

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

FE1 Hop Refab East London Industrial
Development Zone

Complete

Client/Site Name

FE1 Hop Refab 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

UNC.8803

Prepared by

Keith van Onselen

Conducted on

09.05.2024 08:00 SAST

Site Location

Mdubu Road
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

A handwritten signature in black ink, appearing to read 'Nico van Loggerenberg', written in a cursive style.

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
JOHANNESBURG
2198

TELEPHONE: +27 11 642 1703
FACSIMILE: +27 11 642 1019
E-MAIL: asib@asib.co.za
WEB SITE: www.asib.co.za

P O BOX 3139
HOUGHTON
2041

INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

B - Full Protection, Clearance
Certificate Issued

NOTE:

- 1.) Failure to address the issues highlighted in this report may affect future clearance.
- 2.) The installation of ESFR sprinklers in the canopies if 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.

Please Note:

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

Standard

12th Edition

ASIB Contract No

UNC.8803

Client Order No

PO-004203

Was the sprinkler system design in order

No

The installation of ESFR sprinklers in the canopies if 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.

Was the water supplies in order

Yes

Refer report UNC .9004 conducted on 08/05/2024

Was the pump room in order

No

Refer report UNC .9004 conducted on 08/05/2024

Was the installation control valves in order

Yes

Refer to Installation Control Valves - Section 7.

Was the storage in order

No

- Refer Section 8 – Storage

2. Hand Fire Appliances

Hose Reels - 30 metres



Number:

58

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

DCP 9 kg



Number:

280

DCP 4,5 kg



Number:

12

CO² Gas 5 kg



Number:

2

Hand fire appliances date of the last service:

07/2022

Are the hand fire appliances due for their service.

Yes



Photo 1

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

3. Occupancy & Storage Guidance

Percentage Hazard.

% Ordinary Hazard

5
From 0 to 100

% High Hazard

95
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)

ESFR

ESFR K-Factor

36

Roof Height (m)

12,25

Storage Height (m)

10,6

Method 2

Storage Method

Shelving

Design Density (mm)

ESFR

ESFR K-Factor

36

Roof Height (m)

12,25

Storage Height (m)

10,6

4. Sprinkler System Design

Building

Building 1

Building Name

FE1 Hop Refab East London Industrial Development Zone

Date of First Inspection

December 2019

Original Installer

December 2019

Extension By

NA

Building Area m²

31895

Height of Building in meters

12,25

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Void Sprinklers

Canopy Sprinklers

Number of Sprinklers

5731

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

V1
7500 l/min @ 590 kPa

Area of Operation 3

► Area of Operation

Roof Most Favourable Area of
Operation

Flows & Pressures

V1
7345 l/min @ 520 kPa

Area of Operation 4

► Area of Operation

Roof Most Remote Area of
Operation

Flows & Pressures

V2
7500 l/min @ 580 kPa

Area of Operation 5

► Area of Operation

Roof Most Favourable Area of
Operation

Flows & Pressures

V2
7345 l/min @ 505 kPa

Area of Operation 6

► Area of Operation

Roof Most Remote Area of
Operation

Flows & Pressures

V3
7435 l/min @ 542 kPa

| | |
|--|--|
| Area of Operation 7 | |
| ► Area of Operation | Roof Most Favourable Area of Operation |
| Flows & Pressures V3 7365 l/min @ 445 kPa | |
| Area of Operation 8 | |
| ► Area of Operation | Roof Most Remote Area of Operation |
| Flows & Pressures V4 7450 l/min @ 670 kPa | |
| Area of Operation 9 | |
| ► Area of Operation | Roof Most Favourable Area of Operation |
| Flows & Pressures V4 7345 l/min @ 560 kPa | |
| Area of Operation 10 | |
| ► Area of Operation | Roof Most Remote Area of Operation |
| Flows & Pressures V5 7490 l/min @ 630 kPa | |
| Area of Operation 11 | |
| ► Area of Operation | Roof Most Favourable Area of Operation |
| Flows & Pressures V5 7360 l/min @ 539 kPa | |
| Additional Sprinkler System Designs Required | No |

5. Water Supplies

► Water Stored on Site.

