



**Thermographic Inspection at:  
Sample**

**Inspection Date:  
2013**

**Thermographer:  
Aaron Bryant**



<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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Inspection Site Information	
Customer	Sample
Address	Sample
Contact Person	Sample
Phone Number	Sample
E-Mail	Sample
Thermographer	Aaron Bryant ITC Level II thermographer Certification No. 2012NZ25N007.
Electrician	

## **Disclaimer**

All inspections (verbal or written) are my opinion of the thermal images and are valid for the time of inspection only, due to various conditions outside of my control which may affect the condition of the object after the time of inspection.

All thermal anomalies that are outside standard parameters are subject to further investigation by the client to confirm and repair any possible problems. Further investigation and/or repair should only be carried out by a licensed electrician.

This inspection is only valid for the electrical load that was present on the system at the time of inspection, by increasing or decreasing the load on this system the resulting images could change.

## **Overview of Fault Rating (based on temperature rise):**

- 0: Normal**      Temp rise 0-5 °C      No action – continue to monitor.
- 1: Low grade**      Temp rise 5-10 °C      Re-inspect at your next scheduled maintenance - continue to monitor.
- 2: Medium grade**      Temp rise 10-35 °C      Investigate further as soon as possible, repair/replace as needed.
- 3: Severe Grade**      Temp rise >35 °C      Investigate now, repair/replace immediately.

<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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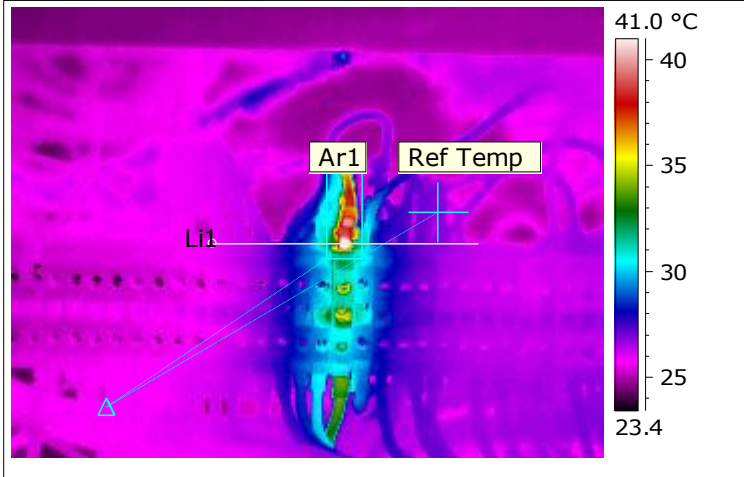
## INFRARED REPORT SUMMARY

Page Number	Location	Equipment	Temperature Rise Measured	Severity
4	Sample only.	Sample only.	14.6	<b>MEDIUM GRADE</b>
5	Main plant room.	Sample only	54.2	<b>SEVERE GRADE</b>
6	Area 6 - second floor.	Stage 1	29.8	<b>MEDIUM GRADE</b>
7	Shed 2	Distribution board	98.8	<b>SEVERE GRADE</b>

<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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<b>Temperature Rise:</b>	<b>14.6</b>
<b>SEVERITY:</b>	<b>MEDIUM GRADE</b>
28/02/2013 9:32:09 a.m.	

Location	Sample only.
Equipment	Sample only.
Area	Old control room.



Component Temperature and Load	Additional Information												
<table border="1"> <tr> <td>Temperature Rise Measured Value</td> <td>14.6</td> </tr> <tr> <td>Ref Temp Temperature</td> <td>27.0 °C</td> </tr> <tr> <td>Ar1 Max. Temperature</td> <td>41.5 °C</td> </tr> <tr> <td>Image Camera Type</td> <td>FLIR T640</td> </tr> <tr> <td>Emissivity</td> <td>0.95</td> </tr> <tr> <td>Atmospheric Temperature</td> <td>22.0 °C</td> </tr> </table>	Temperature Rise Measured Value	14.6	Ref Temp Temperature	27.0 °C	Ar1 Max. Temperature	41.5 °C	Image Camera Type	FLIR T640	Emissivity	0.95	Atmospheric Temperature	22.0 °C	<p>The graph plots temperature in °C on the y-axis (20 to 45) against an unlabeled x-axis. A red line shows a baseline around 25 °C with a sharp peak reaching 41.5 °C. A legend below the graph indicates: ■ Li1 Cursor: - Min: 26.1 Max: 41.5</p>
Temperature Rise Measured Value	14.6												
Ref Temp Temperature	27.0 °C												
Ar1 Max. Temperature	41.5 °C												
Image Camera Type	FLIR T640												
Emissivity	0.95												
Atmospheric Temperature	22.0 °C												

