

Thermography Inspection

SAMPLE REPORT



INFORMATION

Inspection Site Information	
Customer	
Address	
Contact person	
Phone number	
E-mail address	
Thermographer	

Thermal inspection conducted on all functioning plant equipment prior to seasonal start-up. Recommend second report be conducted during plant operation.

All inspected equipment is documented in the table on pages 3-4. Only equipment with faults found is documented in this report. Modern Energy does have thermal images of all inspected equipment without faults. Complete itemized list of all inspected equipment including thermal imaging pictures can be supplied upon request. Modern Energy will use these records to compare with subsequent reports.

Overview of Fault Rating:

0: Normal	Temp rise 0-5 °C	No action
1: Low grade	Temp rise 5-10 °C	To be monitored – Plan new inspection
2: Medium grade	Temp rise 10-35 °C	Repair at scheduled shut down
3: Severe	Temp rise >35 °C	Repair immediately

Summary of Inspection

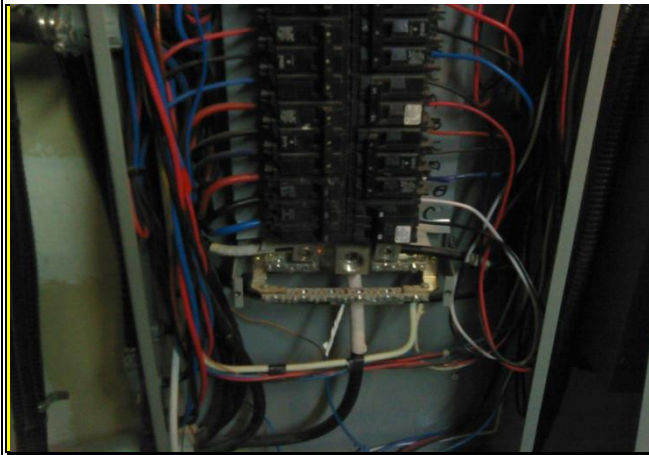
Location	Panel	Fault	Page Number
West Electrical Room	MOD116 - Refrigeration Panel A	Current imbalance	5
West Electrical Room	MOD121 - 10HP Water Pump Motor Panel Disconnect	High temperature difference	6
West Electrical Room	MOD122 - Refrigeration Panel B Disconnect	Current imbalance	7
West Electrical Room	MOD127 - Refrigeration Transformer Disconnect	Current imbalance	8
West Electrical Room	MOD129 - Main Line Disconnect	Loose electrical connection	9-11
East Cluster Buster Area	MOD145 - Mechanical Panel D	Loose electrical connection	12
Second Floor Electrical Room	MOD147 - Comms Room Panel 9	Loose electrical connection	13
Hydro Cooler Area	MOD154 - 10HP Water Pump Motor Controller	Load imbalance or poor connection	14
Hydro Cooler Area	Unitec Pump	High temperature	15

Summary of inspected equipment: No fault

Location	Panel	Label
South East Chiller Area	Chiller #1	MOD100
South East Chiller Area	Chiller #2	MOD101
South East Chiller Area	Chiller #2 Disconnect	MOD102
South East Chiller Area	Chiller #1 Disconnect	MOD103
South East Electrical Room	Main Supply	MOD104
South East Electrical Room	Chiller #1 Panel	MOD105
South East Electrical Room	Chiller #2 Panel	MOD106
South East Electrical Room	Accommodation Building	MOD137
South East Electrical Room	Box Machine Room	MOD138
South East Electrical Room	Trane Chiller Unit	MOD139
South East Chiller Area	Pump Panels	MOD107-114
South East Chiller Area	Panel P	MOD115
West Electrical Room	Blast Cooler	MOD117
West Electrical Room	CU6	MOD118
West Electrical Room	CU5	MOD119
West Electrical Room	CU4	MOD120
West Electrical Room	Panel P	MOD123
West Electrical Room	40HP Air Compressor	MOD124
West Electrical Room	Unitec Transformer	MOD125
West Electrical Room	Mechanical Transformer Disconnect	MOD126
West Electrical Room	Refrigeration Transformer Disconnect	MOD127
West Electrical Room	House Load Transformer Disconnect	MOD128

