

2023

# Inspection of Automatic Sprinkler System

**ASIB**



## Inspection of Automatic Sprinkler System

Draeger/FSI

Complete

### Client/Site Name

Draeger/FSI

### Billing Address

Fire Sprinkler Installations

### Attention:

Hein Fietze  
Jullian Niehaus

### Document No

UNC.9918

### Prepared by

Keith van Onselen

### Conducted on

14.12.2022 13:27 SAST

### Site Location

Draeger ERF 60952 East  
London Industrial  
Development Zone (ELIDZ) 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

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

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INDEPENDENT  
THIRD PARTY  
INSPECTION AND  
ADVISORY  
SERVICE SINCE  
1970

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#### Code

B - Full Protection, Clearance  
Certificate Issued

The clearance certificate is issued with the understanding that the storage issued as highlighted in sections 8&9 of this report are addressed immediately. As discussed on site the rack sprinkler spacing must suit either standard pallets or Euro pallets. If this is not possible then each rack must be converted to shelving as long as the sprinkler spacing allows this.

Please Note:

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

#### Standard

12th Edition

#### ASIB Contract No

UNC.9918

#### Client Order No

Fire Sprinkler Installations

#### Was the sprinkler system design in order

Yes

#### Was the water supplies in order

No

Refer to Water Supplies - Section 5.

#### Was the pump room in order

No

Refer to Pump Room - Section 6.

#### Was the installation control valves in order

Yes

Refer to Installation Control Valves - Section 7 - spare sprinklers required

#### Was the storage in order

Yes

## 2. Hand Fire Appliances

Hose Reels - 30 metres



Number:

9

Hand Fire Appliances - One unit per 100 m<sup>2</sup> of floor area.

DCP 9 kg



Number:

7

CO<sup>2</sup> Gas 5 kg



Number:

72

Hand fire appliances date of the last service:

05/2022

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

Storage Risk

#### Specify Process

Protection breathing apparatus manufacturer

**Category**

CAT III

**Design Density (mm/min)**

17,5 mm/min

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**

Material rolls stored vertically for manufacture of face masks

<b>Category</b>	CAT III
Storage	
<b>Method</b>	
<b>Method 1</b>	
<b>Storage Method</b>	Free Standing / Block Storage
<b>Design Density (mm)</b>	17,5 mm/min
<b>Roof Height (m)</b>	13
<b>Storage Height (m)</b>	
5,2	
<b>Method 2</b>	
<b>Storage Method</b>	Beam Pallet Racking
<b>Design Density (mm)</b>	17,5 mm/min
<b>Roof Height (m)</b>	13
<b>Storage Height (m)</b>	
4,1	
<b>The foregoing stack height limitations for racks and/or shelves refer to those areas where intermediate sprinkler protection has not been installed.</b>	
<input checked="" type="checkbox"/>	

