Thermal Imaging Services

Accredited Thermographers

2015
Thermographic Inspection

(Project Name & Location)

Date: Issue: Ref:

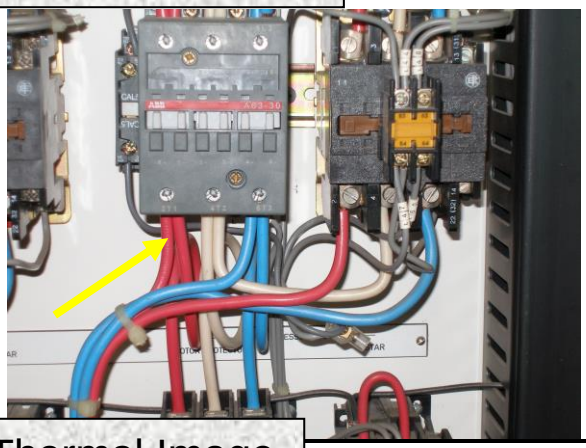
REPORT DETAILS

Issued By:	Thermal Imaging Services 8/139 Woolooware Rd Burraneer NSW 2230 T. (02) 9544 3588 F. (02) 9544 3688 E. info@thermalimagingservices.com.au
Thermographer:	XXXXXXXXXXXXXX
Thermographer Accreditation No:	AINDT – XXXXX
IR Camera:	Manufacturer :- Serial No.:- Calibration Date :-
Client:	XXXXXXXXXXXXXX
Client Representative:	XXXXXXXXXXXXXX
Location:	XXXXXXXXXXXXXX

Table of Contents

Thermal Imaging Services	*Inspected Equipment*	*Operator:*
	Mechanical Services Switchboard Located Level 4 Plant Room	Malcolm Rhind

Reference Image



Equipment	Compressor 3 Motor Starter
Equipment Type	ABB A-63
Additional Information	
Date	14/03/2011
Time	11:38 AM
Working conditions:	
Located within a non ventilated environment	

Thermal Image

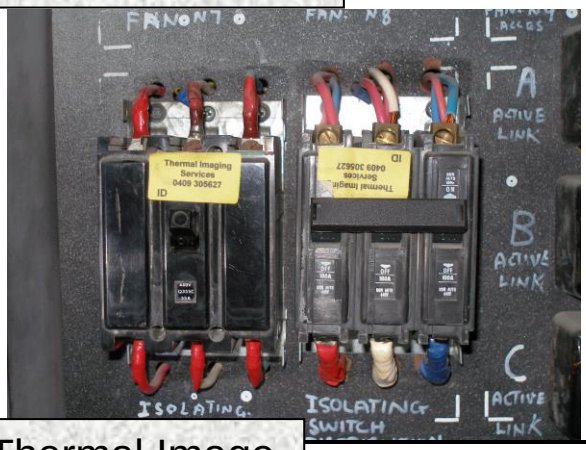
IR Image Details	
Image No.	
Emissivity	0.95
Spot 1	51.4°C
Spot 2	75.8°C
Area 1 Max.	75.8°C
Area 2 Max.	<unknown>
Background	36.0°C

Description of Fault	High resistance A phase load side termination.
Priority Rating	**2**
Recommendation	Re-scan within 12 months.

Previous Fault Description				
Date		Image		
Vol.		Code		
Page		Time		
Remedial Action Taken				
Authorised				

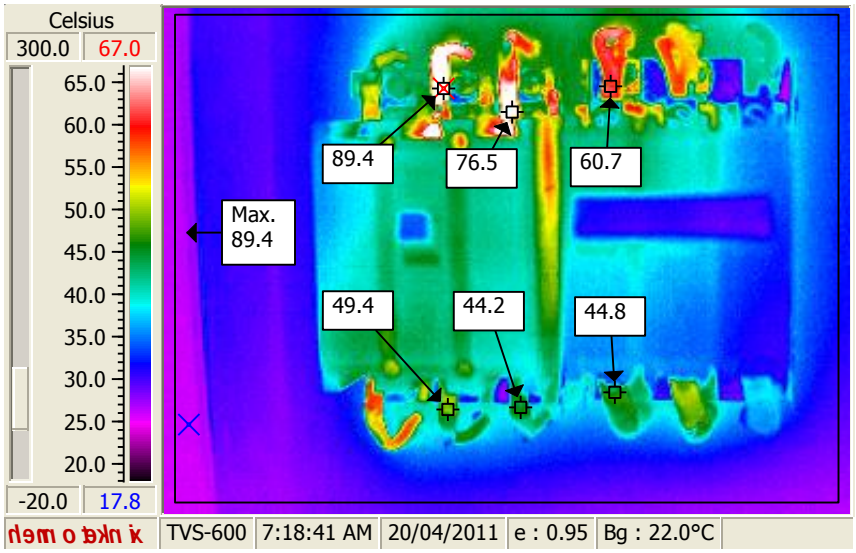
Thermal Imaging Services	*Inspected Equipment*	*Operator:*
	House Services Panel **Located Level 3 Riser**	Malcolm Rhind

