2022

Inspection of Automatic Sprinkler System

ASIB

Inspection of Automatic Sprinkler System

Bushveld Energy

Complete

Client/Site Name	
Bushveld Energy	
Billing Address	
Fire Sprinkler Installations	
Attention:	
Hein Fietze	
Document No	UNC.9855
Prepared by	Keith van Onselen
Conducted on	19.09.2022 21:30 SAST
Site Location	Bushveld Energy ELIDZ (East London Industrial Development Zone) ERF 60936

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

ASIB

REGISTRATION NUMBER: 1970/010833/07

1407 IMBALI
CNR LOUIS BOTHA AND
TUDHOPE AVENUES
BEREA
JOHANNESBURG
2198

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WEB SITE: www.asib.co.za

INDEPENDENT THIRD PARTY INSPECTION AND ADVISORY SERVICE SINCE 1970

Code	C - Full Protection, Clearance Certificate not Issued

All the platforms that are currently being installed in the process area require sprinkler protection.

Clearance certificate withheld due to the following:

Water Supplies - See Report ☑

Both infills to the tanks were found in the closed position and the diesel driven pump failed to meet its duty requirements

Standard	12th Edition

ASIB Contract No

UNC.9855

Client Order No

Fire Sprinkler Installations Re-inspection

Was the sprinkler system design in order	Yes
Was the water supplies in order	No

Refer to Water Supplies - Section 5.
Tanks are not full and both infill valves were found in the closed position

Was the pump room in order	No

Refer to Pump Room - Section 6.

Was the installation control valves in order	Yes
Was the storage in order	Yes

2. Hand Fire Appliances

Hose Reels - 30 metres ☑

Number:

9

Hand Fire Appliances - One unit per 100 m^2 of floor area.

DCP 9 kg ☑

Number:

11

CO^2 Gas 5 kg ☑

Number:

5

Hand fire appliances date of the last service:

New installation

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	**25** From 0 to 100
% High Hazard	**75** 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

Manufacture Modified Vanadium Oxide (MVO)

Category	CAT II
Design Density (mm/min)	10,0 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

Modified Vanadium Oxide (MVO)

Category	CAT I

Storage

Method

Method 1

Storage Method	Beam Pallet Racking
Design Density (mm)	22,5 mm/min
Roof Height (m)	16

Storage Height (m)

6,8

The foregoing stack height limitations for racks and/or shelves refer to those areas where intermediate sprinkler protection has not been installed.	☑

Building

Building 1

Building Name

Bushveld Energy

Date of First Inspection

07 June 2022

Original Installer

Fire Sprinkler Installations

Extension By

NA

Building Area m²

1933

Height of Building in meters

16

Sprinkler Detail

Area

Area 1

► Area & Type of Sprinklers	Roof Sprinklers
	Ceiling Sprinklers
	Void Sprinklers

Number of Sprinklers

473

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	P - Max

Flows & Pressures

8939 l/min @ 1000 kPa

This is appears to be the pump duty. This must be checked by your installer

Area of Operation 3

► Area of Operation	Q - Max

Flows & Pressures

8939 l/min @ 1000 kPa

This is appears to be the pump duty. This must be checked by your installer

Area of Operation 4

► Area of Operation	Roof Most Remote Area of Operation

Pump off 10mm/min design density

Flows & Pressures

3150 l/min @ 491 kPa

Area of Operation 5

► Area of Operation	Roof Most Favourable Area of Operation

Pump off 10mm/min design density

Flows & Pressures

3185 l/min @ 405,6 kPa

Area of Operation 6

► Area of Operation	Roof Most Remote Area of Operation

Pump off 24 mm/min design density

Flows & Pressures	
6583,1 l/min @ 341,2 kPa	
Area of Operation 7	
► Area of Operation	Roof Most Favourable Area of Operation
Pump off 24 mm/min design density	
Flows & Pressures	
6584,7 l/min @ 341 kPa	
Additional Sprinkler System Designs Required	No

Town Main - Flow Test Results

Town Main Diameter (mm)

100

Street / Road

Umsimbithi Road
East London
EC
5201
South Africa

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

Photo 5

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^3)

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

Effective Storage Capacity (m^3)

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 6

5.7 Tank Suction Piping Correctly Supported — No

Photo 7

Photo 8

It is recommended that additional support be provided on the tank suction line. ☑

5.8 Infill Isolating Valves Secured in the Open Position. — No

Photo 9

Photo 10

5.9 Drain valves secured in the Closed Position. — No

Photo 11

5.10 Flanges / Equipment Short Bolted — Yes

Photo 12

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

Recommendation

6. Pump Room

Pump Installed on Site	Yes

Photo 13

Add Pump House

Pump House

Pump House 1

Pump House Location

Umsimbithi Road

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 Anunciator 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

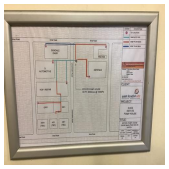


Photo 14

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

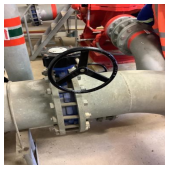


Photo 15

Photo 16

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 17

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 kPa

Orifice Diameter (mm)

103.60

6.2.9 Flanges / Equipment Short Bolted — Yes


Photo 18


Photo 19


Photo 20

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. ☑

Photo 21

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)

580

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 ≦ 50 kPa Below Switch 1 - Not ≧ 20 Below Switch 1)

Cut-In Pressure (kPa)

510

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

905:06

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^3)

9000 l/min

Head (m)

1000 kPa

Impeller Diameter (mm)

543 mm

6.8.2 Electric Motor Make and Model

CMG Marat 355M/L-4 B3

Photo 22

Photo 23

6.8.3 ASIB Prime Mover Date Tag No	Yes

6.8.3.1 ASIB Prime Mover Overhaul Date Tag No

0141530

6.8.3.2 Last Service Date

07/12/2021

6.8.3.3 Next Service Date

07/12/2022

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

0141450

6.8.5.2 Last Overhaul Date

07/12/2021

6.8.5.3 Next Overhaul Date

07/12/2022

Service Overdue	No

6.8.6 Suction Pressure (kPa)

Gauge is faulty. This must be addressed by your installer

Photo 24

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 25

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	No

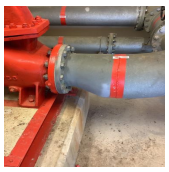


Photo 26

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.

50:35

6.9.3 Emergency Start - Button Depressed	Motor Started
6.9.4 Test - Button Depressed	Failed - See Report

6.9.5 Churn Pressure (kPa)

1120

6.9.6 Flow Test Recorded

9000 l/min @ 1000 kPa


Photo 27


Photo 28


Photo 29

6.9.7 Pump Flow Test	Passed

6.9.8 Hour Meter After Test

50:44

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 30

6.5.3 Diesel Tank Bunded	Yes
6.5.4 Spare Fuel Kept on Site	Yes

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

0141527

6.5.5.2 Last Service Date

07/12/2021

6.5.5.3 Next Service Date

07/12/2022

Service Overdue	No

6.5.6 Pump Make and Model

SPP Thrustream 200/48

6.5.7 ASIB Pump Overhaul Date Tag No	Yes

6.5.7.1 ASIB Pump Overhaul Date Tag No

0141447

6.5.7.2 Last Overhaul Date

07/12/2021

6.5.7.3 Next Overhaul Date

07/12/2022

Service Overdue	No

6.5.8 Flow

9000 l/min

6.5.9 Diesel Engine Make and Model

Kirloskar 6SL8800TA

6.5.10 Head / Pressure

1000 kPa

6.5.11 Impeller Diameter (mm)

461 mm

6.5.12 Suction Pressure (kPa)

6.5.13 Base Grouted In	Yes
6.5.14 Base Plate Grouting Painted	Yes
6.5.15 Delivery Piping Correctly Supported	No


Photo 31


Photo 32

6.5.16 Suction Piping Correctly Supported	No


Photo 33

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.	☑
6.5.17 Eccentric Reducer Piped Correctly	No


Photo 34

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 35

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 ≧ 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

22:6

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 36


Photo 37


Photo 38

6.6.10 Pump Flow Test	Failed

6.6.11 Hour Meter After Test

22:70

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	Failed - See Report
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	**8** From 0 to 9
6.7.5 Abortive Start - Intermittent Siren	Failed - See Report
6.7.6 Abortive Start - Flashing Light	Failed - See Report

6.11 Pump House Alarms

6.11.1 Power Failure - Electrical Isolator - Alarm Bell	Sounded
6.11.2 Power Failure - Electrical Isolator - Flashing Light	Failed - See Report
6.11.3 Pump House Protection - Terminal Test Valve Opened	Operated

The panel light did not illuminate.

Non - Compliance Items.

• **Item**

• **Item 1**

► **Description**	Other

A hanger supporting the remote test line has come adrift

Photo 39

• **Item 2**

► **Description**	The suction line inclines slightly towards the pump.

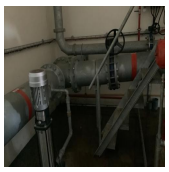


Photo 40

Recommendations

7. Installation Control Valve(s)

7.1 Sprinkler control valves accessible	Yes

Valve Cabinet

Valve Cabinet 1

Location:

Front left corner

Photo 41

Number of Alarm Valves Installed	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 42

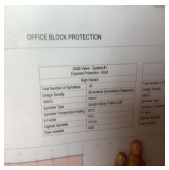


Photo 43

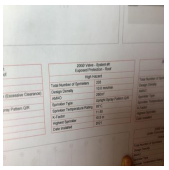


Photo 44

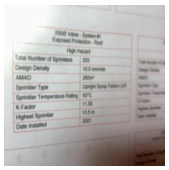
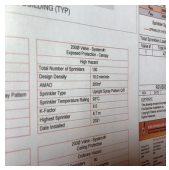


Photo 45



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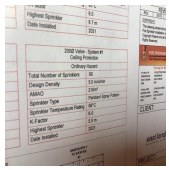

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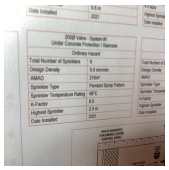


Photo 48

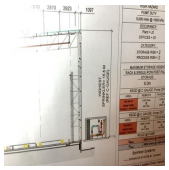


Photo 49

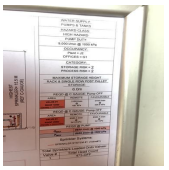


Photo 50

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	Yes
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
Flow Test Results	Pass


Photo 51


Photo 52


Photo 53


Photo 54


Photo 55

Recorded Flow and Pressure	6600 l/min @ 990 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)

1180

Photo 56

7.23 Installation Pressure (kPa)

1360

Photo 57

7.24 ASIB Overhaul Date Tag No

New Installation

First inspection 07/06/2022

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

Pressure too low

7.26 Are All Valves in the Correct Positions

Yes

7.27 Are All Valves Secured

Yes

Non Compliance - Items

Recommendation Items

8. Storage

No storage was taking place at the time of inspection. ☑

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.	Warehouse

System Issue

Issue

Issue 1

Finding	Other

Surfaces exceeding 1,0 metre in width. ☑

Surfaces which exceed 1,0 metre in width will obstruct the water discharged from the sprinklers above which could result in an ignition beneath these surfaces not being controlled or extinguished.

Location of Finding.

All areas that are wider than a meter and any enclosures. As the production areas were still being installed at the time of inspection these could not all be verified


Photo 58

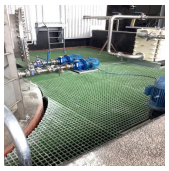


Photo 59


Photo 60


Photo 61


Photo 62


Photo 63

10. Proof of Inspection

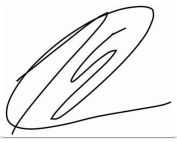
Proof of inspection.

For and on behalf of client:

Hein Fietze
20.09.2022 10:48 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
20.09.2022 10:48 SAST

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

dean@firesprinkler.co.za

Email: 2

Recipient

hein@firesprinkler.co.za

Email: 3

Recipient

craig@elidz.co.za

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

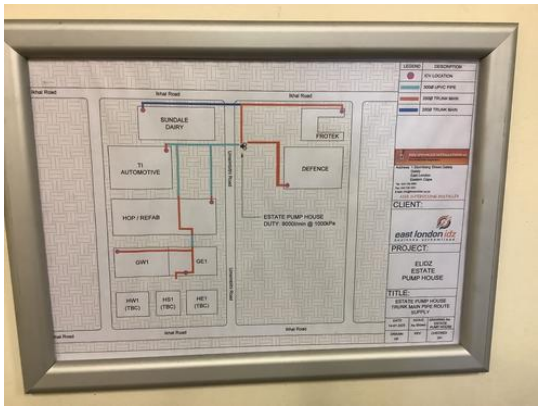


Photo 14

Photo 15

Photo 16

Photo 17

Photo 18

Photo 19

Photo 20

Photo 21

Photo 22

Photo 23

Photo 24

Photo 25

Photo 26

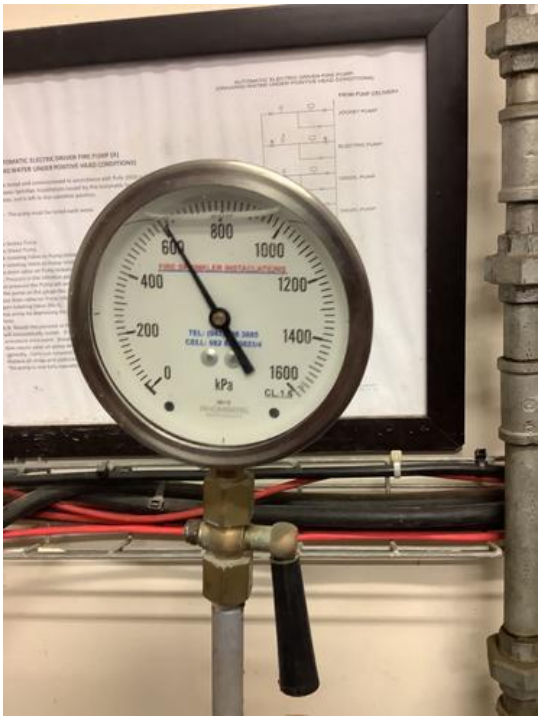


Photo 27

Photo 28

Photo 29

Photo 30

Photo 31

Photo 32

Photo 33

Photo 34

Photo 35

Photo 36

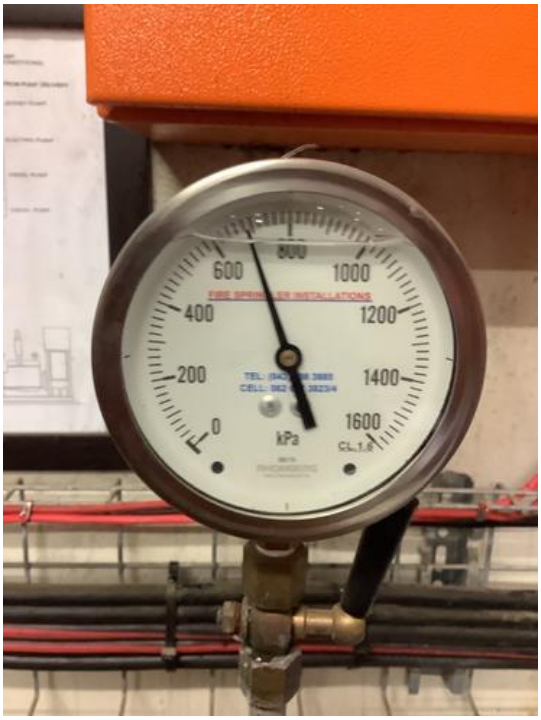


Photo 37

Photo 38

Photo 39

Photo 40

Photo 41

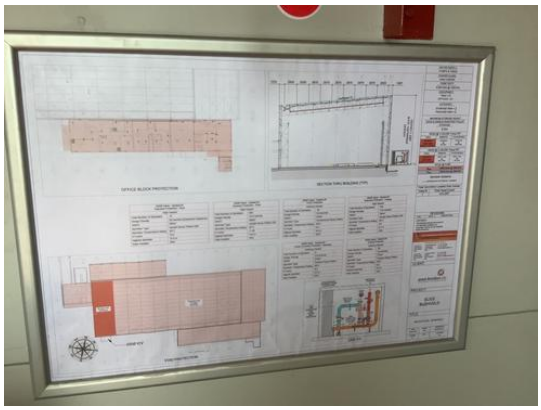


Photo 42

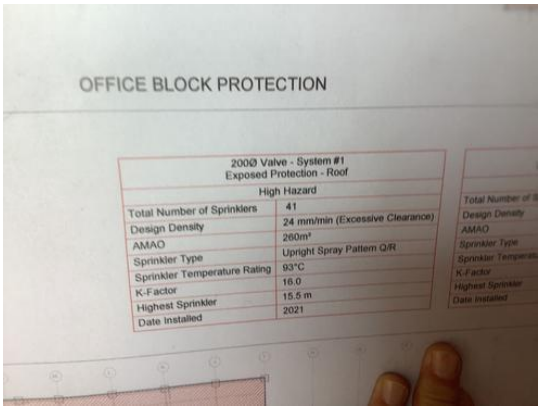


Photo 43

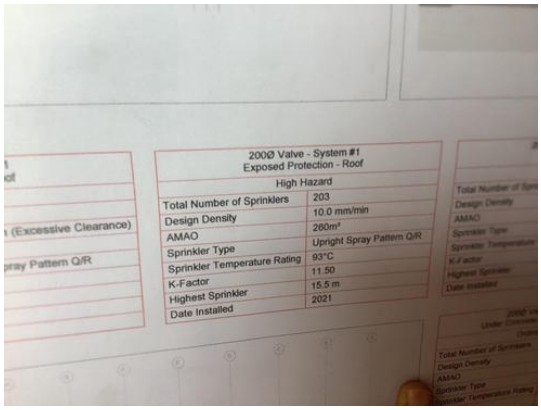


Photo 44

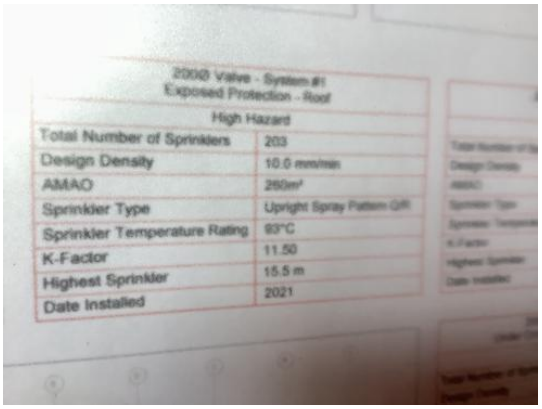


Photo 45

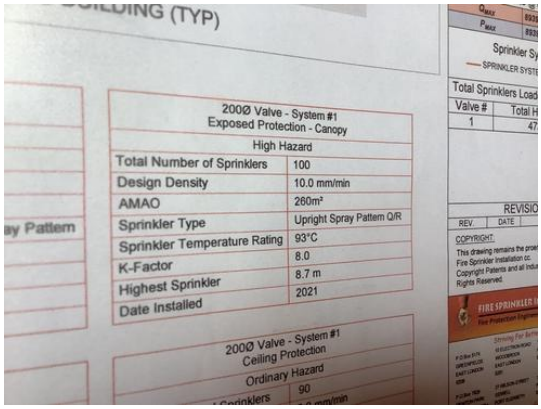
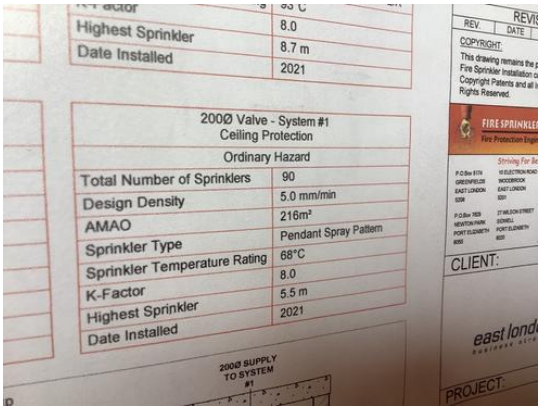


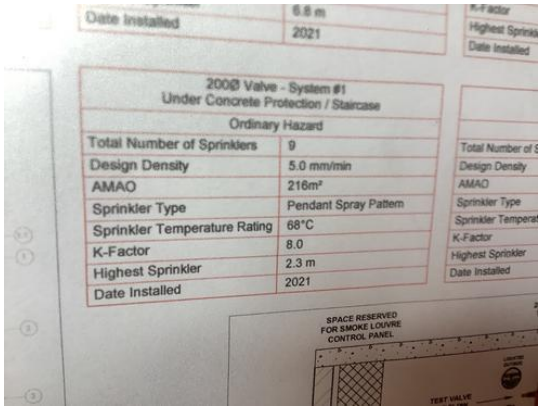
Photo 46



Highest Sprinkler	8.0
Date Installed	8.7 m
	2021

200Ø Valve - System #1 Ceiling Protection	
Ordinary Hazard	
Total Number of Sprinklers	90
Design Density	5.0 mm/min
AMAO	216m²
Sprinkler Type	Pendant Spray Pattern
Sprinkler Temperature Rating	68°C
K-Factor	8.0
Highest Sprinkler	5.5 m
Date Installed	2021

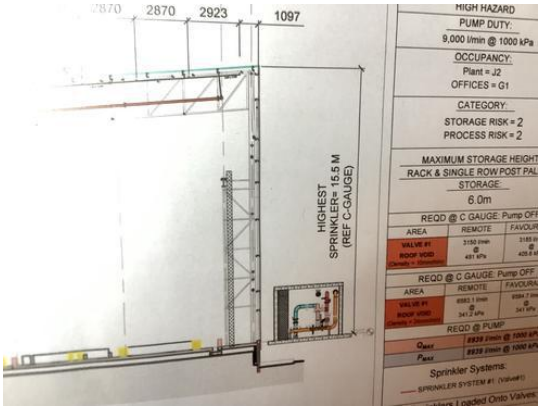
Photo 47



Date Installed	2021

200Ø Valve - System #1 Under Concrete Protection / Staircase	
Ordinary Hazard	
Total Number of Sprinklers	9
Design Density	5.0 mm/min
AMAO	216m²
Sprinkler Type	Pendant Spray Pattern
Sprinkler Temperature Rating	68°C
K-Factor	8.0
Highest Sprinkler	2.3 m
Date Installed	2021

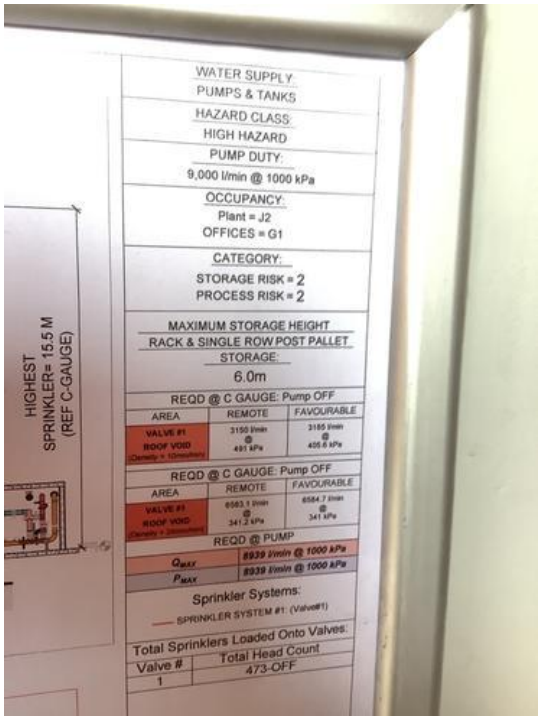
Photo 48



HIGHEST SPRINKLER= 15.5 M (REF C-GAUGE)

HIGH HAZARD
PUMP DUTY:
9,000 l/min @ 1000 kPa
OCCUPANCY:
Plant = J2
OFFICES = G1
CATEGORY:
STORAGE RISK = 2
PROCESS RISK = 2
MAXIMUM STORAGE HEIGHT
RACK & SINGLE ROW POST PALL
STORAGE:
6.0m

Photo 49



HIGHEST SPRINKLER= 15.5 M (REF C-GAUGE)

WATER SUPPLY
PUMPS & TANKS
HAZARD CLASS:
HIGH HAZARD
PUMP DUTY:
9,000 l/min @ 1000 kPa
OCCUPANCY:
Plant = J2
OFFICES = G1
CATEGORY:
STORAGE RISK = 2
PROCESS RISK = 2
MAXIMUM STORAGE HEIGHT
RACK & SINGLE ROW POST PALLET
STORAGE:
6.0m
REQD @ C GAUGE: Pump OFF

AREA	REMOTE	FAVOURABLE
VALVE #1 ROOF VOID	3150 l/min @ 491 kPa	3185 l/min @ 405.6 kPa

REQD @ C GAUGE: Pump OFF

AREA	REMOTE	FAVOURABLE
VALVE #1 ROOF VOID	6583.1 l/min @ 341.2 kPa	6584.7 l/min @ 341 kPa

REQD @ PUMP

Q_{MAX}	8939 l/min @ 1000 kPa
P_{MAX}	8939 l/min @ 1000 kPa

Sprinkler Systems:
SPRINKLER SYSTEM #1: (Valve#1)
Total Sprinklers Loaded Onto Valves:

Valve #	Total Head Count
1	473-OFF

Photo 50

Photo 51

Photo 52

Photo 53

Photo 54

Photo 55

Photo 56

Photo 57

Photo 58

Photo 59

Photo 60

Photo 61

Photo 62

Photo 63