## 4. Sprinkler System Design

### Building

#### Building 1

##### Building Name

Draeger

##### Date of First Inspection

20 July 2022

##### Original Installer

Fire Sprinkler Installations

##### Extension By

NA

##### Building Area m<sup>2</sup>

4024

##### Height of Building in meters

13

Sprinkler Detail

##### Area

##### Area 1

##### ► Area & Type of Sprinklers

Roof Sprinklers

Ceiling Sprinklers

Void Sprinklers

In - Rack Sprinklers

Canopy Sprinklers

##### Number of Sprinklers

973

##### 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

P - Max

#### Flows & Pressures

8801,3 l/min @ 1003,4 kPa

### Area of Operation 3

#### ► Area of Operation

Q - Max

#### Flows & Pressures

8968 l/min @ 999,3 kPa

### Area of Operation 4

#### ► Area of Operation

Roof Most Remote Area of  
Operation

#### Flows & Pressures

5182 l/min @ 511 kPa

### Area of Operation 5

#### ► Area of Operation

Roof Most Favourable Area of  
Operation

#### Flows & Pressures

5183,5 l/min @ 491,5 kPa

### Area of Operation 6

#### ► Area of Operation

Rack Most Remote Area of  
Operation

#### Flows & Pressures

1070 l/min @ 335 kPa

### Area of Operation 7

#### ► Area of Operation

Rack Most Favourable Area of Operation

#### Flows & Pressures

1078 l/min @ 318 kPa

### Area of Operation 8

#### ► Area of Operation

Roof & Rack Most Remote Area of Operation

#### Flows & Pressures

6523,6 l/min @ 519 kPa

### Area of Operation 9

#### ► Area of Operation

Roof & Rack Most Favourable Area of Operation

#### Flows & Pressures

6545 l/min @ 500 kPa

#### Additional Sprinkler System Designs Required

No

## 5. Water Supplies

### Town Main - Flow Test Results

#### Town Main Diameter (mm)

100

#### Street / Road

Umsimbithi Road  
East London

#### Flow Recorded in Flow Test (l/min)

In excess of 1100 l/min

#### ► Water Stored on Site.

Yes

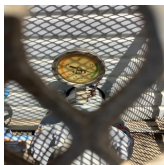


Photo 1

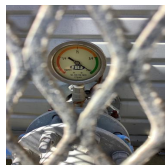


Photo 2

Add Water Storage Tanks

### Storage Tanks

#### Storage Tanks 1

#### Water Storage Tanks (Specify)

Pumped Water Supply - Suction  
Tanks

#### 5.1 Inspection Hatches Accessible

Yes

#### 5.2 Tank Infill

Recorded



Photo 3

#### Infill Rate (l/min)

In excess of 1100 l/min

#### 5.3 Tank Information Plate Installed

Yes



Photo 4

## Tank Detail

### Name of Supplier

SBS Tanks

### Name of Installer

SBS Tanks

### ► 50% or 100% Sub-Divided

50% Sub-Divided

### ► Tank Type

Bladder

### Dimensions Circular

9,86m x 8,34m high

### Vortex Inhibitor

Yes

### Gross Storage Capacity (m<sup>3</sup>)

$574 \times 2 = 1148$

The value engraved on the information plate appears to be incorrect. This must be corrected

### Effective Storage Capacity (m<sup>3</sup>)

The value engraved on the information plate appears to be incorrect. This must be corrected

### Dead Water (mm)

To be determined

### Freeboard (mm)

To be determined

### Dedicated or Combined Tank

Dedicated

### 5.4 Foundation Type

Separate

### Flexible Coupling Installed on Suction Line

Yes

### 5.5 Infill Valves Accessible

Yes

### 5.6 Suction Isolating Valves Secured in the Open Position

No



Photo 5

### 5.7 Tank Suction Piping Correctly Supported

No

### 5.8 Infill Isolating Valves Secured in the Open Position.

No



Photo 6

### 5.9 Drain valves secured in the Closed Position.

No

### 5.10 Flanges / Equipment Short Bolted

Yes



Photo 7

We recommend that the bolts for these flanges be removed and replaced with the correctly sized bolts so as to ensure that at least two full thread pitches past the chamfer protrude beyond the nut.

### 5.11 Loose / Missing Bolts, Nuts & Washers

No

Non - Compliance

#### Item

#### Item 1

#### ► Description

Other

There is a leak in the test line return pipe

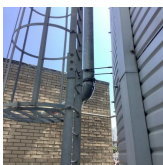


Photo 8

Item 2

► Description

The inspection hatches are not accessible from the external ladder. The external ladders to the roof of the water tanks must be re-positioned so it is not necessary to walk across the roof to gain access to the inspection hatches.

Item 3

► Description

Other

- The minimum tank infill diameter must be 100mm, it is recommended that the infill be rectified by your installer.



