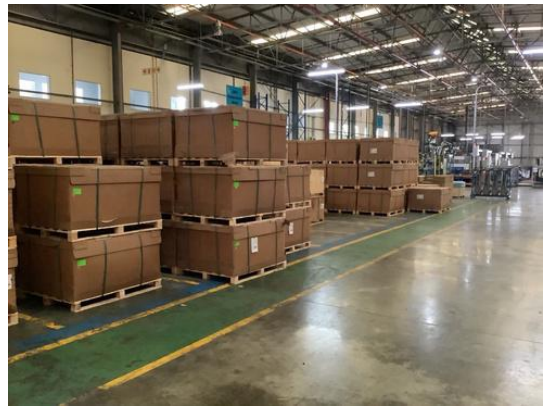


Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12