

Ti Thermal Imaging LTD

Unit 8, Weybridge Business Centre, 66 York Road, Weybridge, Surrey, KT13 9DY

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RISK MANAGEMENT SOLAR PANEL THERMOGRAPHIC INSPECTION FOR:

SAMPLE 2

LOCATION:

DATE:

14/09/12

TI JOB NO.

TI-16078



Report generated by Ti Thermal Imaging LTD.

Company Registered in England: 04450573 VAT No. 828 6288 87



ti



Introduction to your Ti Thermal Imaging LTD risk management thermographic inspection

This solar panel visual and thermographic inspection has been carried out using a Flir P/T-series camera with data input onto a purpose built tablet PC platform for instantaneous results and report generation. A Webmanager houses all data that is permanently accessible over the internet allowing the user to track and monitor problems and their repair status.

Solar Panels should register an even temperature across their entire surface. Areas with an elevated temperature can equate to faulty cells because their energy is not being converted and sent to the inverters correctly and therefore it is often released as heat. This enables the identity of faulty panels to be found and pinpointed quickly using an infrared camera. The survey can be carried out in all conditions although for best results a sunny clear day enables easier image interpretation. Clouds can manifest themselves as areas of elevated temperature so it is important for correct image interpretation to be executed.

This is a guide which should help you to fully understand how the inspection was performed and how the results were achieved

- The framework to this inspection can either be generated onsite during the inspection, building the list during the survey or a list exported to MS Excel can be imported into the tablet PC to provide comprehensive information such as item locations, tag numbers, work orders etc.
- Images are captured of all online items and a record is kept of temperature data to enable a trending programme to begin. Subsequent inspections will see the addition of a new image for each inspection so that temperatures can be monitored.
- Baseline images and anomalous pieces of equipment have been recorded as one of three types of inspection:
 - o T/D Electrical This covers transmission, distribution and instrumentation
 - o Mechanical This covers all mechanical/moving/rotary equipment
 - Visual This covers all visual findings only
- All component baseline images are taken under normal load conditions.
- Panels have been removed where safe and possible to do so and where covered by the Permit To Work system. In addition load readings have been captured using a clamp meter only where covered by the Permit to Work system and where safe to do so. In some cases load readings have not been taken so these are left as blank intentionally so that the normalised graph will function correctly. If a 0 value is inserted then a fictitious reading will be obtained. An explanation of the Normalization graph is listed later.
- A complete inventory will be built of the equipment giving Test Status at the time of the inspection allowing transparency to the inspection and what occurred with each piece of equipment. These Test Status include:

ТВТ	To Be Tested	These appear in bold on the thermographers tablet to identify which items are still to be tested				
TEOTED	TEOTED					
TESTED	TESTED	Marked as Tested once images and faults have been documented				
NTLO	Not Tested Locked Out	Selected if the item could not be opened safely				
NTNL	Not Tested No Load	Selected if the item was offline at the time of inspection and could not be started				
NTNA	Not Tested Not Available	Selected if the item is no longer available				
NTNS	Not Tested Not Specified	Selected if an item is found to be unspecified				
NTUR	Not Tested Under Repair	Selected if an item is currently under a repair procedure				
NSFI	Not Scheduled For Inspection	Selected if an item is not due or needed to be tested				
NTTC	Not Tested Time Constraint	Selected if the inspection has not been allocated enough time or access problems				
		have cause it to overrun.				



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Each piece of equipment has been allocated a priority to operation taken from the following non-changeable list:

CTO	Critical To Operation
010	
ETO	Essential to Operation
210	
NON	Non-Essential To Operation
NON	Non-Essential to Operation
UNC	Unclassified
UNC	Unclassified