Photo 9

Recommendation

## 6. Pump Room

### Pump Installed on Site

Yes

Add Pump House

## Pump House

### Pump House 1

#### Pump House Location

Umsimbithi Road



Photo 10

#### 6.1 Pump House Signage

##### 6.1.1 Pump House External Signage

Yes

##### 6.1.2 Electrical DB Labeled

Yes

##### 6.1.3 Jockey Control Panel Labeled

Yes

##### 6.1.4 Diesel / Electric Pump Control Panel Labeled

Yes

##### 6.1.5 Annunciator Panel Labeled

Yes

##### 6.1.6 Pump House Remote Test Labeled

Yes

##### 6.1.7 Auto Start Test Arrangement Instruction Chart Installed

Yes

##### 6.1.8 Block Plan Installed - Correct Details

No



Photo 11

It is recommended that a block plan 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 requirements (remote and favorable areas) 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.

12th Edition Requirement

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.

#### 6.1.9 Diesel Engine Stop Lever Labeled

Yes

#### 6.1.10 Isolating Valves Correctly Labeled

No



Photo 12

It is recommended all isolating valves be labeled "Normally Open" or "Normally Closed".

### 6.2 Pump House Equipment

#### 6.2.1 Electric Light Installed

Yes

#### 6.2.2 Natural Light Installed

Recommendation

Sufficient natural lighting is recommended, where the pump house is located above ground. Access doors are not acceptable for providing natural lighting.

#### 6.2.3 Mechanical Ventilation Installed

Yes

#### 6.2.4 Hour Meters Installed

Yes

#### 6.2.5 Correct Pressure Gauges Installed

Yes

#### 6.2.6 Correct Suction Pressure Gauge Installed.

Yes

#### 6.2.7 Correct Gauge Cocks Installed

No

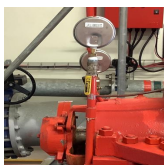


Photo 13



Photo 14

All pressure gauges fitted to a sprinkler system shall be fitted with an isolating gauge cock with bleed to be able to confirm gauge operation back to zero and enable each pressure gauge to be readily removed without interruption of the installation water supplies.

#### 6.2.8 Specify Flow Measuring Device.

Orifice Plate

Details on Orifice Plate



**Test Line (mm)**

150

**Duty Specified**

9000 l/min @ 1000 kPa

**K Factor**

6363.842

**Pressure Differential (kPa)**

200

**Orifice Diameter (mm)**

103.60

**6.2.9 Flanges / Equipment Short Bolted**

Yes



Photo 15



Photo 16

We recommend that the bolts for these flanges be removed and replaced with the correctly sized bolts so as to ensure that at least two full thread pitches past the chamfer protrude beyond the nut.

**6.2.10 Loose / Missing Bolts, Nuts & Washers**

No

**6.2.11 Electrical cables positioned 300mm above the finished floor level.**

Yes

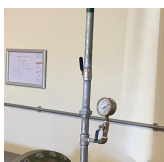
**6.2.12 Correct operating temperature sprinklers installed within the pump house.**

Yes

**6.3 Auto Start Test Arrangement****6.3.1 Auto Start Correctly Piped and Supported**

No

It was noted that an isolating valve is fitted on the supply pipe to the auto start test arrangement. This is not desirable as shutting this valve, will prevent the pump(s) from starting. This valve must be removed.



**6.3.2 Auto Start Diaphragm Valves Operational**

Yes

## 6.3.3 Pressure Switch 1 - Jockey Pump (90% of Churn Pressure)

**Cut-In Pressure (kPa)**

700

**Cut-Out Pressure (kPa)**

800

## 6.3.4 Pressure Switch

**Switch****Switch 1****► Primary or Secondary Pump**

Primary Pump

**► Specify Diesel or Electric**

Electric

Pressure Switch - Electric Motor

**Cut-In Pressure (kPa)**

570

**Switch 2****► Primary or Secondary Pump**

Secondary Pump

**► Specify Diesel or Electric**

Diesel

Pressure Switch - Diesel Primary

**Cut-In Pressure (kPa)**

500

Pressure Switch - Diesel Backup (Not  $\leq$  50 kPa Below Switch 1 - Not  $\geq$  20 Below Switch 1)**Cut-In Pressure (kPa)**

