

THERMAL IMAGING SERVICE

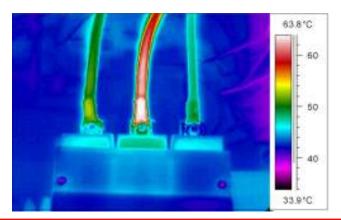
Thermographic Survey Report

Client: Company Name

Contact: Name

Report No.: 001-01-12

Survey Date: 26TH of January 2012



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Thermal Imaging Survey Report

Sample Report

Date: 01 / 01 / 2012

Report No. - Sample '12

The report contains the results of the thermographic survey carried out at

Clients Name
on the
Survey Date

A full list of all equipment surveyed is contained in the following pages:

About this Report:

This report is issued in good faith and without prejudice and the information in it is based on what we found at the time of the survey. We take care to carry out our work diligently, conscientiously and professionally at all times. What we don't do and can't do is unequivocally guarantee that you will never have failures. We recommend that you read this report carefully and use the information in it as part of your ongoing monitoring of your systems and as a significant but not the sole criteria in your decision making.

	<i> </i>	Alarm Key	
No Issue Detected	For Reference	ce Alei	rt Priority Fault

Liam Taylor



Thermal Imaging Survey Report

Sample Report

Date: 01 / 01 / 2012

List of Equipment Surveyed: Facilities

Launmont		1
Equipment	7	Comment
Main Board	14/15-07-09	Ref. Page 12
PFC Panel	14/15-07-09	Ref. Page 13
Main Board	14/15-07-09	
Main Dist. Board	14/15-07-09	
PFC Panels	14/15-07-09	
Traffo's 1,2&3	14/15-07-09	
Water Purple Summary Pa	ge which -09	
Waste Trigograms and serious	spess at 7-09	Ref. Page 25
Dist. Boa <mark>a glance.</mark>	7-09	
Cold Wat	7-09	Ref. Page 14
Boiler 1 Control Panel	14/15-07-09	
Boiler 2 Control Panel	14/15-07-09	
Air Comp. 1 Control Panel	14/15-07-09	
Air Comp. 2 Control Panel	14/15-07-09	
Air Comp 3 Control Panel	14/15-07-09	
Filter Unit Control Panel	14/15-07-09	
APV Ref. and HMI Panel	14/15-07-09	Ref. Page 15,16
Pack 2 Panel (Off)	14/15-07-09	
Pack 1 Panel (Off)	14/15-07-09	
Frigo N2 Main Panel	14/15-07-09	
Pak 3 Panel	14/15-07-09	Ref. Page 17
Main Panel	14/15-07-09	
	Main Board Main Dist. Board PFC Panels Traffo's 1,2&3 Water Putage Strate Strat	Main Board 14/15-07-09 Main Dist. Board 14/15-07-09 PFC Panels 14/15-07-09 Traffo's 1,2&3 14/15-07-09 Water Pure Waste Traffo's a glance. 14/15-07-09 Dist. Board 14/15-07-09 Boiler 1 Control Panel 14/15-07-09 Air Comp. 1 Control Panel 14/15-07-09 Air Comp. 2 Control Panel 14/15-07-09 Air Comp 3 Control Panel 14/15-07-09 Air Comp 3 Control Panel 14/15-07-09 Filter Unit Control Panel 14/15-07-09 Pack 2 Panel (Off) 14/15-07-09 Pack 1 Panel (Off) 14/15-07-09 Prigo N2 Main Panel 14/15-07-09 Pack 3 Panel 14/15-07-09



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Refrigeration Plant Room	Build 2 Set 3 Panel	10
Building 2	Chiller Panel	11
Room 2	Final Unit Control Panel	12
Conveyor Panel	Section BK2-EP-45	13
Packing	Flow Wrap 6	14
-	-	15