**Comments and Recommendations**

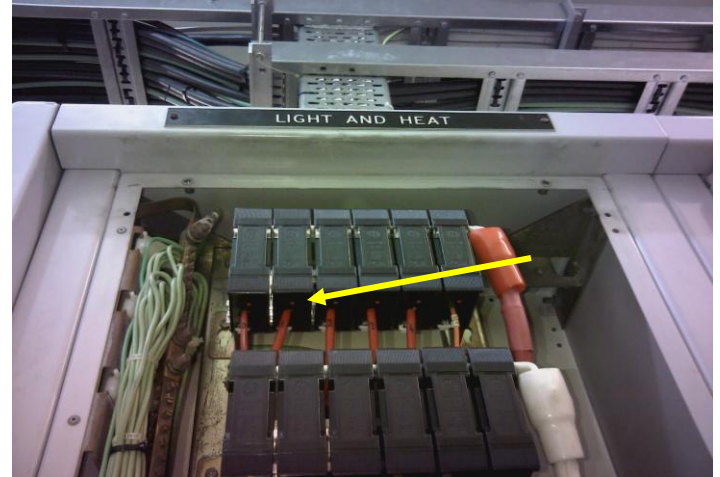
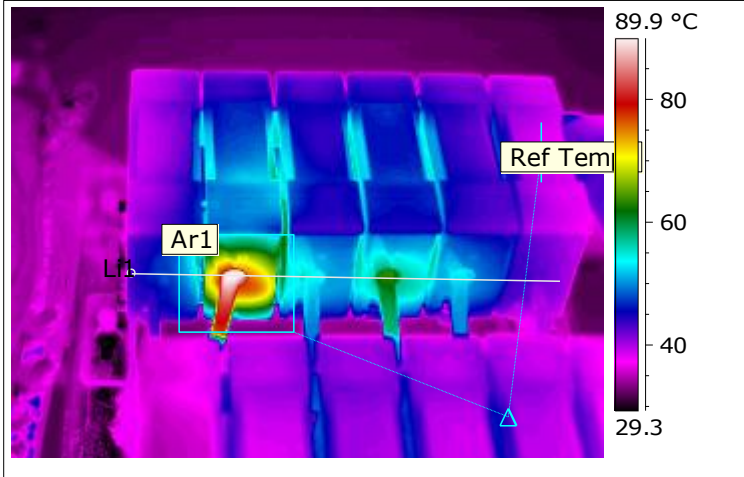
Investigate further as soon as possible, repair/replace as needed.

Severity Criteria (based on temperature rise)			
NORMAL	LOW GRADE	MEDIUM GRADE	SEVERE GRADE
< 5.0 °C	5.0 to 10.0 °C	10.0 to 35.0 °C	> 35.0 °C

<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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<b>Temperature Rise:</b>	<b>54.2</b>
<b>SEVERITY:</b>	<b>SEVERE GRADE</b>
6/05/2013 3:37:51 p.m.	

Location	Main plant room.
Equipment	Sample only
Area	Sample only



Component Temperature and Load	Additional Information												
<table border="1"> <tr> <td>Temperature Rise Measured Value</td> <td>54.2</td> </tr> <tr> <td>Ref Temp Temperature</td> <td>38.4 °C</td> </tr> <tr> <td>Ar1 Max. Temperature</td> <td>92.5 °C</td> </tr> <tr> <td>Image Camera Type</td> <td>FLIR T640</td> </tr> <tr> <td>Emissivity</td> <td>0.95</td> </tr> <tr> <td>Atmospheric Temperature</td> <td>20.0 °C</td> </tr> </table>	Temperature Rise Measured Value	54.2	Ref Temp Temperature	38.4 °C	Ar1 Max. Temperature	92.5 °C	Image Camera Type	FLIR T640	Emissivity	0.95	Atmospheric Temperature	20.0 °C	
Temperature Rise Measured Value	54.2												
Ref Temp Temperature	38.4 °C												
Ar1 Max. Temperature	92.5 °C												
Image Camera Type	FLIR T640												
Emissivity	0.95												
Atmospheric Temperature	20.0 °C												

**Comments and Recommendations**

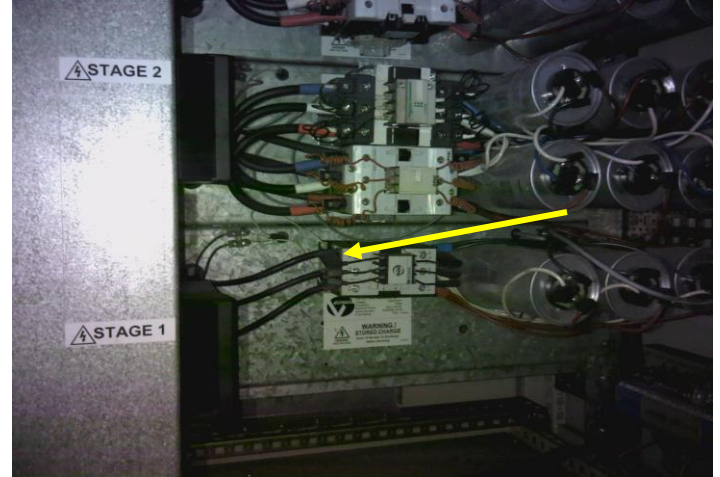
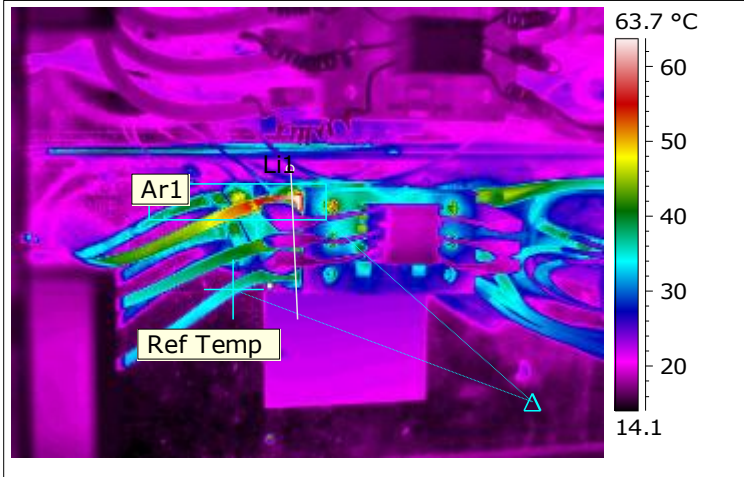
Investigate now, repair/replace immediately.

Severity Criteria (based on temperature rise)			
NORMAL	LOW GRADE	MEDIUM GRADE	SEVERE GRADE
< 5.0 °C	5.0 to 10.0 °C	10.0 to 35.0 °C	> 35.0 °C

<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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<b>Temperature Rise:</b>	<b>29.8</b>
<b>SEVERITY:</b>	<b>MEDIUM GRADE</b>
29/05/2013 10:49:59 a.m.	

Location	Area 6 - second floor.
Equipment	Stage 1
Area	Power factor correction



Component Temperature and Load	Additional Information												
<table border="1"> <tr> <td>Temperature Rise Measured Value</td> <td>29.8</td> </tr> <tr> <td>Ref Temp Temperature</td> <td>35.3 °C</td> </tr> <tr> <td>Ar1 Max. Temperature</td> <td>65.1 °C</td> </tr> <tr> <td>Image Camera Type</td> <td>FLIR T640</td> </tr> <tr> <td>Emissivity</td> <td>0.88</td> </tr> <tr> <td>Atmospheric Temperature</td> <td>10.0 °C</td> </tr> </table>	Temperature Rise Measured Value	29.8	Ref Temp Temperature	35.3 °C	Ar1 Max. Temperature	65.1 °C	Image Camera Type	FLIR T640	Emissivity	0.88	Atmospheric Temperature	10.0 °C	<p>The graph shows the temperature of component Li1 over time. The temperature fluctuates between approximately 17.5 °C and 62.6 °C.</p>
Temperature Rise Measured Value	29.8												
Ref Temp Temperature	35.3 °C												
Ar1 Max. Temperature	65.1 °C												
Image Camera Type	FLIR T640												
Emissivity	0.88												
Atmospheric Temperature	10.0 °C												

**Comments and Recommendations**

Investigate further as soon as possible, repair/replace as needed.

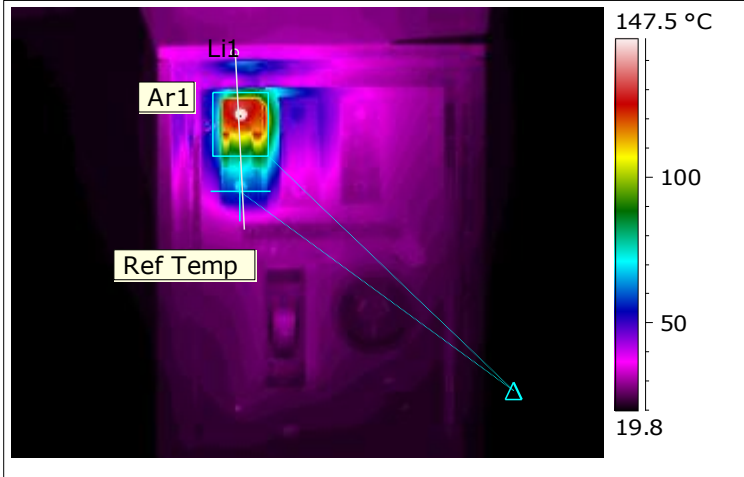
Severity Criteria (based on temperature rise)			
NORMAL	LOW GRADE	MEDIUM GRADE	SEVERE GRADE
< 5.0 °C	5.0 to 10.0 °C	10.0 to 35.0 °C	> 35.0 °C



<b>Infrared Solutions Ltd</b>	<b>Thermography Inspection at SAMPLE</b>	<b>Date: 2013</b>
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<b>Temperature Rise:</b>	<b>98.8</b>
<b>SEVERITY:</b>	<b>SEVERE GRADE</b>
12/02/2013 9:12:10 a.m.	

Location	Shed 2
Equipment	Distribution board
Area	Interior wall



Component Temperature and Load	Additional Information												
<table border="1"> <tr> <td>Temperature Rise Measured Value</td> <td>98.8</td> </tr> <tr> <td>Ref Temp Temperature</td> <td>61.4 °C</td> </tr> <tr> <td>Ar1 Max. Temperature</td> <td>&gt;160.2 °C</td> </tr> <tr> <td>Image Camera Type</td> <td>FLIR T640</td> </tr> <tr> <td>Emissivity</td> <td>0.95</td> </tr> <tr> <td>Atmospheric Temperature</td> <td>20.0 °C</td> </tr> </table>	Temperature Rise Measured Value	98.8	Ref Temp Temperature	61.4 °C	Ar1 Max. Temperature	>160.2 °C	Image Camera Type	FLIR T640	Emissivity	0.95	Atmospheric Temperature	20.0 °C	
Temperature Rise Measured Value	98.8												
Ref Temp Temperature	61.4 °C												
Ar1 Max. Temperature	>160.2 °C												
Image Camera Type	FLIR T640												
Emissivity	0.95												
Atmospheric Temperature	20.0 °C												

**Comments and Recommendations**

Investigate now, repair/replace immediately.

Severity Criteria (based on temperature rise)			
NORMAL	LOW GRADE	MEDIUM GRADE	SEVERE GRADE
< 5.0 °C	5.0 to 10.0 °C	10.0 to 35.0 °C	> 35.0 °C