Reference Image



Equipment	Fan Isolating Switch & DB-2 Isolating Switch
Equipment Type	Quicklag Q355C & Q3100CN
Additional Information	
Date	20/04/2011
Time	07:18 AM
Working conditions:	
Located within a non ventilated environment	

Thermal Image



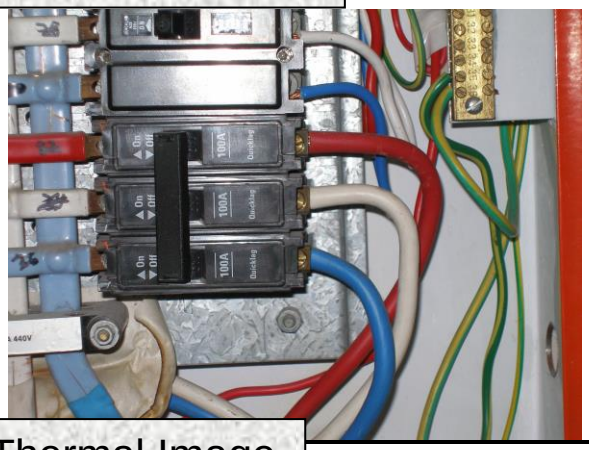
IR Image Details	
Image No.	
Emissivity	0.95
Spot 1	49.4°C
Spot 2	89.4°C
Area 1 Max.	89.4°C
Area 2 Max.	<unknown>
Background	22.0°C

Description of Fault	High resistance terminations. Variation in line and load side temperatures
Priority Rating 2	
Recommendation	Inspect contact surfaces and re-terminate. Ensure tunnel terminals are securely fitted to circuit breaker housings

Previous Fault Description				
Date		Image		
Vol.		Code		
Page		Time		
Remedial Action Taken				

Thermal Imaging Services	*Inspected Equipment*	*Operator:*
	DB-8A **Located Level 4 Riser**	Malcolm Rhind

Reference Image



Equipment	Main Switch
Equipment Type	Quicklag Q3100C
Additional Information	Loading A Phase – 89 Amperes B Phase – 32 Amperes C Phase – 38 Amperes
Date	2/05/2011
Time	08:41 AM
Working conditions:	
Located within a ventilated environment	

Thermal Image

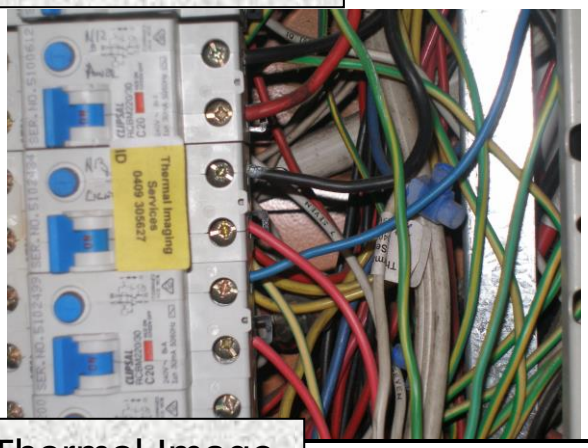
IR Image Details	
Image No.	
Emissivity	0.95
Spot 1	31.3°C
Spot 2	68.0°C
Area 1 Max.	68.0°C
Area 2 Max.	<unknown>
Background	25.0°C

Description of Fault		High resistance A phase connection. Unbalanced load
Priority Rating	**2**	
Recommendation		Ensure runnel terminal is securely fitted to circuit breaker housing. Re-tension termination. Re-distribute load over adjacent phases.

Previous Fault Description				
Date		Image		
Vol.		Code		
Page		Time		
Remedial Action Taken				
Authorised				

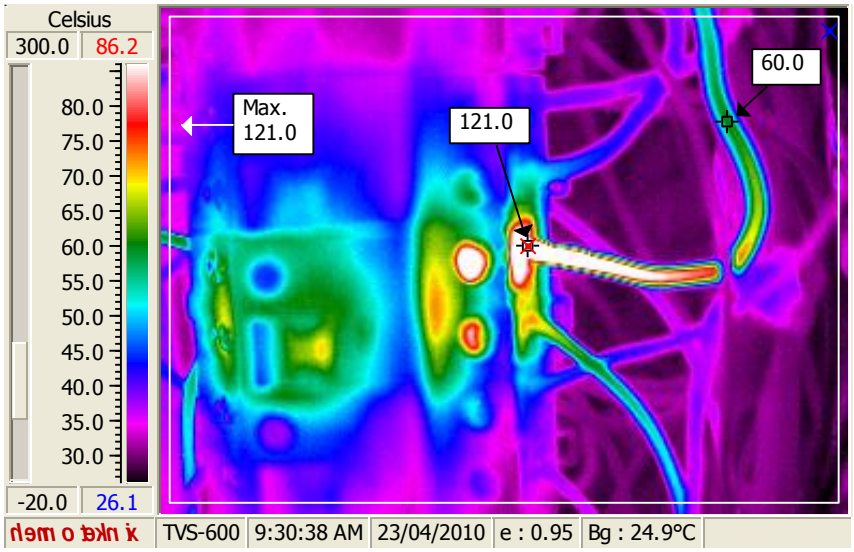
Thermal Imaging Services	*Inspected Equipment*	*Operator:*
	DB-3 **Located Warehouse Ramp**	Malcolm Rhind

Reference Image



Equipment	Circuit Breaker 89-90
Equipment Type	Hager
Additional Information	Neutral Conductor
Date	23/04/2010
Time	09:30 AM
Working conditions:	
Located within a ventilated environment	

Thermal Image



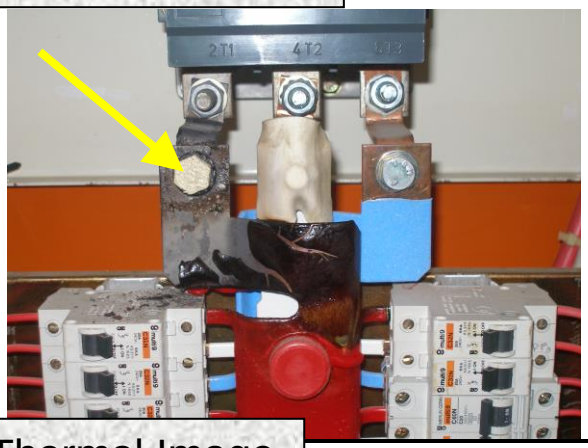
IR Image Details	
Image No.	
Emissivity	0.95
Spot 1	121.0°C
Spot 2	60.0°C
Area 1 Max.	121.0°C
Area 2 Max.	<unknown>
Background	25.0°C

Description of Fault		High resistance termination.
Priority Rating	**1**	
Recommendation		Make good cable end and re-terminate

Previous Fault Description				
Date		Image		
Vol.		Code		
Page		Time		
Remedial Action Taken				
Authorised				

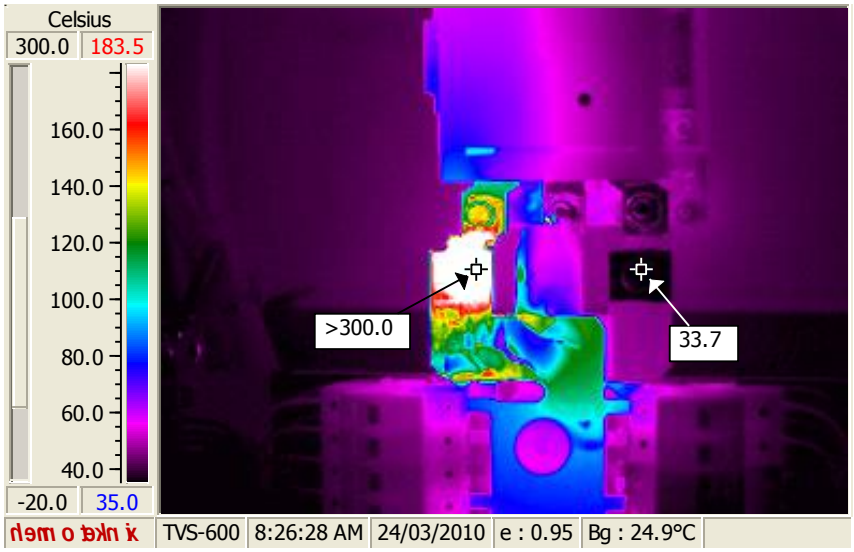
Thermal Imaging Services	*Inspected Equipment*	*Operator:*
	DB-4.4 **Located Level 1 Riser**	Malcolm Rhind

Reference Image



Equipment	A phase circuit breaker chassis
Equipment Type	Merlin Gerin
Additional Information	
Date	24/03/2010
Time	08:26 AM
Working conditions:	
Located within a non ventilated environment.	