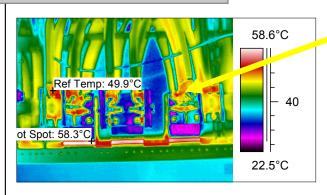


Company	Sample
Thermographer	Liam Taylor
Section	Facilities
Equipment	Main Board
Date	14/07/2009
File name	Ir_5363.jpg

Working conditions:

On-going Monitoring of selected critical plant

Image Description



Dear ation	Main ACD Tarresinals
Decorption	Mair ACB Terminals
1	

Label	Value
Hot Spot	58.3°C
F.ef Temp	49.9°C
Temp Diff	8.4°C

Comments

Main Switch Room. Main Board. Main ACB Terminals.		
Date	Temp. °C.	Comment
July '07	97.1	On-Going Monitoring
Dec '07	71.5	On-Going Monitoring
July '08	57.8	Current Loading Low
Dec '08	53.9	Current Loading Low
July '09	58.3	On-Going Monitoring



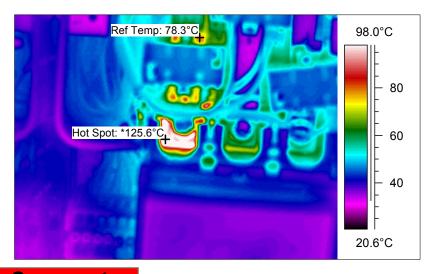
Identification



Persistance Pays Off Plant reluctant to isolate for repairs.

Ref. next 2 pages for outcome.

Image Description



Comments

Plant Room MCC 1-8. AHU 8 Section - Main Switch.

The switch's R phase spreader busbar is operating at 125.6°C. Image captured June 18 approx. 1.00pm. Serious fault - plant advised immediately.



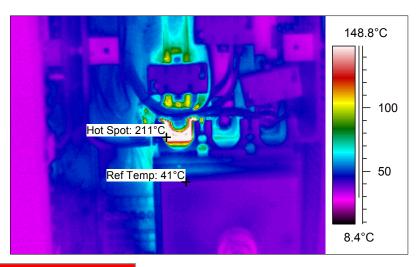
Identification



Fault from Previous page has escalated seriously in 24hrs.

Plant advised immediate action required to avert serious outage.

Image Description



Comments

Plant Room MCC 1-8. AHU 8 Section - Main Switch.

The switch's R phase spreader busbar is operating at 211°C.

Image captured June 19 approx. 1.30pm.

Fault temp. has risen 85.4°C. in just over 24hrs.

Plant advised immediate action needed.

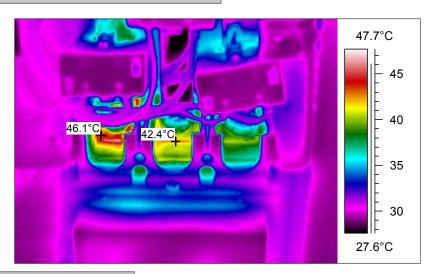
Switch immediately isolated and terminals tightened. R phase terminal was very loose. Switch re-energised.





Fault Repaired.
Follow Up Action as advised very important.

Image Description



Comments

Plant Room MCC 1-8. AHU 8 Section - Main Switch.

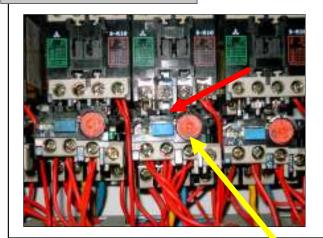
R Phase busbar at approx 3.00pm. June 19th.

Busbar is now operating at 46.1°C. and is normal.

A temporary fan was in use for 1hour to accelerate the switch cooling. Switch and associated cabling should be scheduled for replacement as a priority. Monitor closely in intervening period.