Yes

Refer report UNC .9004 conducted on 08/05/2024

Add Water Storage Tanks

6. Pump Room

Pump Installed on Site

Yes

Refer report UNC .9004 conducted on 08/05/2024

Add Pump House

7. Installation Control Valve(s)

7.1 Sprinkler control valves accessible

Yes

Valve Cabinet

Valve Cabinet 1

Location:

North west corner of building



Photo 2



Photo 3



Photo 4

Number of Alarm Valves Installed

1 x 150 mm, 7 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



Photo 5

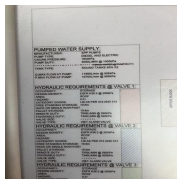


Photo 6

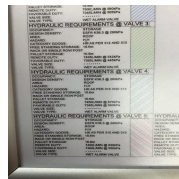


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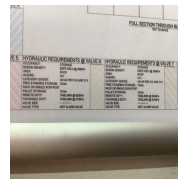


Photo 8

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 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.

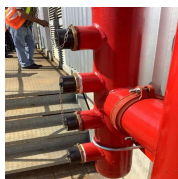


Photo 9

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



Photo 10



Photo 11

Flow Test Results

Pass

Recorded Flow and Pressure

Approximately 7600 l/min @ 1000 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

No

The water motor alarm drain pipes discharge into a common manifold. This must be revised so that the drain pipes are taken separately to waste.



Photo 12

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)

1280

7.24 ASIB Overhaul Date Tag No

Yes

Last Overhaul Date

2024

Next Overhaul Date

2027

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 13

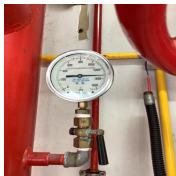


Photo 14

Recommendation Items

8. Storage

Are the required clearances being maintained.

No

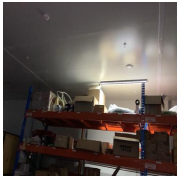


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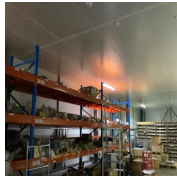


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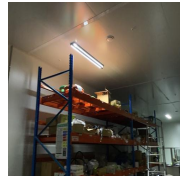


Photo 17

Are the storage heights exceeded.

No

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

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:

Transverse only where the black plastic crates are stored



Photo 18

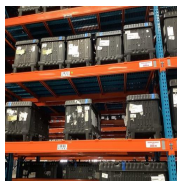


Photo 19



Photo 20

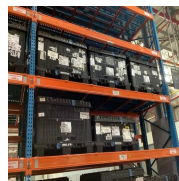


Photo 21

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:

TSSstores
Paint store

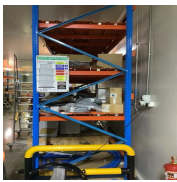


Photo 22

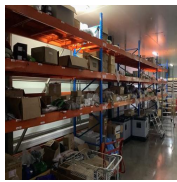


Photo 23

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Offices

System Issue

Issue

Issue 1

Finding

Sprinkler Heads

Mix operating temperature sprinklers.



Location of Finding.

The 93 degree Celsius sprinklers under the stairs must be replaced with 68;degree

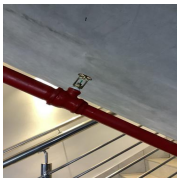


Photo 24

Area 2

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Other

Specify Other.



To be verified as correct

ESFR Mechanical Ventilation

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.

Location of Finding.

Roof



Photo 25

Issue 2

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

An additional hangers required. Various on right of building

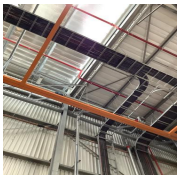


Photo 26



Photo 27

Issue 3

Finding

Pipe Support

Distribution rise/drop pipes shall be secured directly to the building structure or by hangers securing horizontal distribution pipes within 300 mm of the riser.



Location of Finding.

Dropper to office next to charging bay



Photo 28

Issue 4

Finding

Pipe Support

Terminal hangers on distribution pipes are exceeding the maximum distance of 450 mm from the end of the distribution pipe.



Location of Finding.

Various roof mains



Photo 29

Issue 5

Finding

Other

Specify Other.



Approved heat collection plates to be installed

Location of Finding.

Factory rest area



Photo 30

Issue 6

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Pipe work must be supported independently from the composite panel

Location of Finding.

Warehouse offices

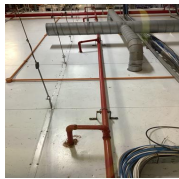


Photo 31

Issue 7

Finding

Other

Electrical Cable or other services attached to sprinkler pipework.



All electrical cables or any other services attached to the sprinkler pipe work must be removed and independently supported.

Location of Finding.

On feed to laser room

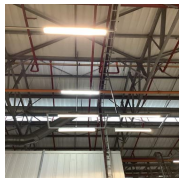


Photo 32

Issue 8

Finding

Pipe Support

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



Location of Finding.