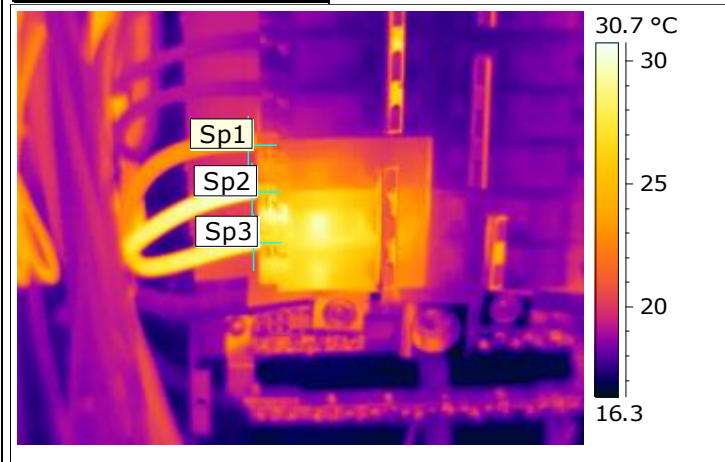
Location	Panel	Label
West Electrical Room	Jealous Fruits	MOD130
West Electrical Room	Forklift	MOD131
West Electrical Room	Control Panel 8	MOD132
West Electrical Room	Control Panel 9	MOD133
Outside	Hydro Pole	N/A
Accommodation Electrical Room	Main Circuit Breaker Panel	MOD134
Accommodation Electrical Room	600V Disconnect	MOD135
Accommodation Electrical Room	600V Control Panel	MOD136
First Floor Interior Electrical Room	Refrigeration Panel B	MOD140
First Floor Interior Electrical Room	House Load Panel A	MOD141
First Floor Interior Electrical Room	Mechanical Panel A	MOD142
East Cluster Buster Area	Cluster Separator Control Panel 2	MOD143
East Cluster Buster Area	Cluster Separator Control Panel 1	MOD144
Unitec Area	Cluster Separators Control Panel	MOD146
Unitec Area	Condensing Unit 9 Control Panel	MOD151
Unitec Area	Condensing Unit 9 Disconnect	MOD152
Unitec Area	Mechanical Panel C	MOD153
Unitec Area	Unitec Panel 1	MOD155
Unitec Area	Unitec Transformer	MOD156
Unitec Area	Clam Filler Control Panel	MOD157
Second Floor Electrical Room	Comms Room Panel 10	MOD148
Second Floor Electrical Room	Comms Room Panel 9 Disconnect	MOD149
Second Floor Electrical Room	Office Lights and Heaters Panel	MOD150

Photo and Identification



Location	West Electrical Room
Panel	Refrigeration Panel A - MOD116
Equipment	Condensing Unit #9
L1	28
L2	46
L3	46
Fault	Current Imbalance

Thermogram 13/06/2014



Sp1 Temperature	23.4 °C
Sp2 Temperature	30.3 °C
Sp3 Temperature	29.4 °C

Analysis & Recommended action:

This circuit breaker supplies condensing unit nine. Compressor current draw imbalance found during inspection. Follow up required.

Inspected by :

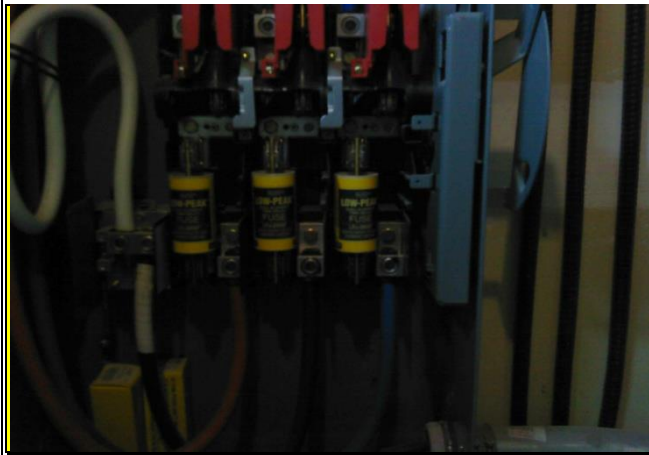
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Repaired by:

date:

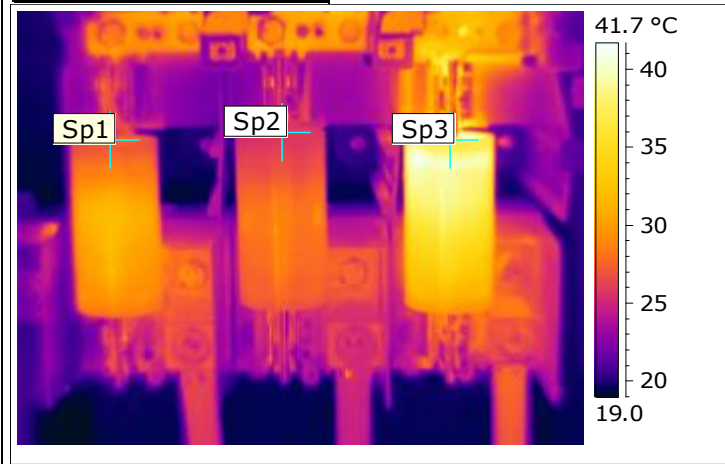
Comment:.....

Photo and Identification



Location	West Electrical Room
Panel	10HP Water Pump Motor Panel Disconnect - MOD121
Equipment	10HP Pump Panel
L1	60
L2	60
L3	65
Fault	High temperature difference

Thermogram 13/06/2014



Sp1 Temperature	26.8 °C
Sp2 Temperature	24.7 °C
Sp3 Temperature	36.8 °C

Analysis & Recommended action:

Identified a temperature discrepancy found on main line power supplying motor pump panel. Load analysis to be included on pump panel report. Refer to page 14.

Inspected by :

date:

Repaired by:

date:

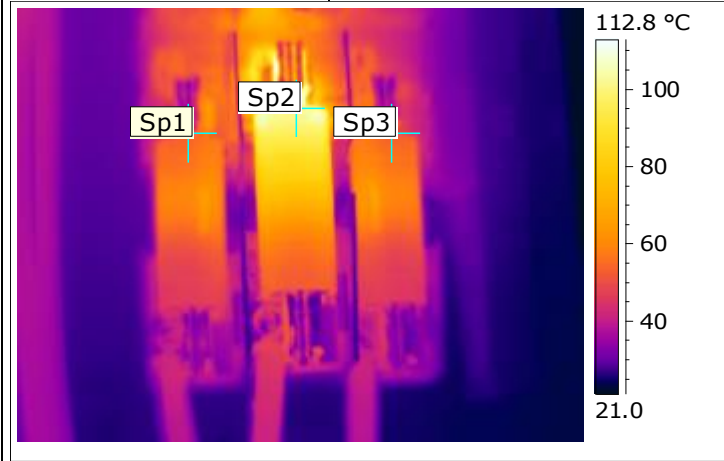
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Photo and Identification



Location	West Electrical Room
Panel	Refrigeration Panel B Disconnect - MOD122
Equipment	Refrigeration Panel B
L1	64
L2	54
L3	76
Fault	Current Imbalance

Thermogram 13/06/2014



Sp1 Temperature	47.0 °C
Sp2 Temperature	100.9 °C
Sp3 Temperature	53.1 °C

Analysis & Recommended action:

Current imbalance found. Follow up required to check panel loads and connections.

