

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

Feltex Automotive - East London
Industrial Development Zone - AE4

Complete

Client/Site Name

Feltex Automotive - East London Industrial Development Zone - AE4

Billing Address

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

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.10604

Prepared by

Keith van Onselen

Conducted on

11.07.2024 14:38 SAST

Site Location

Feltex Automotive (Building AE1
and 4)
1 Lower Chester Road
Sunnyridge
East London

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:

Storage - See Report



Sprinkler System - Excessive Fault



Standard

10th Edition

11th Edition

ASIB Contract No

UNC.10604

Client Order No

004203

Was the sprinkler system design in order

No

Refer to Sprinkler System Design - Section 4.

Was the water supplies in order

No

Refer to report UNC.9478 conducted on 08/05/2024

Was the pump room in order

Yes

Refer to report UNC.9478 conducted on 08/05/2024

Was the installation control valves in order

No

Refer to Installation Control Valves - Section 7.

Was the storage in order

No

- Refer to Occupancy & Storage Guidance - Section 3.
 - Refer to Storage - Section 8.
-

2. Hand Fire Appliances

Hose Reels - 30 metres ☒

Number:

39

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

Other ☒

Specify

Various hand held extinguishers

Number:

58

Are the hand fire appliances due for their service. No

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**

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

Specify Process

Manufacturing Automotive Components Mixed Categories

Category

CAT II

Design Density (mm/min)

10,0 mm/min

Occupancy/Risk 3

► 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 Mixed Categories

Category

CAT III

CAT IV

Storage

Method

Method 1

Storage Method

Free Standing / Block Storage

Design Density (mm)

7,5 mm/min

Roof Height (m)

11,66 m and 12,3 m

Storage Height (m)

Cat 3 7,5 mm 2,9 m

Cat 4 7,5 mm 1,6 m

Method 2

Storage Method

Beam Pallet Racking

Design Density (mm)

7,5 mm/min

Roof Height (m)

11,66 m and 12,3 m

Storage Height (m)

Cat 3 7,5 mm 2,2 m

Cat 4 7,5 mm 1,6 m

Occupancy/Risk 4

► 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 Mixed Categories

Category

CAT III

CAT IV

Storage

Method

Method 1

Storage Method

Free Standing / Block Storage

Design Density (mm)

10,0 mm/min

Roof Height (m)

11,66 m and 12,3 m

Storage Height (m)

Cat 3 10,0 mm 3,5 m
Cat 4 10,0 mm 2,0 m

Method 2

Storage Method

Beam Pallet Racking

Design Density (mm)

10,0 mm/min

Roof Height (m)

11,66 m and 12,3 m

Storage Height (m)

Cat 3 10,0 mm 2,6 m
Cat 4 10,0 mm 2,0 m

4. Sprinkler System Design

Building

Building 1

Building Name

Feltex Automotive East London Industrial Development Zone - AE4

Date of First Inspection

September 2010

Original Installer

Fire Sprinkler Installations

Extension By

Unknown

Building Area m²

Approximately 5500

Height of Building in meters

11,66 m and 12,3 m

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers

Roof Sprinklers	Ceiling Sprinklers	In - Rack Sprinklers
Shelf Sprinklers	Mezzanine Sprinklers	Canopy Sprinklers

Number of Sprinklers

Approximately 800

Calculations

Hydraulic Calculations

Area of Operation

Area of Operation 1

► Area of Operation

Pump Duty

Flows & Pressures

7500 l/min @ 950 kPa as taken from block plan

Area of Operation 2

► Area of Operation

Design Flow & Pressure

AE4 V2

Flows & Pressures

2100 l/min @ 515 kPa

Area of Operation 3

► Area of Operation

Roof & Rack Most Remote Area
of Operation

AE4

Flows & Pressures

Required

Additional Sprinkler System Designs Required

Yes

The flow and pressure requirements for combined rack and roof are required.

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.

5. Water Supplies

Town Main - Flow Test Results

Town Main Diameter (mm)

100

► Water Stored on Site.

Yes

Refer to report UNC.9478 conducted on 08/05/2024

Add Water Storage Tanks

6. Pump Room

Pump Installed on Site

Yes

Refer to report UNC.9478 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:

AE4



Photo 1

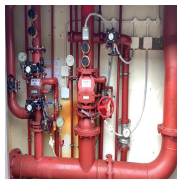


Photo 2

Number of Alarm Valves Installed

1 x 100mm, 1 x 150mm

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



Photo 3

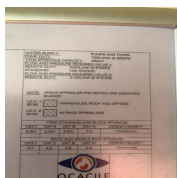


Photo 4

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.

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	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 5

7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet	Yes
Sprinkler protection is required within the valve cabinet	<input checked="" type="checkbox"/>

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
Flow Test Results	Pass



Photo 6



Photo 7

Recorded Flow and Pressure	3050 l/min @ 1100 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)	
1150	
7.23 Installation Pressure (kPa)	
1160	
7.24 ASIB Overhaul Date Tag No	Yes

Last Overhaul Date

2022

Next Overhaul Date

2025

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 8

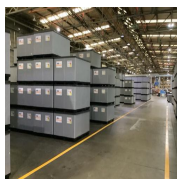


Photo 9

Are the required clearances being maintained.

Yes

Are the storage heights exceeded.

Yes



Photo 10



Photo 11

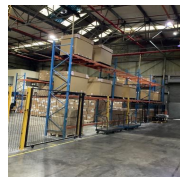


Photo 12



Photo 13



Photo 14

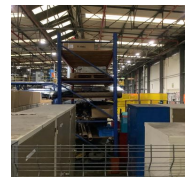


Photo 15

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

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:

Quarantine store
Trim workshop



Photo 16



Photo 17



Photo 18



Photo 19

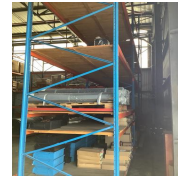


Photo 20

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Other

Specify Area

AE4

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.

Some canopy fittings

Issue 2

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.

Various at roof



Photo 21

Issue 3

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Location of Finding.

Droppers to shelves

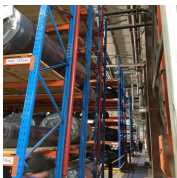


Photo 22

Issue 4

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.

Stenter oven

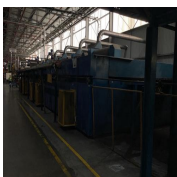


Photo 23

Issue 5

Finding

Intermediate Sprinkler Protection

The range pipe must be lowered so that the sprinkler deflectors protrude a minimum distance of 25 mm beneath the horizontal beam of the rack and/or shelf.



Sprinkler guards damaged or missing.



Location of Finding.

carpet rack at roller door

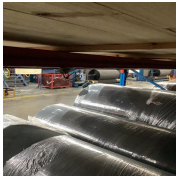


Photo 24

Issue 6

Finding

Exposure Hazards

Adjacent building within 10,0 metres / 15,0 of the sprinkler protected building.



Any detached building in the Ordinary Hazard or Extra Light Hazard class, any part of which is within 10,0 m of a protected building, must itself be sprinkler protected.

Any detached building in the Extra High Hazard class, any part of which is within 15,0 m of a protected building, must itself be sprinkler protected.

Where there are practical difficulties in providing such protection as, for example, when the detached building is in separate ownership or where the detached building is lofty and open-sided, (e.g. timber storage sheds), and the value of standard sprinkler protection is doubtful, it will be required that the sprinkler protection in the protected building be extended to provide external sprinkler protection over window and door openings and over any combustible sections of the wall opposing the exposure hazard.

It should be noted that it is the hazard classification of the UNPROTECTED building which determines the required separation and NOT the hazard classification of the protected building.

Location of Finding.

Maintenance workshop and containers



Photo 25

Issue 7

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

Issue 8

Finding

Other

Specify Other.



11th & 12th Edition

Fast response, upright spray pattern sprinklers with an operating temperature of 68 °C shall be used for the protection of the underside of the mezzanine floor. The sprinklers must be fitted with approved water shields and sprinkler guards so as to prevent mechanical damage. This must be rectified by your installer.

Location of Finding.

Mezzanine. Only a recommendation for tenth edition systems

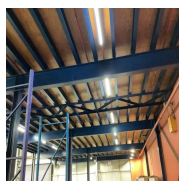


Photo 26

Issue 9

Finding

Sprinkler Spacing

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



Sprinklers are out of effective working distance.



Location of Finding.

Under carpet machine platforms



Photo 27

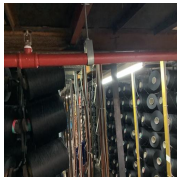


Photo 28

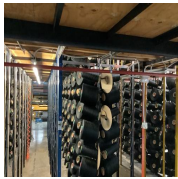


Photo 29



Photo 30

Issue 10

Finding

Sprinkler Heads

Distribution pattern of sprinklers affected.



Location of Finding.

Canopy to Tugger



Photo 31



Photo 32

Issue 11

Finding

Pipe Support

The sprinkler pipe work must be correctly supported.



Belt-to-belt hangers utilized.



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

Location of Finding.

Main feed
Distribution main

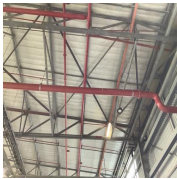


Photo 33

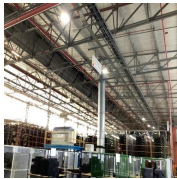


Photo 34

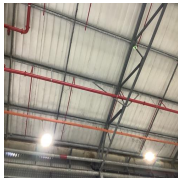


Photo 35

Issue 12

Finding

Sprinkler Heads

Sprinkler heads must be correctly aligned.



Location of Finding.

carpet rack at roller door

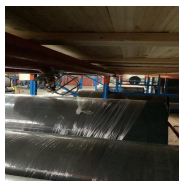


Photo 36

Issue 13

Finding

Partial Protection /
Communicating Areas

Separation between protected and unprotected areas.



Window openings must be of wired glass or heat-tempered construction.

Cut off sprinklers required above the windows on the unprotected side.

Door openings within the separating wall must be either Class D or Class B fire rated doors with cut off sprinklers installed on the unprotected side.

All fire resisting doors must be fitted with automatic devices capable of closing them from any set position and of holding doors open. Manual movements of the doors must not be prevented by the automatic device.

Location of Finding.

Room O26



Photo 37



Photo 38

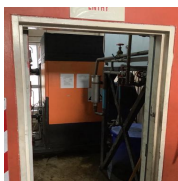


Photo 39

10. Proof of Inspection

Proof of inspection.

For and on behalf of client:



Camagwini Ngxokolo-Nomatye
20.06.2024 12:28 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.06.2024 12:28 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

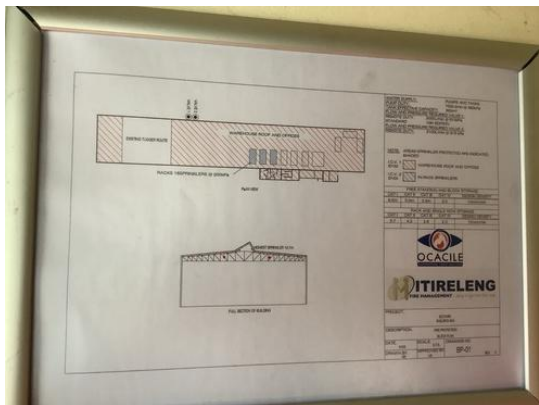


Photo 3

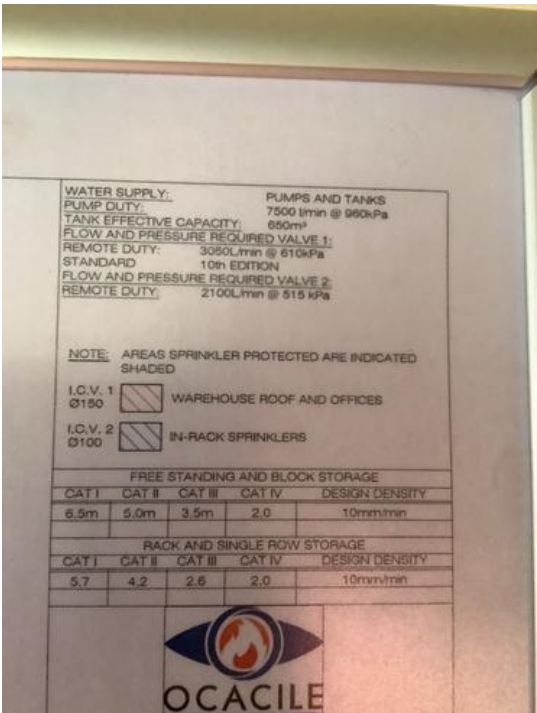


Photo 4



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

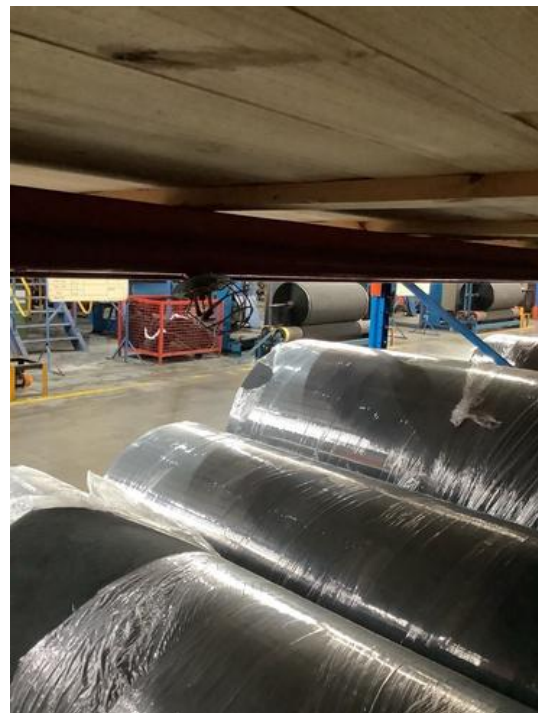


Photo 24



Photo 25



Photo 26



Photo 27

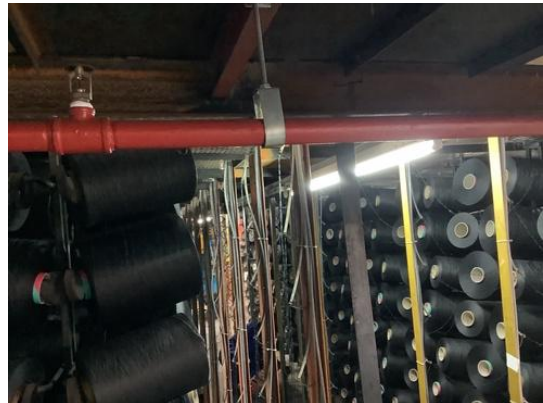


Photo 28



Photo 29



Photo 30



Photo 31



Photo 32



Photo 33

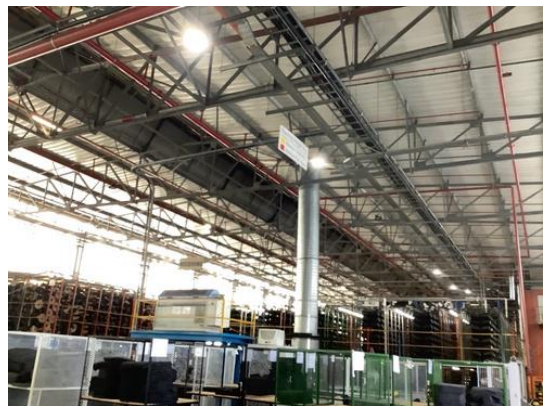


Photo 34

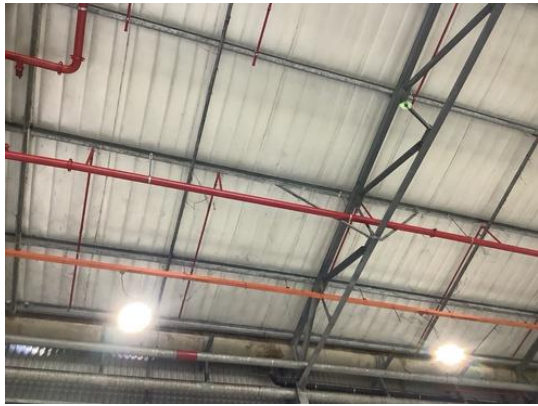


Photo 35



Photo 36



Photo 37



Photo 38



Photo 39