12th range from back range

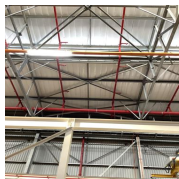


Photo 33



Photo 34

Area 3

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.

Mainly on the hangers

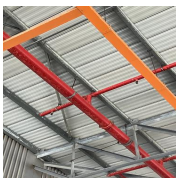


Photo 35

Issue 2

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

Canopies

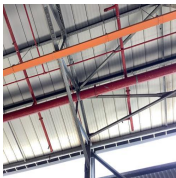


Photo 36

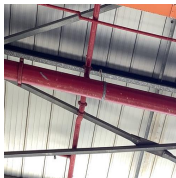


Photo 37

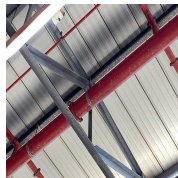


Photo 38

Issue 3

Finding

Pipe Support

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



Location of Finding.

Middle of first canopy on the left

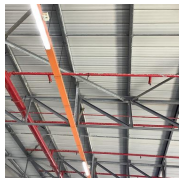


Photo 39

General Notes

Yes

NOTE:
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.



Photo 40

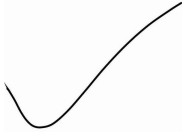


Photo 41

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
11.06.2024 22:20 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
11.06.2024 22:20 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

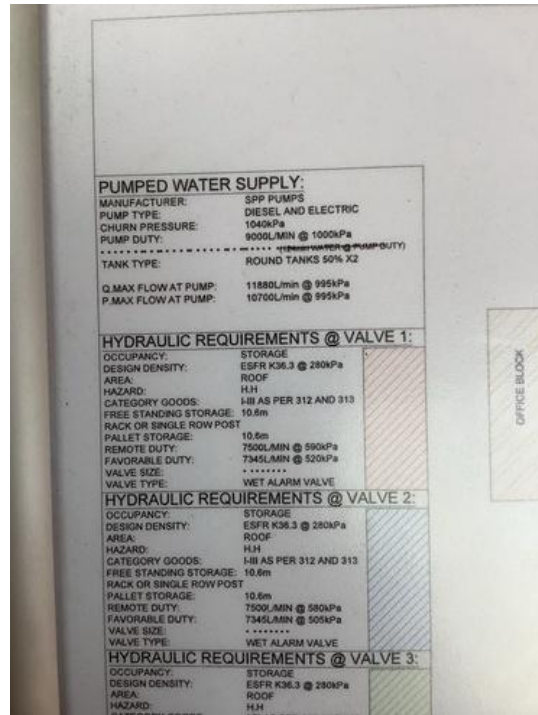


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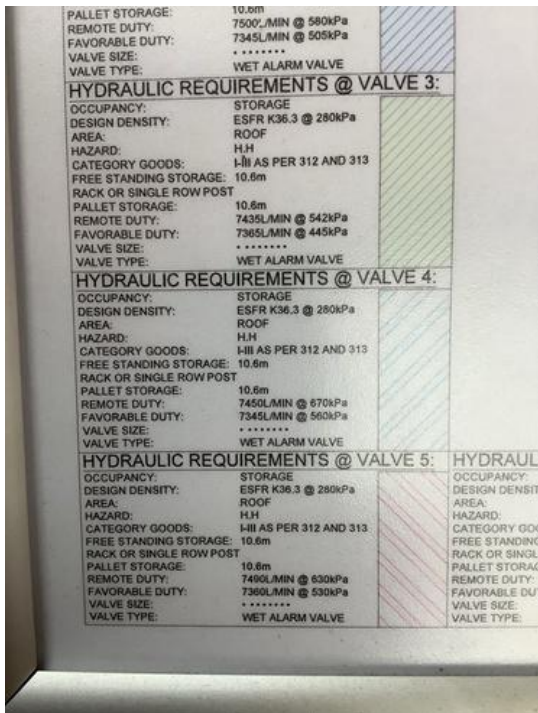