Inspected by :

date:

Repaired by:

date:

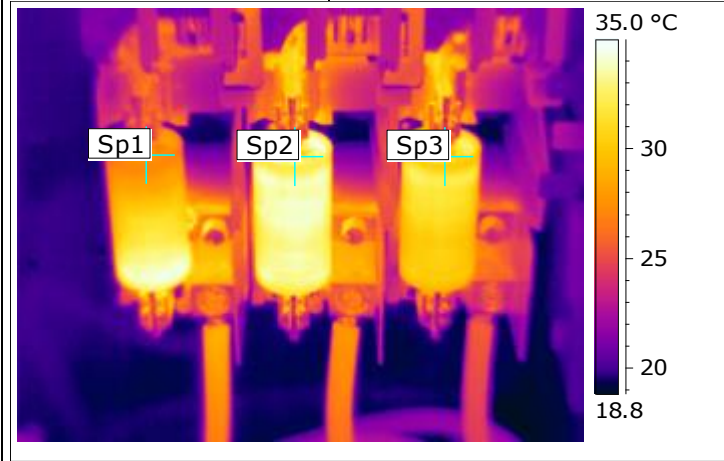
Comment:

Photo and Identification



Location	West Electrical Room
Panel	Refrigeration Transformer Disconnect - MOD127
Equipment	Refrigeration Transformer
L1	57
L2	69
L3	62
Fault	Current Imbalance

Thermogram 13/06/2014



Sp1 Temperature	27.5 °C
Sp2 Temperature	32.9 °C
Sp3 Temperature	31.4 °C

Analysis & Recommended action:

Current imbalance identified and follow up required to test loads.

Inspected by :

date:

Repaired by:

date:

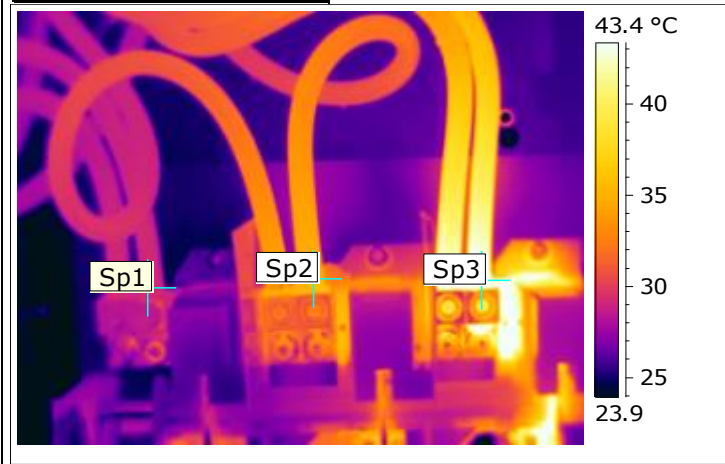
Comment:

Photo and Identification



Location	West Electrical Room
Panel	Main Line Disconnect - MOD129
Equipment	Building
Fault	Loose electrical connection

Thermogram 13/06/2014



Sp1 Temperature	29.2 °C
Sp2 Temperature	35.4 °C
Sp3 Temperature	44.2 °C

Analysis & Recommended action:

Loose electrical connection on L3 of main line disconnect supplying all electrical loads fed from West Electrical Room.

Refer to page 14-15 for complete main panel overview.

Inspected by :

date:

Repaired by:

date:

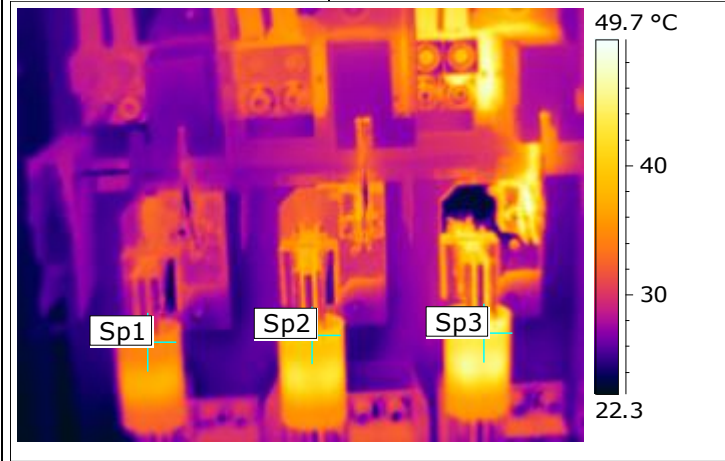
Comment:

Photo and Identification



Location	West Electrical Room
Panel	Main Line Disconnect - MOD129
Equipment	Building
Fault	Loose electrical connection

Thermogram 13/06/2014



Sp1 Temperature	34.6 °C
Sp2 Temperature	39.3 °C
Sp3 Temperature	43.9 °C

Analysis & Recommended action:

Refer to page 12.

Inspected by :

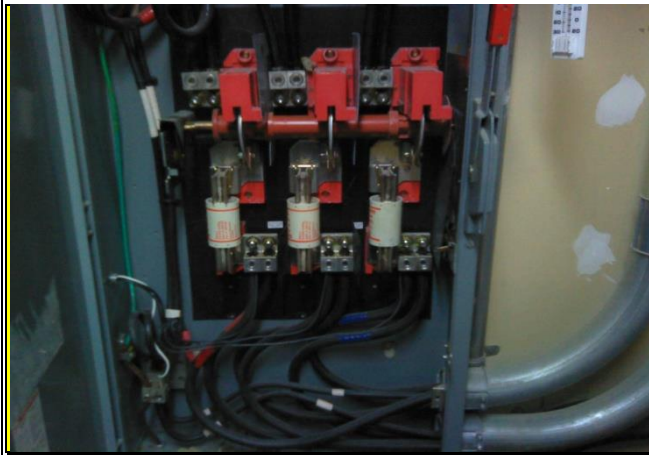
date:

Repaired by:

date:

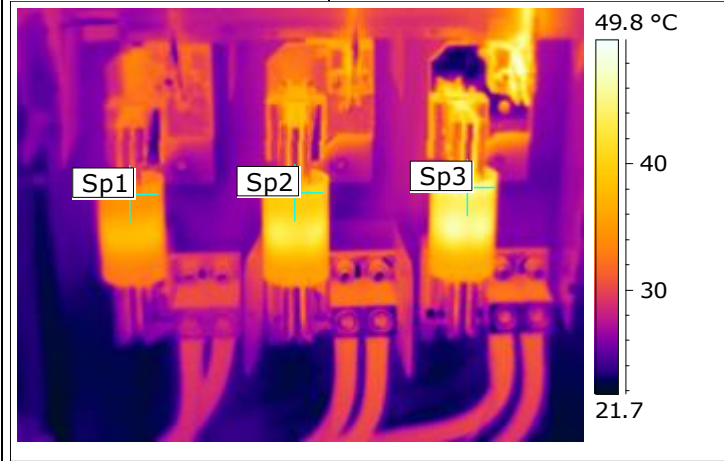
Comment:.....

Photo and Identification



Location	West Electrical Room
Panel	Main Line Disconnect - MOD129
Equipment	Building
Fault	Loose electrical connection

Thermogram 13/06/2014



Sp1 Temperature	35.1 °C
Sp2 Temperature	40.0 °C
Sp3 Temperature	45.5 °C

Analysis & Recommended action:

Refer to page 12.

Inspected by :

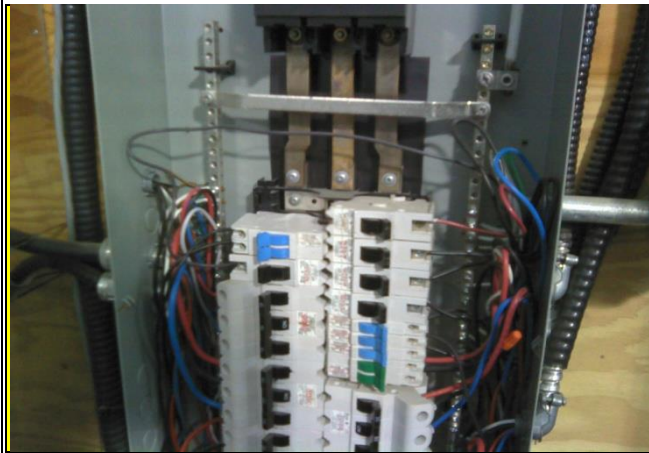
date:

Repaired by:

date:

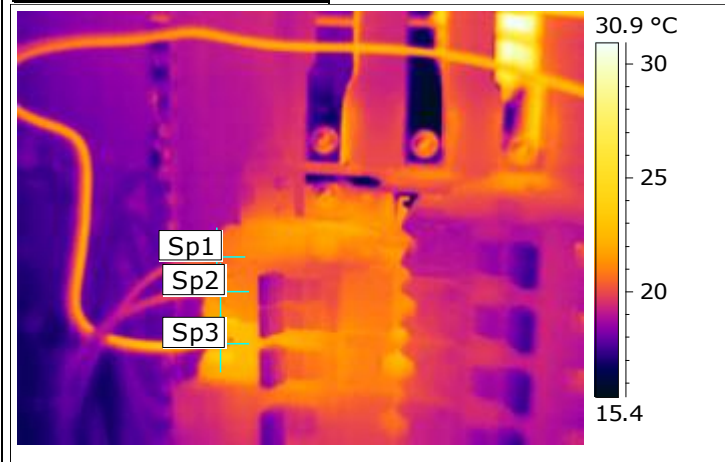
Comment:

Photo and Identification



Location	East Cluster Buster Area
Panel	Mechanical Panel D - MOD145
Equipment	N/A
Fault	Loose electrical connection

Thermogram 13/06/2014



Sp1 Temperature	20.3 °C
Sp2 Temperature	20.9 °C
Sp3 Temperature	23.3 °C

Analysis & Recommended action:

Loose electrical connection found on panel. Tightened by electrical contractor during time of inspection.

Inspected by :

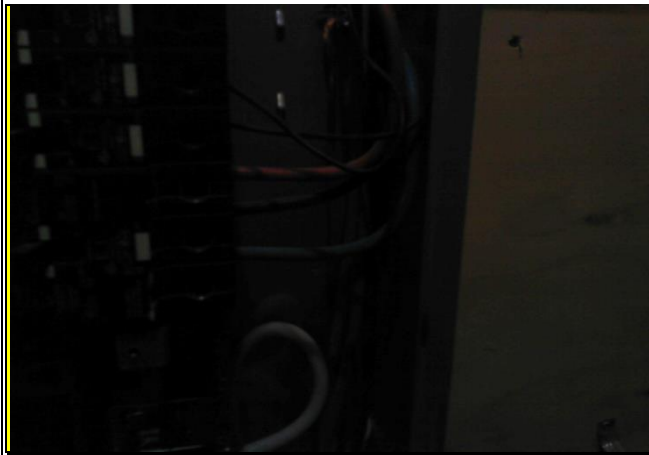
date:

Repaired by:

date:

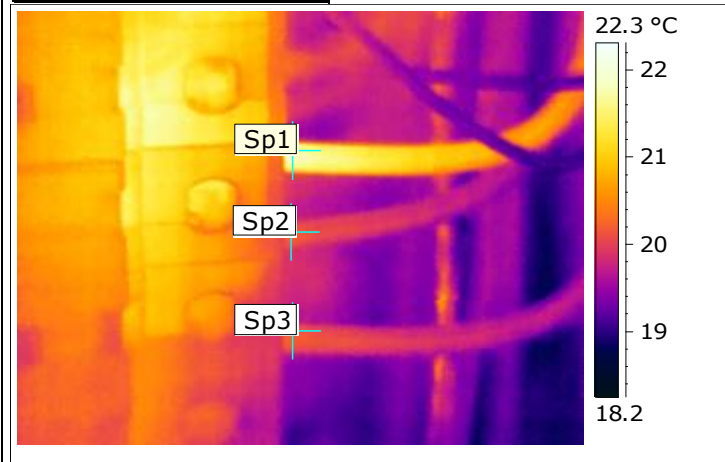
Comment:

Photo and Identification



Location	Second Floor Electrical Room
Panel	Comms Room Panel 9 - MOD147
Equipment	N/A
Fault	Loose electrical connection

Thermogram 13/06/2014



Sp1 Temperature	21.8 °C
Sp2 Temperature	20.2 °C
Sp3 Temperature	20.1 °C

Analysis & Recommended action:

Loose electrical connection found on panel. Tightened by electrical contractor during time of inspection.

Inspected by :

date:

Repaired by:

date:

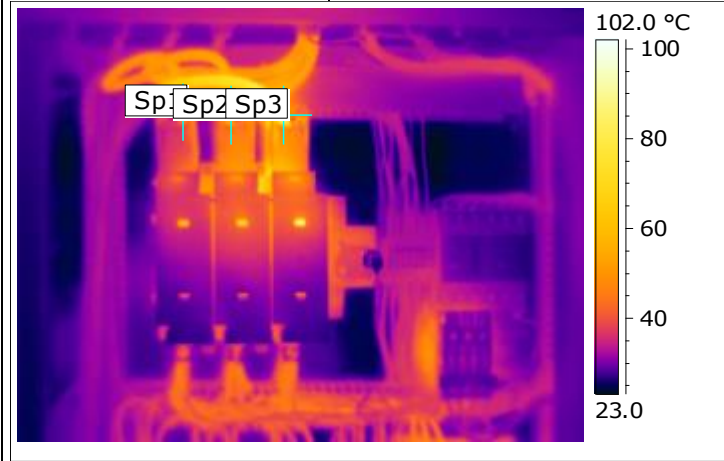
Comment:

Photo and Identification



Location	Hydro Cooler Area
Panel	10 HP Water Pump Motor Controller - MOD154
Equipment	Hydro Cooler Chilled Water Circulating Pumps
Fault	Load Imbalance or Poor Connection

Thermogram 18/06/2014



Sp1 Temperature	55.4 °C
Sp2 Temperature	58.3 °C
Sp3 Temperature	98.1 °C

Analysis & Recommended action:

Motor load imbalance or circuit connection fault. Follow up required.

Inspected by :

date:

Repaired by:

date:

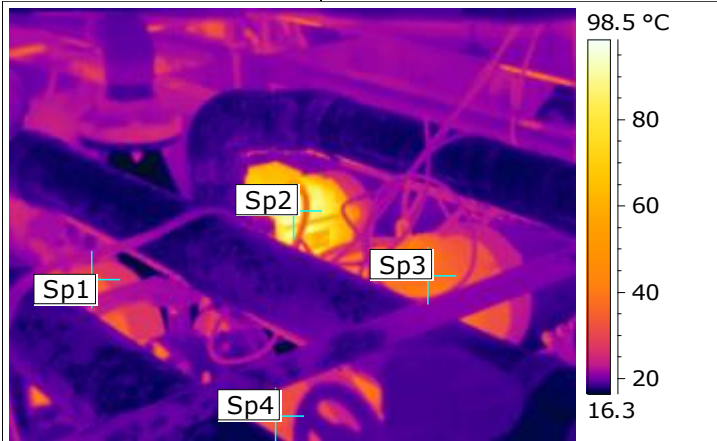
Comment:

Photo and Identification



Location	Hydro Cooler Area
Equipment	Unitec Pump
Model	Bronzoni
Fault	High Temperature

Thermogram 18/06/2014



Sp1 Temperature	34.8 °C
Sp2 Temperature	91.3 °C
Sp3 Temperature	37.9 °C
Sp4 Temperature	32.9 °C

Analysis & Recommended action:

Pump found to be operating above manufacturer temperature specifications. Follow up required.

Inspected by :

date:

Repaired by:

date:

Comment: