

2024

Inspection of Automatic Sprinkler System

ASIB



Inspection of Automatic Sprinkler System

Yekani - East London Industrial
Development Zone
Pump house and tanks only

Complete

Client/Site Name

Yekani - East London Industrial Development Zone
Pump house and tanks only

Billing Address

IDEC Financial Services (Pty) Ltd
P O Box 432
EAST LONDON
5400

Attention:

Mteteleli Zantsi
Camagwini Ngxokolo-Nomatye

Document No

UNC.8029

Prepared by

Keith van Onselen

Conducted on

08.05.2024 11:29 SAST

Site Location

East London IDZ
EC
5201
South Africa

Disclaimer

We have pleasure in attaching our inspector's report.

Whilst every care is taken in the preparation of the report which describes the conditions as found, such report is not a guarantee carrying responsibility for results and neither this Company nor any of its employees or agents shall be liable for any loss or damage of whatsoever nature and howsoever caused, (whether by actual or alleged negligence or otherwise), in any way arising out of the acts or omissions of the Company and/or its employees or agents aforesaid.

The report is based upon the visual inspection of the external condition of the equipment where accessible without having to provide scaffolding, ladders, staging, lighting and not requiring the removal or displacement of any temporary or permanent structure, fitting or fixture.

If there are any points arising on which you require clarification, kindly communicate with the undersigned. Assuring you of our best attention at all times.

Confidentiality

In order to maintain the integrity and credibility of the inspection processes and to protect the parties involved, it is understood that the inspectors will not divulge to unauthorized persons any information obtained during this inspection unless legally obligated to do so.

Yours faithfully,

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



Nico van Loggerenberg
Managing Director

1. Report Summary

THE AUTOMATIC SPRINKLER INSPECTION BUREAU (PTY) LIMITED



REGISTRATION NUMBER: 1970/010833/07

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CNR LOUIS BOTHA AND
TUDHOPE AVENUES
BEREA
JOHANNESBURG
2198

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HOUGHTON
2041

INDEPENDENT
THIRD PARTY
INSPECTION AND
ADVISORY
SERVICE SINCE
1970

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Code

B - Full Protection, Clearance
Certificate Issued

Please Note:

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

Standard

11th Edition

ASIB Contract No

UNC.8029

Client Order No

PO-004203

Was the sprinkler system design in order

Yes

Report forces response to this. Ignore it as this aspect of the report is not applicable. Design details (Hydraulics, Block Plans etc.) are not contemplated herein.

Was the water supplies in order

Yes

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

Not Inspected

Was the storage in order

Yes

Report forces response to this. Ignore it as this aspect of the report is not applicable. Design details (Hydraulics, Block Plans etc.) are not contemplated herein.

2. Hand Fire Appliances

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

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

3. Occupancy & Storage Guidance

Percentage Hazard.

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

% High Hazard	100 From 0 to 100
---------------	----------------------

Stack height signs not less than 500 mm by 500 mm in size must be prominently displayed at the maximum level of the allowable storage height in all storage and process risk areas.

5. Water Supplies

Town Main - Flow Test Results

Town Main Diameter (mm)

100

Street / Road

Umthiza Road

Flow Recorded in Flow Test (l/min)

No test apparatus installed

► 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

No Measuring Device Installed

A direct reading flow measuring device must be installed to measure the infill to the tank.

The water supply testing assembly must be installed downstream from the isolating valve in order to periodically test the flows of the town main.

Municipal water supplies are continuously reducing and it must be established that the tank can be refilled as required within a 36 hour period.