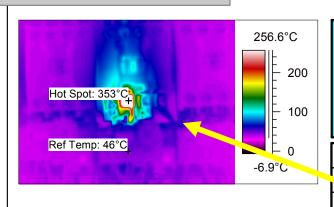
Identification



Company	Sample
Thermographer	Liam Taylor
Section	Refrigeration Plant Room
Equipment	APV Panel
Date	14/07/2009
File name	lr_5367.jpg

Working conditions:

Image Description



Description	Contactor Terminal Temp.
Label	Value
Hot Spot	353°C
Ref Temp	46°C
Temp Diff	30b.2°C
	Plant advised of

Comments

Plant advised of Serious Faults immediately.

Refrigeration Plant Room. APV Panel. Area 2 Contactor Enclosure. 2nd. Row. 3rd. Contactor from Left.

The contactor's centre phase terminal is operating at 353°C.

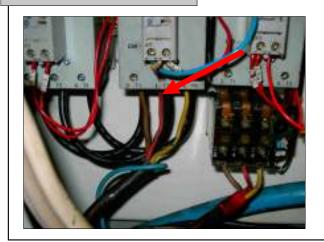
This is a serious fault and should be corrected as a matter of priority.

Replace Contactor and overload unit.

Inspect cables for heat damage and crop or replace as required.

Plant advised of fault on day of survey.

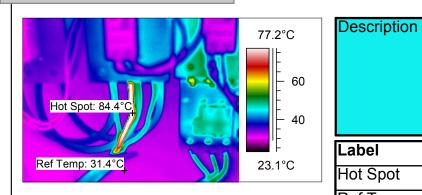




Company	Sample
Thermographer	Liam Taylor
Section	Refrigeration Plant Room
Equipment	Pak 3 Panel
Date	14/07/2009
File name	lr_5368.jpg

Working conditions:

Image Description



Label	Value
Hot Spot	84.4°C
Ref Temp	31.4°C
Temp Diff	53.0°C

Cable Terminal Temp.

Comments

Refrigeration Plant Room. Set 3 Control Panel.

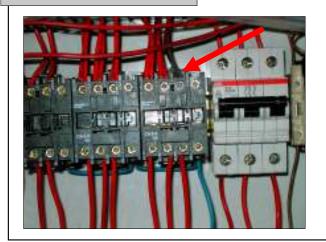
Cable A11 in Panel's Lower Left Corner.

The cable's centre phase is operating at 84.4°C.

Check the cables operating current loading.

Ensure the cable is properly inserted into the contactor's terminal and fully secured.



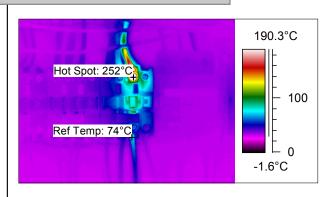


Company	Sample
Thermographer	Liam Taylor
Section	Building 2
Equipment	Chiller Panel
Date	14/07/2009
File name	lr_5369.jpg

Working conditions:

Description

Image Description



Value
252°C
74°C
178.3°C

Contactor Terminal Temp.

Comments

Building 2. Chiller Panel. 3rd. Contactor from Left.

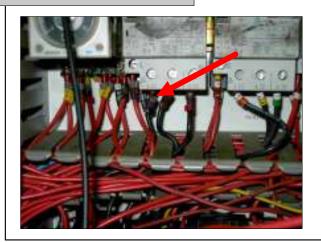
The Contactor's top right phase terminal is operating at 252°C.

Replace Contactor and crop or replace damaged cable sections.

This is a serious fault and should be corrected as a matter of priority.

Plant advised of fault on day of survey.



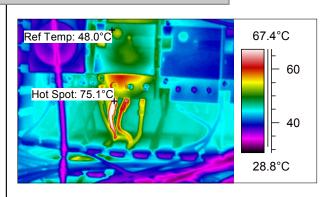


Company	Sample
Thermographer	Liam Taylor
Section	Building 2
Equipment	Final Unit Control Panel
Date	15/07/2009
File name	lr_5370.jpg

Working conditions:

Description

Image Description



Label	Value
Hot Spot	75.1°C
Ref Temp	48.0°C
Temp Diff	27.1°C

MCB 29 Terminal Temp.