Photo 7

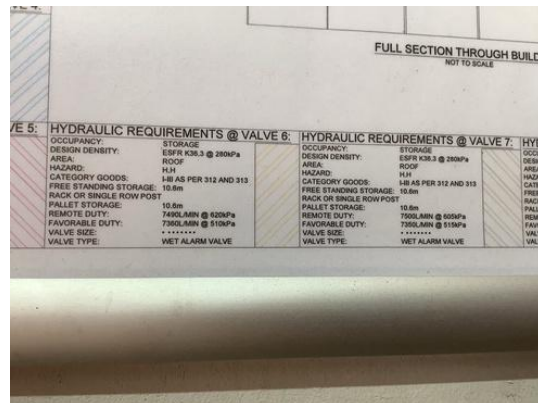


Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14

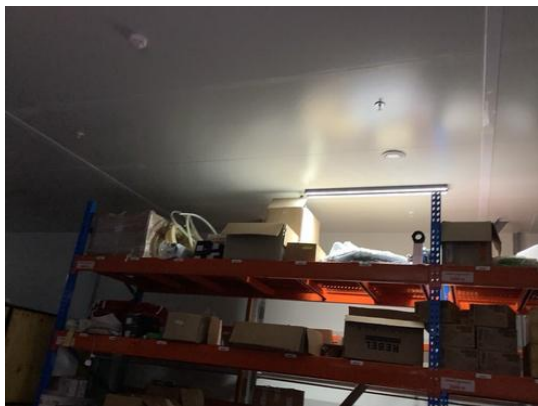


Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21



Photo 22



Photo 23

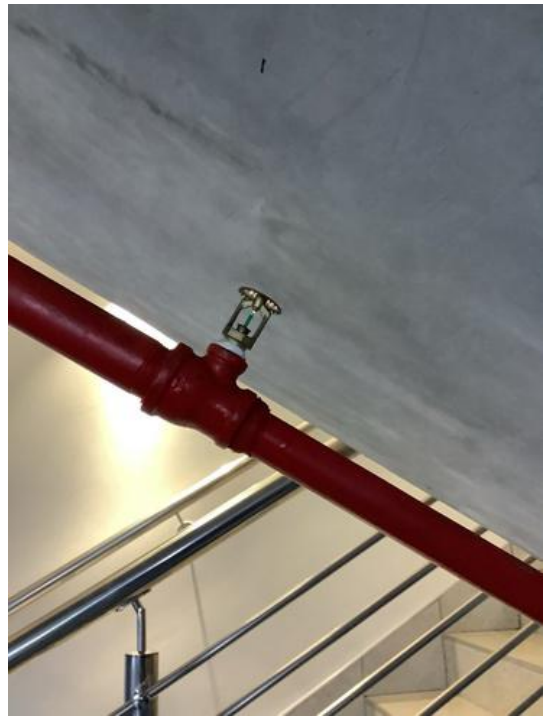


Photo 24



Photo 25



Photo 26



Photo 27



Photo 28



Photo 29



Photo 30



Photo 31

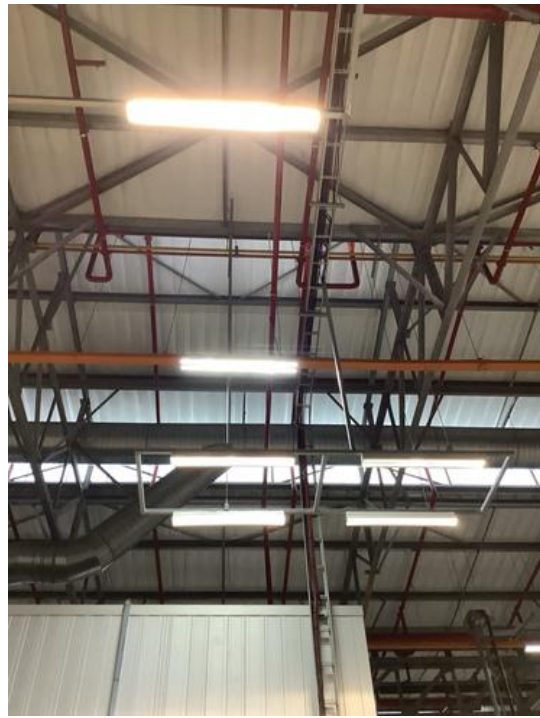


Photo 32



Photo 33



Photo 34



Photo 35



Photo 36



Photo 37

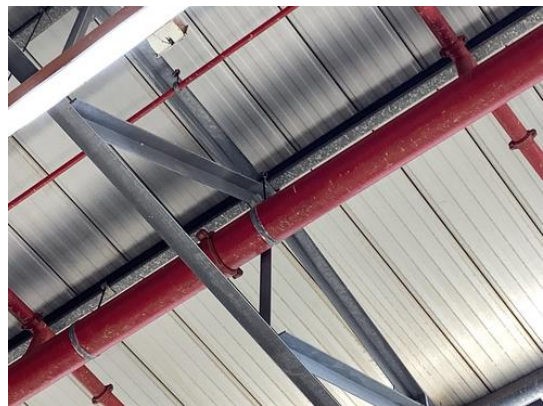


Photo 38



Photo 39



Photo 40



Photo 41