5.3 Tank Information Plate Installed

Yes



Photo 3

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

8,88 x 8,35 high

Vortex Inhibitor

Yes

Gross Storage Capacity (m³)

516 x 2 = 1032

Effective Storage Capacity (m³)

466 x 2 = 9032

Dead Water (mm)

Required

Freeboard (mm)

Required

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

Yes

5.7 Tank Suction Piping Correctly Supported

Yes

5.8 Infill Isolating Valves Secured in the Open Position.

Yes

Underground

5.9 Drain valves secured in the Closed Position.	Yes
5.10 Flanges / Equipment Short Bolted	No
5.11 Loose / Missing Bolts, Nuts & Washers	No

Non - Compliance

Item	
Item 1	
► Description	Other

The holes cut into the top of the tank must be repaired

Item 2	
► Description	Suction line inclines towards the pump. Suction lines must be laid truly horizontal or must fall towards the pump for pumps under positive head conditions. In order to prevent any air becoming trapped within this pipework, we recommend that an automatic air release valve be installed.

Right hand tank suction line

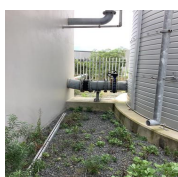


Photo 4

Recommendation

6. Pump Room

Pump Installed on Site

Yes



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9

Add Pump House

Pump House

Pump House 1

Pump House Location

Front facing the 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 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

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	Yes
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	Yes
6.2.8 Specify Flow Measuring Device.	Direct Reading Flow Meter
6.2.9 Flanges / Equipment Short Bolted	No
6.2.10 Loose / Missing Bolts, Nuts & Washers	No
6.2.11 Electrical cables positioned 300mm above the finished floor level.	No



Photo 10

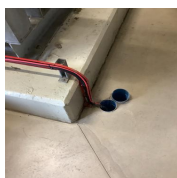


Photo 11

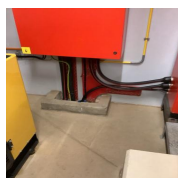


Photo 12

Current carrying parts, regardless of voltage, shall be at least 300 mm above finished floor level.

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

Yes

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)

760

Cut-Out Pressure (kPa)

860

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)

700

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



Switch 2

► Primary or Secondary Pump

Secondary Pump

► Specify Diesel or Electric

Diesel

Pressure Switch - Diesel Primary

Cut-In Pressure (kPa)

620

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

Cut-In Pressure (kPa)

540

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

168:04:50

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

5117

ASIB Approval Number Pump

5117

Flow Q (m³)

583

9717 l/min

This differs from the 9000 l/min indicated on the block plan. This must be investigated by your installer



Photo 13

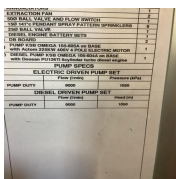


Photo 14

Head (m)

106
1060 kPa

Impeller Diameter (mm)

548

6.8.2 Electric Motor Make and Model

Actom ZD/158/03/02/MK

6.8.3 ASIB Prime Mover Date Tag No

Yes

6.8.3.1 ASIB Prime Mover Overhaul Date Tag No

0155183

6.8.3.2 Last Service Date

16/02/2024

6.8.3.3 Next Service Date

16/02/2025

Service Overdue

No

6.8.4 Pump Make and Model

KSB OMEGA 150-605A

6.8.5 ASIB Pump Overhaul Date Tag No

Yes

6.8.5.1 ASIB Pump Overhaul Date Tag No

0166752

6.8.5.2 Last Overhaul Date

16/02/2024

6.8.5.3 Next Overhaul Date

16/02/2025

Service Overdue

No

6.8.6 Suction Pressure (kPa)

65

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
<div data-bbox="183 394 360 568" data-label="Image"> </div> <div data-bbox="177 568 277 595" data-label="Caption"> <p>Photo 15</p> </div> <p>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.</p> <div data-bbox="1370 759 1404 790" data-label="Image"> </div>	
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. Not operational <div data-bbox="183 1628 360 1805" data-label="Image"> </div> <div data-bbox="177 1805 277 1832" data-label="Caption"> <p>Photo 16</p> </div>	
6.9.3 Emergency Start - Button Depressed	Motor Started
6.9.4 Test - Button Depressed	Motor Started

6.9.5 Churn Pressure (kPa)

1260

6.9.6 Flow Test Recorded

9717 l/min @ 1060 kPa

6.9.7 Pump Flow Test

Passed

6.9.8 Hour Meter After Test

Not operational

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

Sounded

6.10.2 Flashing Light

Operated

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

5128

6.5.2 Diesel Tank Level

Full

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

0166951

6.5.5.2 Last Service Date

16/02/2024

6.5.5.3 Next Service Date

16/02/2025

Service Overdue

No

6.5.6 Pump Make and Model

KSB OMEGA 150-605A

6.5.7 ASIB Pump Overhaul Date Tag No

Yes

6.5.7.1 ASIB Pump Overhaul Date Tag No

0166751

6.5.7.2 Last Overhaul Date

16/02/2024

6.5.7.3 Next Overhaul Date

16/02/2025

Service Overdue

No

6.5.8 Flow

9000 l/min as per block plan

Must be engraved on plate provided

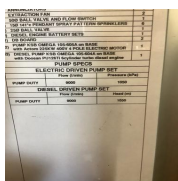


Photo 17



Photo 18

6.5.9 Diesel Engine Make and Model

Doosan PU126TI

6.5.10 Head / Pressure

1050 kPa as per block plan

Must be engraved on plate provided




6.5.11 Impeller Diameter (mm)

486

6.5.12 Suction Pressure (kPa)

70

6.5.13 Base Grouted In	Yes
6.5.14 Base Plate Grouting Painted	Yes
6.5.15 Delivery Piping Correctly Supported	Yes
6.5.16 Suction Piping Correctly Supported	Yes
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	Yes
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	O.K.
6.6 Diesel Engine Driven Pump - Test	
6.6.1 Panel Lamp Test	O.K.
6.6.2 Hour Meter Before Test	
11:36:45	
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 1800	
6.6.8 Churn Pressure (kPa) 1440 	
Photo 19	
6.6.9 Flow Test Recorded 9717 l/min @ 1050 - 60 = 990 kPa The correct flow and pressure requirements must be verified and engraved/stamped on the plate provided	
	
Photo 20	
	
Photo 21	
6.6.10 Pump Flow Test	Passed
6.6.11 Hour Meter After Test 11:40:53	
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	Sounded
6.7.2 Flashing Light	Operated
6.7.3 Abortive Start Test Successful Would not cycle	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

0
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

Operated

6.11.3 Pump House Protection - Terminal Test Valve Opened

Operated

Non - Compliance Items.

• Item

• Item 1

► Description

Other

Maximum 1200 kPa

The churn pressure has exceeded the maximum allowable pressure of 1200 kPa, this must be investigated and rectified by your installer. On both pumps.



Photo 22



Photo 23

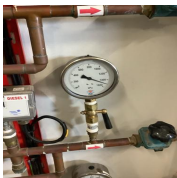


Photo 24

Recommendations

7. Installation Control Valve(s)

7.1 Sprinkler control valves accessible

No

Pumps and tanks inspection only

8. Storage

No storage was taking place at the time of inspection.



Pumps and tanks inspection only

9. Sprinkler System

Sprinkler System

Area

Area 1

Specified Area.

Other

Specify Area

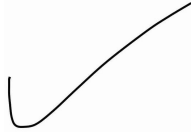
Pumps and tanks inspection only

System Issue

10. Proof of Inspection

Proof of inspection.

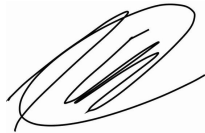
For and on behalf of client:



Camagwini Ngxokolo-Nomatye
09.06.2024 18:45 SAST

Proof of inspection.

ASIB Inspector:



Keith van Onselen
09.06.2024 18:45 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

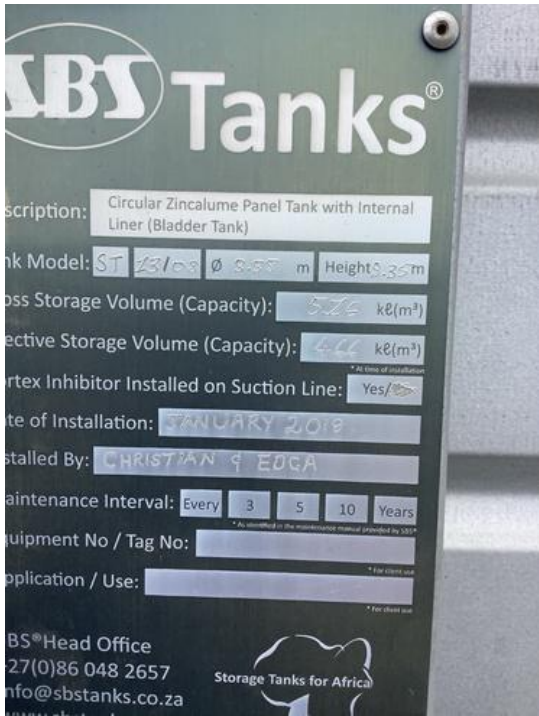


Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13

ANNUNCIATORS	1	
EXTRACTION FAN	2	
500 BALL VALVE AND FLOW SWITCH	1	
150 141°C PENDANT SPRAY PATTERN SPRINKLERS	6	
250 BALL VALVE	1	
DIESEL ENGINE BATTERY SETS	1	
DB BOARD	2	
PUMP KSB OMEGA 105-605A on BASE with Actom 225KW 400V 4 POLE ELECTRIC MOTOR	1	
DIESEL PUMP KSB OMEGA 105-604A on BASE with Doosan PU126T1 6cylinder turbo diesel engine	1	
PUMP SPECS		
ELECTRIC DRIVEN PUMP SET		
	Flow (l/min)	Pressure (kPa)
PUMP DUTY	9000	1050
DIESEL DRIVEN PUMP SET		
	Flow (l/min)	Head (m)
PUMP DUTY	9000	1050

Photo 14



Photo 15



Photo 16

ANNUNCIATIONS		
EXTRACTION FAN		2
500 BALL VALVE AND FLOW SWITCH		1
150 141°c PENDANT SPRAY PATTERN SPRINKLERS		6
250 BALL VALVE		1
1) DIESEL ENGINE BATTERY SETS		1
1) DB BOARD		2
2) PUMP KSB OMEGA 105-605A on BASE with Actom 225KW 400V 4 POLE ELECTRIC MOTOR		1
3) DIESEL PUMP KSB OMEGA 105-604A on BASE with Doosan PU126TI 6cylinder turbo diesel engine		1
PUMP SPECS		
ELECTRIC DRIVEN PUMP SET		
	Flow (l/min)	Pressure (kPa)
PUMP DUTY	9000	1050
DIESEL DRIVEN PUMP SET		
	Flow (l/min)	Head (m)
PUMP DUTY	9000	1050

Photo 17



Photo 18



Photo 19



Photo 20

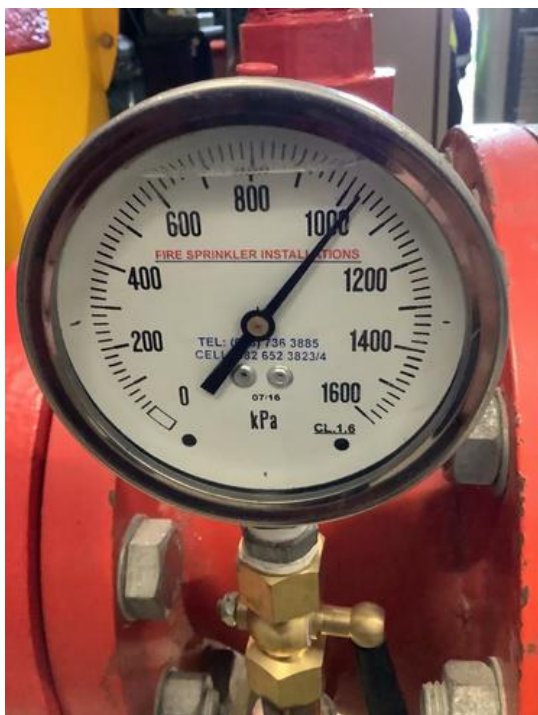


Photo 21



Photo 22



Photo 23



Photo 24