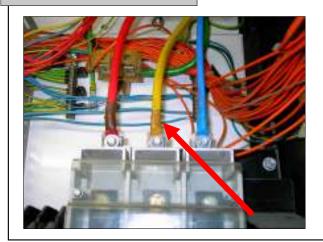
Comments

Room 2. Final Unit Control Panel. MCB 29.

The MCB's lower left phase is operating at 75.1°C.

Ensure MCB's terminal connections are fully secured.



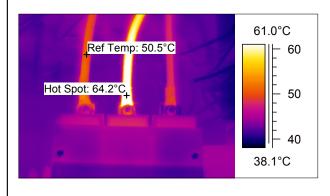


Company	Sample
Thermographer	Liam Taylor
Section	Conveyor Panel
Equipment	Section BK2-EP-45
Date	15/07/2009
File name	lr_5371.jpg

Working conditions:

Description

Image Description



Label	Value
Hot Spot	64.2°C
Ref Temp	50.5°C
Temp Diff	13.7°C

Panel Isolator Temp.

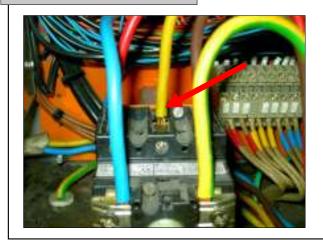
Comments

Conveyor Panel. Section BK2-EP-45. Panel Isolator.

The Panel Isolator's top centre phase is operating at 64.2°C.

Ensure the isolator's terminal connections are fully secured and that the cable's crimp conection is good.

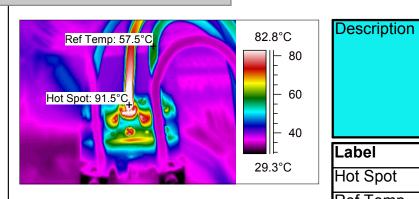




Company	Sample
Thermographer	Liam Taylor
Section	Packing
Equipment	Flow Wrap 6
Date	15/07/2009
File name	Ir_5374.jpg

Working conditions:

Image Description



Value
91.5°C
57.5°C
33.9°C

Panel Switch Temp.

Comments

Packing Flow Wrapper 6. Panel Switch.

The Switch's top centre phase terminal is operating at 91.5°C.

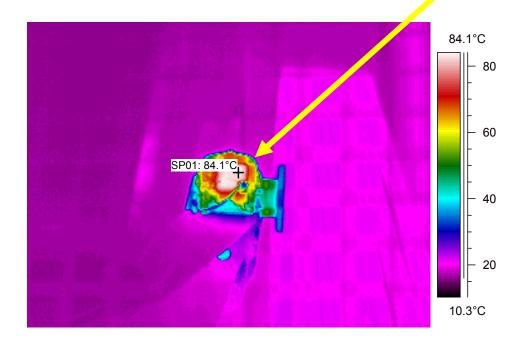
Ensure switch's terminal connections are fully secured.





Image Description

Mechanical Equipment can also be incorporated into the survey or surveyed seperately.





Summary of Detected Images at

Sample Report

List of Included Images

Section	Equipment	Description	Addressed By	Date
Facilities	Build 3 Main Board	Main ACB Terminals	-	-
-	-	-	-	-
Plant Room MCC 1-8	AHU 8 Section Main Switch	Day 2 Temp. Rise	-	-
-	-	-	-	-
Refrigeration Plant Room	APV Panel	Contactor Terminal Temp.	-	-
Refrigeration Plant Room	Build 2 Set 3 Panel	Cable Terminal Temp.	-	-
Building 2	Chiller Panel	Contactor Terminal Temp.	-	-
Room 2	Final Unit Control Panel	MCB 29 Terminal Temp.	-	-
Conveyor Panel	Section BK2-EP-45	Panel Isolator Temp.	-	-
Packing	Flow Wrap 6	Panel Switch Temp.	-	-
-	-	-	-	-