Thermal Image



IR Image Details	
Image No.	
Emissivity	0.95
Spot 1	300.0°C
Spot 2	33.7°C
Area 1 Max.	300.0°C
Area 2 Max.	<unknown>
Background	25.0°C

Description of Fault		High resistance A phase connection to circuit breaker chassis
Priority Rating	**1**	
Recommendation		Replace circuit breaker chassis and make good connection hardware and conductor.

Previous Fault Description				
Date		Image		
Vol.		Code		
Page		Time		
Remedial Action Taken				
Authorised				

List of Reported Items

Switchboard	Equipment	Fault	Priority/Recommendation	
Mechanical Services Switchboard Located Level 4 Plant Room	Compressor 3 Motor Starter	High resistance A phase load side termination was detected	2	Termination re-tensioned during inspection
House Services Panel Located Level 3 Riser	Fan Isolating Switch & DB-2 Isolating Switch	High resistance terminations. Variation in line and load side temperatures	2	Inspect contact surfaces and re-terminate. Ensure tunnel terminals are securely fitted to circuit breaker housings
DB-8A Located Level 4 Riser	Main Switch	High resistance A phase connection. Unbalanced load	2	Ensure runnel terminal is securely fitted to circuit breaker housing. Re-tension termination. Re-distribute load over adjacent phases.
DB-3 Located Warehouse Ramp	Circuit Breaker 89-90	High resistance termination.	1	Make good cable end and re-terminate
DB-4.4 Located Level 1 Riser	A phase circuit breaker chassis	High resistance A phase connection to circuit breaker chassis	1	Replace circuit breaker chassis and make good connection hardware and conductor.

List of Inspected Assets

Location	Switchboard	Fault	Comment
Main Switch Room	Main Switchboard	Nil	
	PFC Unit 1	Nil	
	PFC Unit 2	Nil	
	Unmarked DB	Nil	
Admin. Block Data Recovery Room	UPS DB	Nil	
	By Pass Switch	Nil	
Located Level 1 Riser	DB-4.4	√	
Under Art Department (Building Void)	DB-7	Nil	
	DB-8	Nil	
	Compressor Load Centre	Nil	
Under Administration Block	DB-5	Nil	
	Air Conditioning Sub Board	Nil	
Warehouse Ramp	DB-3	√	
	DB-3A	Nil	
Warehouse Mezzanine	MCC	Nil	
Warehouse (Adj. Loading Dock)	DB-3C	Nil	
Warehouse Customer Service	DB-3D	Nil	
Warehouse (Rear Wall)	DB-6	Nil	
	DB-3CB	Nil	
Workshop	Sub Board	-	No load
Located Level 4 Riser	DB-8A	√	
Level 4 Plant Room	Mechanical Services Switchboard	√	
House Services Panel Located Level 3 Riser	Fan Isolating Switch & DB-2 Isolating Switch	√	
Data Room	DB	Nil	
	UPS By Pass Switch	Nil	
Book Fare Warehouse	DB-1	Nil	
Level 1 Admin. New Media	DB-2	Nil	
	DB-3	Nil	
	DB-3 (Special Purpose)	Nil	
Level 1 Comms. Room New Media	UPS -1 Sub Board	Nil	
	UPS -2 Sub Board	Nil	

Accreditation Details

AINDT

AUSTRALIAN INSTITUTE
FOR
NON-DESTRUCTIVE TESTING

A.B.N. 21 005 040 835

Malcolm Rhind

IS CERTIFIED IN ACCORDANCE WITH
AS3998-2006/ISO 9712:2005
FOR

Infrared Thermographic Testing

INDUSTRIAL SECTOR	Multi-Industry
LEVEL	2
REGISTRATION NO.	2067
ISSUE DATE	27 May 2010
EXPIRY DATE	27 May 2015
ISSUE NUMBER	1
ENDORSEMENTS	---- ----

JAS-ANZ

Accredited to ISO 17024 by the Joint Accreditation Scheme of Australia and New Zealand. Acc. No. P2120700AM

FEDERAL PRESIDENT

CHAIRMAN CERTIFICATION BOARD

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