500

**The pressure switch settings are incorrect and must be set in accordance with the churn pressure.**

**6.4 Pumped Water Supply - Jockey Pump**

## Hour Meter

906:49

### 6.4.1 Jockey Pump Correctly Piped

Yes

### 6.4.2 Jockey Pump Test

Passed

Add Pump

## Pump

### Pump 1

#### ► Pump Type

Electric

### 6.8 Pumped Water Supply - Electric Motor Driven Pump

#### ► Primary or Secondary Pump

Primary Pump

### 6.8.1 ASIB Approval No

Yes

#### ASIB Approval Number Motor

2516

#### ASIB Approval Number Pump

2516

### Flow Q (m<sup>3</sup>)

9000 l/min

### Head (m)

1000 kPa

### Impeller Diameter (mm)

543

### 6.8.2 Electric Motor Make and Model

CMG Marat 355M/L-4 B3

### 6.8.3 ASIB Prime Mover Date Tag No

Yes

#### 6.8.3.1 ASIB Prime Mover Overhaul Date Tag No

0155181

#### 6.8.3.2 Last Service Date

14/12/2022

### 6.8.3.3 Next Service Date

14/12/2023

Service Overdue

No

### 6.8.4 Pump Make and Model

SPP Thrustream 200/58 B

6.8.5 ASIB Pump Overhaul Date Tag No

Yes

6.8.5.1 ASIB Pump Overhaul Date Tag No

0155081

6.8.5.2 Last Overhaul Date

14/12/2022

6.8.5.3 Next Overhaul Date

14/12/2023

Service Overdue

No

6.8.6 Suction Pressure (kPa)

Gauge is faulty. This must be addressed by your installer



Photo 18

6.8.7 Base Grouted In

Yes

6.8.8 Base Painted

Yes

6.8.9 Delivery Piping Correctly Supported

Yes

6.8.10 Suction Piping Correctly Supported




No



Photo 19

It is recommended that additional support be provided on the pump suction line as close to the pump casing as possible. This is to ensure that there is no strain on the pump casing. If strain is present, it results in axial loading which in turn places excessive wear on the pump resulting in eventual or premature failure. It has been found that some pump and suction alignments have placed excessive strain on the volute of the pump resulting in poor performance.



6.8.11 Eccentric Reducer Piped Correctly	Yes
6.8.12 Cooling Line Correctly Aligned and Supported	Yes
6.8.13 Sight Glass Clean	Yes
6.8.14 Flexible Coupling Correctly Installed	Yes
6.8.15 Glands Condition	O.K.
6.9 Electric Motor Driven Pump - Test	
6.9.1 Panel Lamp Test	O.K.
6.9.2 Hour Meter Before Test.	
53:92	
6.9.3 Emergency Start - Button Depressed	Motor Started
6.9.4 Test - Button Depressed	Motor Started
6.9.5 Churn Pressure (kPa)	
1140	
6.9.6 Flow Test Recorded	
9000 l/min @ 1000 kPa	
<div>    </div> <div> <div>Photo 20</div> <div>Photo 21</div> <div>Photo 22</div> </div>	
6.9.7 Pump Flow Test	Passed
6.9.8 Hour Meter After Test	
53:98	

The Electric motor driven pump must be tested for at least 10 minutes every week in accordance

with the minimum requirements.

#### 6.10 Electric Motor Driven Pump Alarms

##### 6.10.1 Siren Alarm

Failed - See Report

##### 6.10.2 Flashing Light

Failed - See Report

#### Pump 2

##### ► Pump Type

Diesel

#### 6.5 Pumped Water Supply - Diesel Engine Driven Pump

##### ► Primary or Secondary Pump

Secondary Pump

##### 6.5.1 ASIB Approval No

Yes

##### ASIB Pump Set Approval Number

2515

##### 6.5.2 Diesel Tank Level

3/4



Photo 23

##### 6.5.3 Diesel Tank Bunded

Yes

##### 6.5.4 Spare Fuel Kept on Site

No

This tank must be kept full at all times and sufficient fuel for an additional six hours running time, (on full load) must be kept within on site.

##### 6.5.5 ASIB Prime Mover Date Tag No

Yes

##### 6.5.5.1 ASIB Prime Mover Overhaul Date Tag No


0155182

##### 6.5.5.2 Last Service Date

14/12/2022

##### 6.5.5.3 Next Service Date

14/12/2023

<b>Service Overdue</b>	No
<b>6.5.6 Pump Make and Model</b>	
SPP Thrustream 200/48	
<b>6.5.7 ASIB Pump Overhaul Date Tag No</b>	Yes
<b>6.5.7.1 ASIB Pump Overhaul Date Tag No</b>	
0155082	
<b>6.5.7.2 Last Overhaul Date</b>	
14/12/2022	
<b>6.5.7.3 Next Overhaul Date</b>	
14/12/2023	
<b>Service Overdue</b>	No
<b>6.5.8 Flow</b>	
9000 l/min	
<b>6.5.9 Diesel Engine Make and Model</b>	
Kirloskar 6SL8800TA	
<b>6.5.10 Head / Pressure</b>	
1000	
<b>6.5.11 Impeller Diameter (mm)</b>	
461	
<b>6.5.12 Suction Pressure (kPa)</b>	
45	
<b>6.5.13 Base Grouted In</b>	Yes
<b>6.5.14 Base Plate Grouting Painted</b>	Yes
<b>6.5.15 Delivery Piping Correctly Supported</b>	No
	

**6.5.16 Suction Piping Correctly Supported**

No



Photo 26

**6.5.17 Eccentric Reducer Piped Correctly**

Yes

**6.5.18 Correct Fuel Lines**

Yes

**6.5.19 Oil Level**

O.K.

**6.5.20 Batteries Installed on Stillage**

Yes

**6.5.21 Batteries Locked**

No



Photo 27

**6.5.22 Water Level (Heat Exchanger)**

O.K.

**6.5.23 Exhaust Correctly Supported**

Yes

**6.5.24 Exhaust Alignment**

Horizontal

**6.5.25 Exhaust Lagged**

Yes

**6.5.26 Sprinkler Protection  $\geq$  800mm From Exhaust**

Yes

**6.5.27 Cooling Line Correctly Aligned and Supported**

Yes

**6.5.28 Sight Glass Clean**

Yes

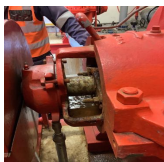
**6.5.29 Flexible Coupling Correctly Installed**

Yes

**6.5.30 Glands Condition**

Requires Attention

Excessive flow





**6.6 Diesel Engine Driven Pump - Test****6.6.1 Panel Lamp Test**

O.K.

**6.6.2 Hour Meter Before Test**

23:00

**6.6.3 Test - Button Depressed**

Engine Started

**6.6.4 Battery 1 - Button Depressed**

Engine Started

**6.6.5 Battery 2 - Button Depressed**

Engine Started

**6.6.6 Battery 1 & 2 - Button Depressed**

Engine Started

**6.6.7 RPM Recorded**

2000

**6.6.8 Churn Pressure (kPa)**

1000

**6.6.9 Flow Test Recorded**

9000 l/min @ 800 kPa

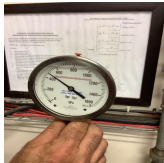


Photo 29



Photo 30



Photo 31



Photo 32



Photo 33

**6.6.10 Pump Flow Test**

Failed

**6.6.11 Hour Meter After Test**

23:01

The diesel engine driven pump must be tested for at least 30 minutes every week in accordance with the minimum requirements.

**6.7 Diesel Engine Driven Pump - Alarms****6.7.1 Siren Alarm**

Failed - See Report

**6.7.2 Flashing Light**

Operated

**6.7.3 Abortive Start Test Successful**

Failed

During the abortive start test the diesel engine will attempt to start six times, (six cycles). Each of these cycles alternates the batteries. The sequence is fifteen seconds cranking followed by six seconds rest before the next cycle starts alternating the battery. After the sixth attempt, the pump fail light will be indicated on the diesel engine control panel and a double tone alarm will sound.

This must be investigated by your installer and revised to achieve the correct sequence.

6.7.4 Abortive Start - Number of Cranks

7  
From 0 to 9

6.7.5 Abortive Start - Intermittent Siren

Failed - See Report

6.7.6 Abortive Start - Flashing Light

Operated

6.11 Pump House Alarms

6.11.1 Power Failure - Electrical Isolator - Alarm Bell

Failed - See Report

6.11.2 Power Failure - Electrical Isolator - Flashing Light

Operated

6.11.3 Pump House Protection - Terminal Test Valve Opened

Failed - See Report



Photo 34

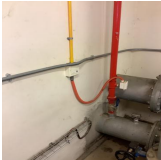


Photo 35



Photo 36

Non - Compliance Items.

• Item

• Item 1

► Description

Other

A hanger supporting the remote test line has come adrift

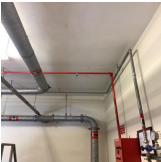


Photo 37

• Item 2

► Description

The suction line inclines slightly towards the pump.



Photo 38

### • Item 3

#### ► Description

Foundation bolts have been passed through lugs that have been welded to the base plate for the pump set base frame. The bolts should pass through the purpose made holes in the pump set base frame. The stability of the pump set checked by your installer

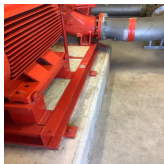


Photo 39



Photo 40

### • Item 4

#### ► Description

Other

The cooling water pipe work must be routed independently back to the water supply tanks, this must be addressed by your installer.

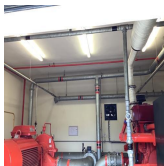


Photo 41

### Recommendations

## 7. Installation Control Valve(s)

### 7.1 Sprinkler control valves accessible

Yes

## Valve Cabinet

### Valve Cabinet 1

#### Location:

Right of loading canopy



Photo 42



Photo 43

### Number of Alarm Valves Installed

1 x 100mm 1 x 200mm

### 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 44

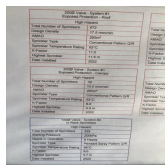


Photo 45

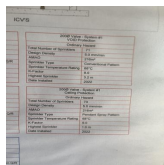


Photo 46



Photo 47

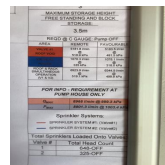


Photo 48

### 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

No



Photo 49

The correct quantity of spare sprinklers and compatible sprinkler spanner of the types used must be kept within the spares box at all times.

<b>7.7 By Pass Arrangement Installed</b>	Yes
<b>7.8 Fire Brigade Booster Connections Installed Correctly and Accessible</b>	Yes
<b>7.9 Are the Installation Control Valves Housed within an Approved Valve Cabinet</b>	Yes
<b>7.10 Flow Switch Installed Correctly</b>	Yes
<b>7.11 Manifold Correctly Supported</b>	Yes
<b>7.12 Riser Mains Correctly Supported</b>	Yes
<b>7.13 Riser Mains Externally Located</b>	No
<b>7.14 Flow Measuring Device Installed.</b>	Yes
<b>Flow Test Results</b>	Pass



Photo 50



Photo 51



Photo 52

<b>Recorded Flow and Pressure</b>	7000 l/min @ 760 l/min
<b>7.15 Correct Pressure Gauges Installed</b>	Yes
<b>7.16 Correct Gauge Cocks Installed</b>	Yes
<b>7.17 Flanges Short Bolted</b>	No
<b>7.18 Loose / Missing Bolts, Nuts &amp; Washers</b>	No
<b>7.19 False Alarm Prevention Pump Installed</b>	N/A
<b>7.20 Drain &amp; Test Pipes Installed Correctly</b>	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)

820

#### 7.23 Installation Pressure (kPa)

1000

#### 7.24 ASIB Overhaul Date Tag No

New Installation

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

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.

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.

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:

Various racks

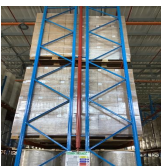


Photo 53



Photo 54

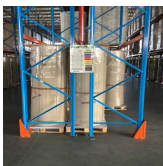


Photo 55

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Warehouse

System Issue

Issue

Issue 1

Finding

Intermediate Sprinkler Protection

Sprinklers do not line up with the transverse flue spaces, the system must be redesigned to accommodate the stacking arrangements.



Distance between the top of the storage on the racks and the roof sprinklers exceeds 4,0 metres.



An additional array of intermediate sprinklers must be installed above the uppermost tier level of storage.

Location of Finding.

- 1. Various
- 2. Top tier to be verified for 4m clearance as some racks have protection on top tier.

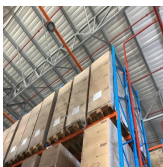


Photo 56

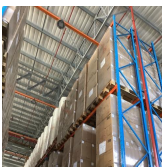


Photo 57



Photo 58

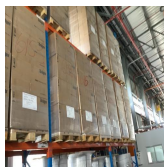


Photo 59



## 10. Proof of Inspection

Proof of inspection.

For and on behalf of client:

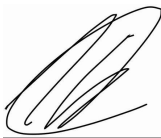


Julian Niehaus  
14.12.2022 16:45 SAST

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Proof of inspection.

ASIB Inspector:



Keith van Onselen  
14.12.2022 16:45 SAST

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### 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**

hein@firesprinkler.co.za

---

**Email: 2**

---

**Recipient**

craig@elidz.co.za

---

**Email: 3**

---

**Recipient**

jullian@firesprinkler.co.za

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## Appendix



Photo 1



Photo 2



Photo 3



Photo 4





Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10

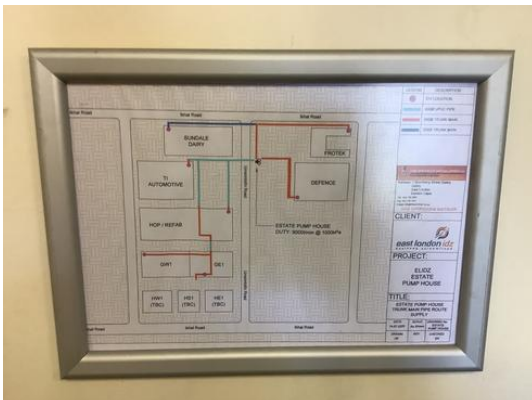


Photo 11



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



Photo 43

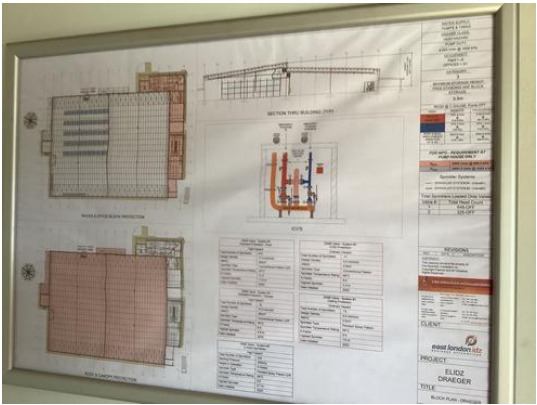


Photo 44



2000 Valve - System #1 Exposed Protection - Roof	
High Hazard	
Total Number of Sprinklers	472
Design Density	17.5 mm/min
AMAO	260m <sup>2</sup>
Sprinkler Type	Conventional Pattern Q/R
Sprinkler Temperature Rating	93°C
K-Factor	11.5
Highest Sprinkler	11.9 m
Date Installed	2022

2000 Valve - System #1 Exposed Protection - Canopy	
High Hazard	
Total Number of Sprinklers	32
Design Density	10.0 mm/min
AMAO	260m <sup>2</sup>
Sprinkler Type	Conventional Pattern Q/R
Sprinkler Temperature Rating	93°C
K-Factor	8.0
Highest Sprinkler	4.9 m
Date Installed	2022

1000 Valve - System #2 In Rack Sprinklers	
High Hazard	
Total Number of Sprinklers	325
Starting Pressure	200kPa
Heads in Operation	9 Heads
Sprinkler Type	Pendant Spray Pattern Q/R
Sprinkler Temperature Rating	68°C
K-Factor	8.0
Highest Sprinkler	5.7 m
Date Installed	2022

Photo 45

2000 Valve - System #1 VOID Protection	
Ordinary Hazard	
Total Number of Sprinklers	71
Design Density	5.0 mm/min
AMAO	216m <sup>2</sup>
Sprinkler Type	Conventional Pattern
Sprinkler Temperature Rating	68°C
K-Factor	8.0
Highest Sprinkler	3.2 m
Date Installed	2022

2000 Valve - System #1 Ceiling Protection	
Ordinary Hazard	
Total Number of Sprinklers	73
Design Density	5.0 mm/min
AMAO	216m <sup>2</sup>
Sprinkler Type	Pendant Spray Pattern
Sprinkler Temperature Rating	68°C
K-Factor	8.0
Highest Sprinkler	1.6 m
Date Installed	2022

Photo 46

WATER SUPPLY:		
PUMPS & TANKS		
HAZARD CLASS:		
HIGH HAZARD		
PUMP DUTY:		
9,000 l/min @ 1000 kPa		
OCCUPANCY:		
Plant = J2 OFFICES = G1		
CATEGORY:		
3		
MAXIMUM STORAGE HEIGHT FREE STANDING AND BLOCK STORAGE:		
3.5m		
REQD @ C GAUGE: Pump OFF		
AREA	REMOTE	FAVOURABLE

Photo 47

MAXIMUM STORAGE HEIGHT FREE STANDING AND BLOCK STORAGE:		
3.5m		
REQD @ C GAUGE: Pump Off		
AREA	REMOTE	FAVOURABLE
VALVE #1	5181.8 l/min	5183.5 l/min
ROOF VOID	510.9 kPa	491.5 kPa
VALVE #2	1070.3 l/min	1078.1 l/min
ROOF VOID	335 kPa	318.0 kPa
ROOF & RACK SIMULTANEOUS OPERATION (V1 & V2)	6523.6 l/min	6544.9 l/min
	519.1 kPa	499.8 kPa
FOR INFO - REQUIREMENT AT PUMP HOUSE ONLY		
Q <sub>MAX</sub>	8968 l/min @ 999.3 kPa	
P <sub>MAX</sub>	8801.3 l/min @ 1003.4 kPa	
Sprinkler Systems:		
— SPRINKLER SYSTEM #1: (Valve#1)		
— SPRINKLER SYSTEM #2: (Valve#2)		
Total Sprinklers Loaded Onto Valves:		
Valve #	Total Head Count	
1	648-OFF	
2	325-OFF	

Photo 48



Photo 49



Photo 50

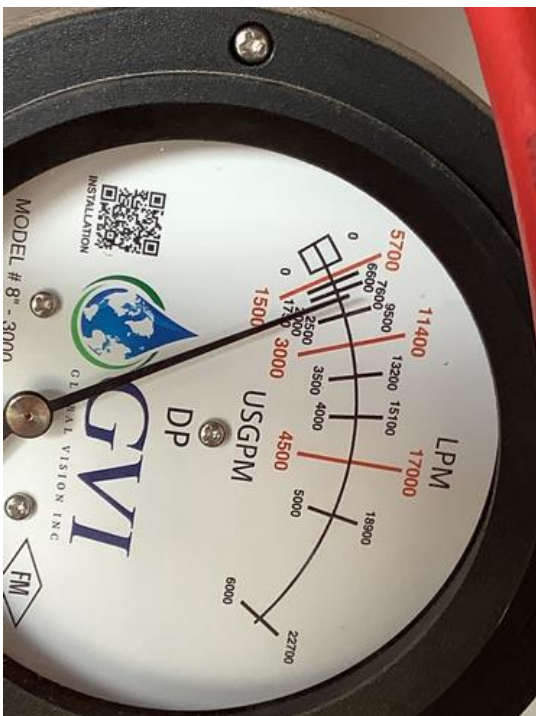


Photo 51



Photo 52





Photo 53



Photo 54



Photo 55



Photo 56





Photo 57



Photo 58



Photo 59