- Emissivity is the value in which an object emits it's infra-red radiation and is also directly proportional to it's reflectivity. For example if an item had 0.9 emissivity then it's reflectivity would be 0.1. This inspection uses an emissivity set to 0.96 because this value is found to be suitable when assessing the temperatures of most electrical components due to them usually being housed in plastic or rubber which has a similar emissivity value. Emissivity is only changed were absolutely necessary. An example of this would be copper busbar with no electrical tape/labels attached.
- Anomalous components are assessed in one of two ways.
- 1. With the use of Reference components operating under similar conditions: These would include using line/load sides or different phases with similar load patterns to compare an anomalous component with another which has a more normal temperature gradient.
- 2. The use of load correction formulas which results in the following value:
 - Estimated fault component temp at full load (°C) This estimates the temperature that the component would be running at if it was loaded at 100%. This value has been arrived at using a formula correction using anomalous and ambient temperatures, measured and maximum load.
- The value of 75°C has been taken from the British Standard BS7671 (*.*). This value is the recommended cable temperatures of between 65-85C at full load.
- Using this value it is possible to use a fault rating system to grade the severity of the fault. The following fault ratings and colour coding have been used:

Fault Ratings	minor	Important	Serious	Critical
Temp above ref temp or above 75°C	0-7	8-15	16-32	33+

- This value of 75°C is also used as a threshold temperature for the captured baseline images. In certain circumstances, this value has either been increased to 100°C or decreased to 50°C. The value has been increased to 100°C where the thermographer deems this a more appropriate value due to an elevated cubicle ambient or where components are tightly arranged together causing uplift in operating temperature. The value has been decreased to 50°C where the thermographer deems this a more appropriate value due to panel covers not being able to be removed and only the surface of the component can be seen and not the actual connections. In certain circumstances where SP2 Reference temperature cannot be suitably obtained, the value has been set from the BS Ref of 75°C as the SP2 reference temp.
- The normalization graph simulates temperature at 0, 50% and 100% load and is designed to assist the prediction of component operating temperature where a reference component has been used. According to Ohms law P=I²R but the graph is designed as a quick glance tool to assist in viewing the potential that a problem may become.
- Where anomalous components are found, a knowledge base library is used to house specific statements that ensure synergy between inspections for faults, root causes and recommended remedial actions.
- Formulas:

Normalization	P=I ² R where P=Power, I=Current, R=Resistance
Graph	
T load corrected	Let (Tm – Tamb) = Trise ; I meas / I full = LF (Load factor)
	Then:
	Tcorr = (((1/ LF)^1.68+(1/ LF)^1.46)/2)*Trise + Tamb



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Report pages:

The combined report contains the following pages:

NB Page numbers have been left in for additional ID purposes. Page numbers run in sequence beginning at #1 for each section but do not run in sequence for the whole combined report.

- 1. Cover Page for TD Electrical: This is a summary report which offers the amount of problems found and their severity grade. It is for a complete site overview.
- 2. List of all open problems: This is the full list of equipment found with problems and includes their locations and tag numbers
- 3. Inspection Inventory: This is a full inventory of equipment inspected, their ID numbers and their test status.
- 4. Documentation pages: These pages include the details of all anomalies found for individual pieces of equipment.
- 5. Cost Benefit Analysis: This lists the possible cost benefits of finding the faults before they have failed and estimates how much cost has been saved by predicting a failure before it happens. These values are deliberately very conservative and loss of production has not been taken into account.

The Webmanager contains all of the above reports and lists problems, cost benefits and baseline trends in easy to source locations. To view your current and previous inspections, please logon to your personal Webmanager using your username and password already supplied. If you do not have this please contact Ti on 0845 4586315.

http://193.228.155.40/inspectrend or www.thermalimaging.co.uk then 'Login to Webmanager' tab

Webmanager tutorial snapshot:

Navigate to the area you need using one of the 6 tabs at the top of the screen:

	Overview	Summary listing all problems active or closed with severity grade.				
	Inspection	Select site and then hit search to reveal historical list of inspections. Select 'more' next to the inspection that you want to see further details of. At the bottom is a 'reports' button that highlights in red, hit this to reveal a list of your reports. Your combined report will be prefixed by 1_ to ensure it the very first report.				
REP'S/ELECTRICIANS ENTER CORRECTIVE	Inventory	Select site and then hit search to reveal a full inventory of surveyed equipment, test status, priority to site operation and last inspected date.				
WORKORDERS INTO	Problems	Select site and then hit search to reveal a list of all open/closed problems found with severity grade, repair status and date found. Attach a work order here for remedial action and view the problem in its own individual report page.				
	Cost Benefit	Select site and then hit search to reveal the savings you have made by having this inspection carried out. Typical ratio is spend £1 and save £4.				
	Baseline	Select site and then hit search to reveal baseline trend data for all equipment surveyed. Here you can view individual trend reports for each piece of equipment where the latest IR/DC images are displayed with a historical temperature graph for baseline temp/current insp. Temp and threshold temp.				



Report generated by Ti Thermal Imaging LTD.





Cover Page for Visual

Executive and Operations summary of problems found

Also available on your Webmanager Overview page Please use your login details provided

http://193.228.155.40/inspectrend





Report generated by Ti Thermal Imaging LTD.



INFRARED THERMOGRAPHIC INSPECTION OF VISUAL PROBLEMS

Page 1

Provided for

Report Date: 15/09/2012

Overview:

The Infrared Inspection was performed by TI Thermal Imaging, by a certified infrared Thermographer. All of the items inspected are listed in this InspecTrend report. Any anomalies are listed in order of priority based on the component's temperature rise, as measured from a reference component of equal type and load at the time of the inspection. TI Thermal Imaging assumes no liability directly or indirectly as a result of this inspection.

Current Inspection No: Prior Inspection No:	1896	September 14, 2012			Percent
P	riority	Temp Rise	Current Inspection	Prior Inspection	of Change
1-Critica 2-Serio 3-Impor 4-Minor	us tant		0 = 0% 2 = 14% 10 = 71% 2 = 14%	NA NA NA NA	NA NA NA NA
		Total Tested Problems:	14	NA	NA
		ocumented Problems: I re-occuring Problems:	14 =100% 0 = 0%	NA NA	NA NA
Number of prior problems w	hich were	Not Tested this inspection :	NA		
Number of Total Open Prob	ems		14		
Number of prior problems w	hich teste	d Normal this inspection :	NA		

I hereby certify the above project was inspected by myself or under my direction and that the enclosed data is the direct result of this inspection. **TI Thermal Imaging**

Michel, Jason

Certification Level/No.:

* Summary of reoccuring problems on following page(s)



Cover Page for T/D Electrical

Executive and Operations summary of problems found

Also available on your Webmanager Overview page Please use your login details provided

http://193.228.155.40/inspectrend





Report generated by Ti Thermal Imaging LTD.



INFRARED THERMOGRAPHIC INSPECTION OF TRANSMISSION / DISTRIBUTION ELECTRICAL INSPECTION

Page 1

Report Date: 16/09/2012

Provided for

Overview:

The Infrared Electrical Inspection was performed by TI Thermal Imaging, by a certified infrared Thermographer. All of the items inspected are listed in this InspecTrend report. Any anomalies are listed in order of priority based on the component's temperature rise, as measured from a reference component of equal type and load at the time of the inspection. TI Thermal Imaging assumes no liability directly or indirectly as a result of this inspection.

Current Inspection No: 1896 Prior Inspection No:	September 14, 2012			Percent
Priority	Temp Rise	Current Inspection	Prior Inspection	of Change
1-Critical 2-Serious 3-Important 4-Minor <u>5-Normal</u>	33 - Above 16 - 32 8 - 15 1 - 7 0	$0 = 0\% \\ 0 = 0\% \\ 0 = 0\% \\ 0 = 0\% \\ 0 = 0\% \\ 0 = 0\%$	NA NA NA NA NA	NA NA NA NA NA
	Total Tested Problems:	0	NA	NA
Number of New	Documented Problems:	0	NA	NA
Number of Teste	d re-occuring Problems:	0	NA	NA
Number of prior problems which wer Number of Total Open Problems	NA NA			
Number of prior problems which test	ed Normal this inspection :	NA		

I hereby certify the above project was inspected by myself or under my direction and that the enclosed data is the direct result of this inspection. **TI Thermal Imaging**

Michel, Jason

Certification Level/No.:

* Summary of reoccuring problems on following page(s)



List of Open Problems

Full list of thermal, mechanical and visual issues found

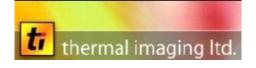
Also available on your Webmanager Problems page Please use your login details provided

http://193.228.155.40/inspectrend





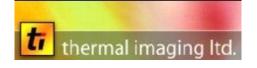
Report generated by Ti Thermal Imaging LTD.



Report Date: 15/09/2012

Operation Priority Key
CTO = Critical to operation
CTO = Critical to operation ETO = Essential to operation
NON = Non-essential to operation
UNC = Un-Classified

	rior Inspection No : rent Inspection No : 1896	September 14, 2012		Temp	%		
Prob#	Asset ID		Insp#	Rise	Load	Severity	Status
V 6		Equipment: INVERTER ROOM \ BUSBAR	1896			4-Minor	TESTED
		Component: Missing panel fixings causing the panel to be secured insufficiently					
V 1	-	Equipment: ROW A \ A10	1896			3-Important	TESTED
		Component: Elevated Surface Temperature at AR1, AR2 and AR3					
V 2	-	Equipment: ROW A \ A11	1896			3-Important	TESTED
		Component: Elevated Surface Temperature at AR1 and AR2					
V 3	-	Equipment: ROW A \ A12	1896			2-Serious	TESTED
		Component: Elevated Surface Temperature at AR1, AR2 and AR3					
V 4	-	Equipment: ROW B \ B12	1896			2-Serious	TESTED
		Component: Elevated Surface Temperature at AR1, AR2 and AR3					
V 5	-	Equipment: ROW B \ B13	1896			3-Important	TESTED
		Component: Elevated Surface Temperature at AR1					
V 7	-	Equipment: ROW B \ B14	1896			3-Important	TESTED
		Component: Elevated Surface Temperature at AR1					
V 11	-	Equipment: ROW C \ C1	1896			3-Important	TESTED
		Component: Elevated Surface Temperature at AR1					



Report Date: 15/09/2012

Operation Priority Key
CTO = Critical to operation
ETO = Essential to operation
NON - Non-essential to operation

NON = Non-essential to operation UNC = Un-Classified

Prior Inspection No : Current Inspection No : 1896	September 14, 2012	Temp	%	
Prob# Asset ID		Insp# Rise	Load Severity	Status
V 10 -	Equipment: ROW C \ C30 Component: Elevated Surface Temperature at AR1 and AR2	1896	3-Important	TESTED
V9 -	Equipment: ROW C \ C31 Component: Elevated Surface Temperature at AR1, AR2 and AR3	1896	3-Important	TESTED
V 8 -	Equipment: ROW C \ C32 Component: Elevated Surface Temperature at AR1	1896	3-Important	TESTED
V 12 -	Equipment: ROW I \ I15 Component: Elevated Surface Temperature at AR1	1896	4-Minor	TESTED
V 13 -	Equipment: ROW K \ K20 Component: Elevated Surface Temperature at AR1	1896	3-Important	TESTED
V 14 -	Equipment: ROW N \ N1 Component: Elevated Surface Temperature at AR1 and AR2	1896	3-Important	TESTED



Inspection Inventory Pages Equipment listing and test status

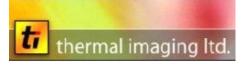
Also available on your Webmanager Inventory page with Photos Please use your login details provided

http://193.228.155.40/inspectrend





Report generated by Ti Thermal Imaging LTD.



Report Date: 15/09/2012

Work Order

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Inspected By : Michel, Jason

Asset ID

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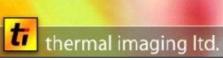
-

Current Inspection Inventory Status By Inspection Order

	Other	Test Status Note	Problem Type	e Kev	I	Equipment Test Status Key		
	NI = Not Issued	SCE = Safety Critical	TD = T/D Ele			TBT = To Be Tested		
		COL - Calcty Childan	M = Mechar		I	NT/NL = Not Tested/No Load		
			V = Visual Ir	nspection		NT/TC = Not Tested/Time Constraint		
			Operation Pr	iority Key		NT/UR = Not Tested/Under Repair NT/LO = Not Tested/Locked Out		
	Prior Inspection No:			I to operation		NT/NA = Not Tested/Not Available		
	Current Inspectior		tial to operation		NT/NS = Not Tested/Not Specified			
			NON = Non-e UNC = Un-Cl	essential to operat assified	tion I	NSFI = Not Selected for this insp.		
Equipment I	Description		СТО	Tested P	roblem	# Test Status Notes		
ROW A			СТО	TESTED				
A10			СТО	TESTED V	1			
A11			СТО	TESTED V	2			
A12			СТО	TESTED V	3			
ROW B			СТО	TESTED				
B12			СТО	TESTED V				
B13			СТО	TESTED V				
B14			СТО	TESTED V	7			
ROW C			СТО	TESTED				
C32			СТО	TESTED V				
C31			СТО	TESTED V				
C30			СТО		10			
C1			СТО	TESTED V	11			
ROW D			CTO	TESTED				
ROW E			CTO	TESTED				
ROW F			СТО СТО	TESTED				
ROW G ROW H			СТО	TESTED TESTED				
ROW I			СТО	TESTED				
115			СТО		12			
ROW J			СТО	TESTED	12			
ROW 5			СТО	TESTED				
K20			СТО		13			
ROW L			СТО	TESTED				
ROW L			СТО	TESTED				
ROW N			СТО	TESTED				
N1			СТО		14			
ROW O			СТО	TESTED				
				-				

Page: 1

This inspection and report was performed and generated by: TI Thermal Imaging



Report Date: 15/09/2012

Work Order

NI

NI

NI NI NI NI NI NI NI NI NI NI NI NI NI NI NI NI NI NI NI

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Inspected By : Michel, Jason

Asset ID

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INVERTER 1

INVERTER 2

INVERTER 3

INVERTER 4

INVERTER 5

INVERTER 6 INVERTER 7

Current Inspection Inventory Status By Inspection Order

g ltd.	Other	Test Status Note	Problem Type	e Key	Equipment Test Status Key
	NI = Not Issued	SCE = Safety Critical	TD = T/D Ele		TBT = To Be Tested
			M = Mechar		NT/NL = Not Tested/No Load
			V = Visual Ir	nspection	NT/TC = Not Tested/Time Constraint
			Operation Pr		NT/UR = Not Tested/Under Repair NT/LO = Not Tested/Locked Out
	Prior Inspectio	n No:		al to operation	NT/NA = Not Tested/Not Available
	Current Inspectio	n No [.] 1896		itial to operation	NT/NS = Not Tested/Not Specified
			NON = Non-e UNC = Un-Cl	essential to operation assified	n NSFI = Not Selected for this insp.
Equipme	ent Description		СТО	Tested Prot	olem # Test Status Notes
ROW P			СТО	TESTED	
ROW Q			СТО	TESTED	
ROW R			СТО	TESTED	
ROW S			СТО	TESTED	
ROW T			СТО	TESTED	
ROW U			СТО	TESTED	
ROW V			СТО	TESTED	
ROW W			СТО	TESTED	
ROW X			СТО	TESTED	
ROW Y			СТО	TESTED	
ROW Z			СТО	TESTED	
ROW AA	١		СТО	TESTED	
ROW AB	3		СТО	TESTED	
ROW AC)		СТО	TESTED	
ROW AD)		СТО	TESTED	
ROW AE			СТО	TESTED	
ROW AF	:		СТО	TESTED	
ROW AG	3		СТО	TESTED	
ROW AF	1		СТО	TESTED	
ROW AI			СТО	TESTED	
INVERT	ER ROOM		СТО	TESTED	
INVE	RTER 1		СТО	TESTED	
INVE	RTER 2		СТО	TESTED	
INVE	RTER 3		СТО	TESTED	
INVE	RTER 4		СТО	TESTED	
INVE	RTER 5		СТО	TESTED	
INVE	RTER 6		СТО	TESTED	
INVE	RTER 7		СТО	TESTED	

Page: 2

This inspection and report was performed and generated by: TI Thermal Imaging



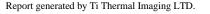
Current Inspection Inventory Status By Inspection Order

thern	hal imaging ltd.	Other	Test Status Note	Problem Type Ke	ey	Equipment Test Status Key
		NI = Not Issued	SCE = Safety Critical	$T\underline{D} = T/D \text{ Electri}$ $M = \text{Mechanical}$ $V = \text{Visual Inspect}$		TBT = To Be Tested NT/NL = Not Tested/No Load NT/TC = Not Tested/Time Constraint
				Operation Priori	ty Key	NT/UR = Not Tested/Under Repair NT/LO = Not Tested/Locked Out
		Prior Inspection I	No:	CTO = Critical to	operation	NT/NA = Not Tested/Not Available
Report Date: 15	5/09/2012	Current Inspection I	No: 1896	ETO = Essential NON = Non-esse	·	NT/NS = Not Tested/Not Specified NSFI = Not Selected for this insp.
Inspected By :	Michel, Jason			UNC = Un-Class	ified	
Work Order	Asset ID	Equipment Description		СТО	Tested Proble	m # Test Status Notes
NI	INVERTER 8	INVERTER 8		СТО	TESTED	
NI	INVERTER 9	INVERTER 9		СТО	TESTED	
NI	KWH GENERATED METER	KWH GENERATED METER		СТО	TESTED	
NI	BUSBAR	BUSBAR		СТО	TESTED V6	

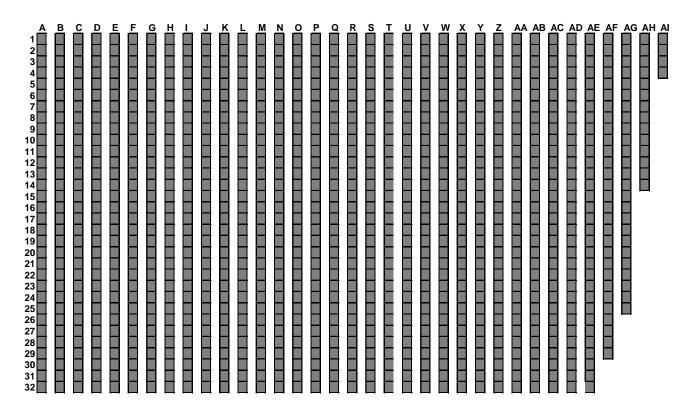
Page: 3



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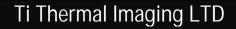


Company Registered in England: 04450573 VAT No. 828 6288 87









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Documentation pages for Visual findings

Details of Visual problems found

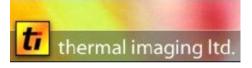
Also available on your Webmanager Problems page Please use your login details provided

http://193.228.155.40/inspectrend





Report generated by Ti Thermal Imaging LTD.

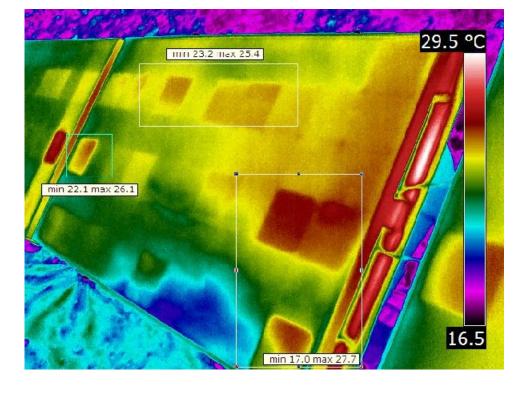


Location/Equipment Information Asset ID: -ROW A A10

Work Order#: NOT ISSUED

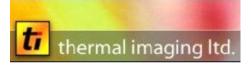
Current Prob No: Visual/1		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

	1896 15/09/2012	
Classification:	Solar Panel	
Observations:	Elevated Surface Temperature at AR1, AR2 and AR3	
What is the Cause:	Suspected Faulty Solar Cell(s)	
Recommendations:	Further investigation required	





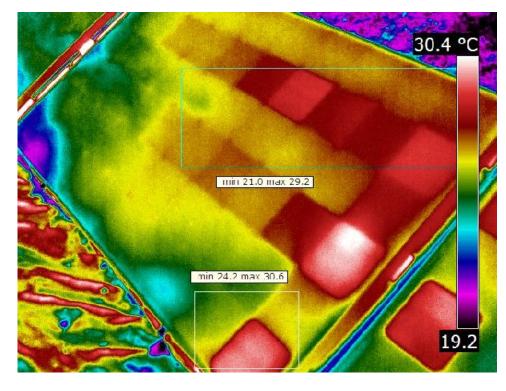
File: IR_11329A.jpg	Date: 15/09/2012	Time: 12:49 PM
File: DC_11330.jpg	Date: 15/09/2012	Time: 12:51 PM
	Technician: Certification Level/No.:	Michel, Jason



Location/Equipment Information Asset ID: -ROW A A11

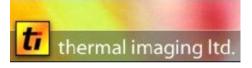
Current Prob No: Visual/2		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

	1896 15/09/2012	
Classification:	Solar Panel	
Observations:	Elevated Surface Temperature at AR1 and AR2	
What is the Cause:	Suspected Faulty Solar Cell(s)	
Recommendations:	Further investigation required	





File: IR_11331A.jpg	Date: 15/09/2012	Time: 12:53 PM
File: DC_11332.jpg	Date: 15/09/2012	Time: 12:53 PM
	Technician: Certification Level/No.:	Michel, Jason

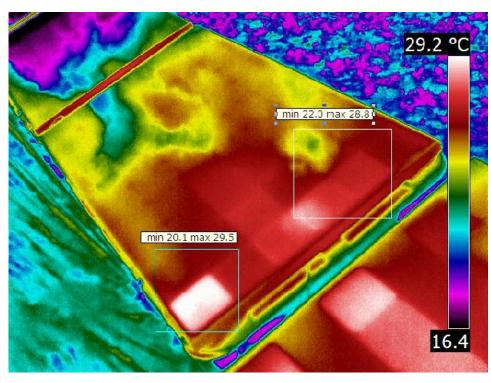


Location/Equipment Information Asset ID: -ROW A A12

Work Order#: N	NOT ISSUED
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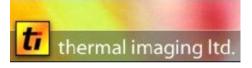
Current Prob No: Visual/3		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	2-Serious	

InspectionNo: 189 Report Date: 15/0	6 99/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1, AR2 and AR3
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





File: IR_11333A.jpg	Date: 15/09/2012	Time: 01:00 PM
File: DC_11334.jpg	Date: 14/09/2012	Time: 10:19 AM
	Technician: Certification Level/No.:	Michel, Jason



Location/Equipment Information Asset ID: -ROW B B12

Work Order#: NOT ISSUED

Page 4

Current Prob No: Visual/4	
Is Chronic:	No
Operation Priority:	Critical to operation
Repair Priority:	2-Serious

 InspectionNo: 1896

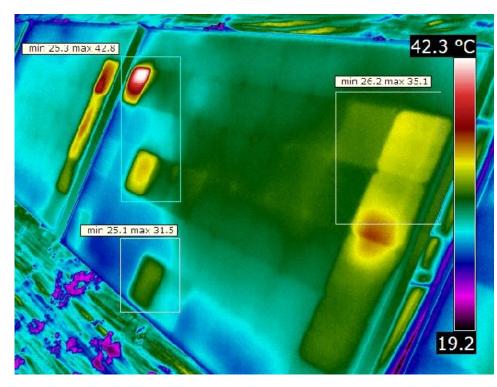
 Report Date: 15/09/2012

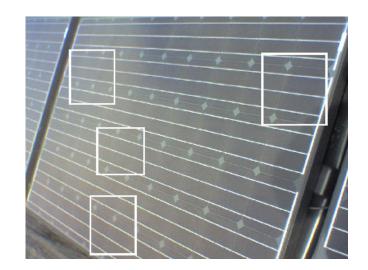
 Classification: Solar Panel

 Observations: Elevated Surface Temperature at AR1, AR2 and AR3

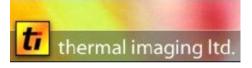
 What is the Cause: Suspected Faulty Solar Cell(s)

 Recommendations: Further investigation required





File: IR_11335A.jpg	Date: 15/09/2012	Time: 12:57 PM
File: DC_11336.jpg	Date: 15/09/2012	Time: 12:57 PM
	Technician: Certification Level/No.:	Michel, Jason

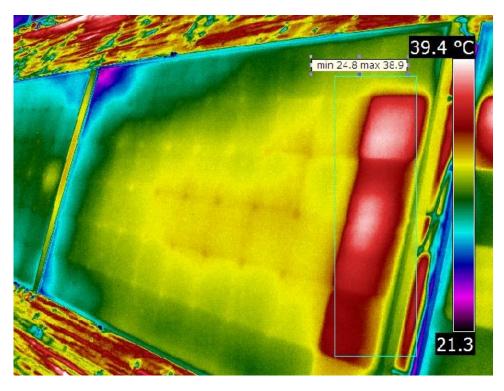


Location/Equipment Information Asset ID: -ROW B B13

	Work	Order#:	NOT ISSUED
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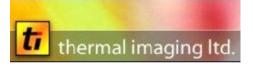
Current Prob No: Visual/5	
Is Chronic:	No
Operation Priority:	Critical to operation
Repair Priority: 3-Important	

InspectionNo: 1896 Report Date: 15/0	
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





File: IR_11337A.jpg	Date: 15/09/2012	Time: 01:04 PM
File: DC_11338.jpg	Date: 15/09/2012	Time: 01:04 PM
	Technician: Certification Level/No.:	Michel, Jason



Location/Equipment Information Asset ID: -INVERTER ROOM BUSBAR

Work Order#: NOT ISSUED

Current Prob No: Visual/6		
Is Chronic: No		
Operation Priority:	Critical to operation	
Repair Priority: 4-Minor		

InspectionNo: 1896

 Report Date:
 15/09/2012

 Classification:
 Electrical

 Observations:
 Missing panel fixings causing the panel to be secured insufficiently

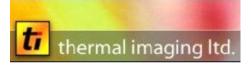
 What is the Cause:
 Panel fixings have not been replaced after previous removal

Recommendations: Add appropriate number of panel screws



File:	Date:	Time:
File: DC_11447.jpg	Date: 15/09/2012	Time: 12:33 PM
	Technician: Certification Level/No.:	Michel, Jason

IR IMAGE IS NOT NECESSARY

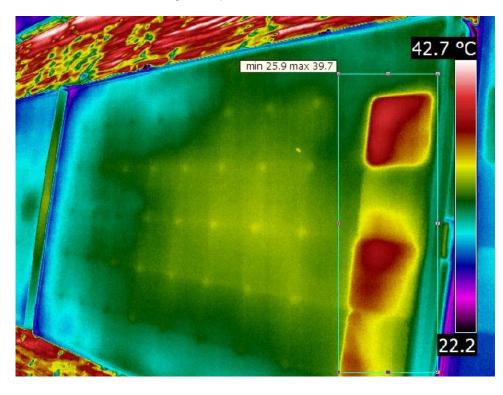


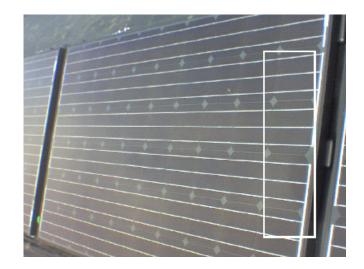
Location/Equipment Information Asset ID: -ROW B B14

Work Order#: NC	DT ISSUED
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Current Prob No: Visual/7		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority: 3-Important		

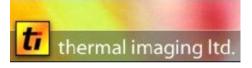
InspectionNo: 1896 Report Date: 15/0	9/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





File: IR_11339A.jpg	Date: 15/09/2012	Time: 01:06 PM
File: DC_11340.jpg	Date: 15/09/2012	Time: 01:06 PM
	Technician: Certification Level/No.:	Michel, Jason

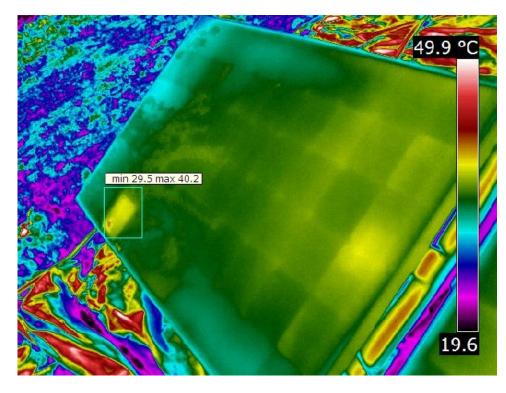
Page 7

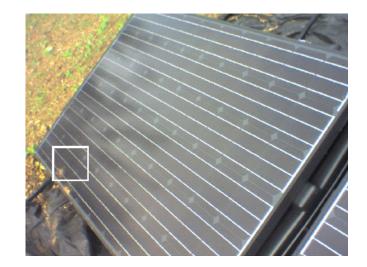


ocation/Equipment Information	
Asset ID: -	
ROW C C32	

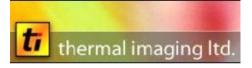
Current Prob No: Visual/8		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

InspectionNo: 1896 Report Date: 15/0	6 19/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





File: IR_11341A.jpg	Date: 15/09/2012	Time: 01:12 PM
File: DC_11342.jpg	Date: 15/09/2012	Time: 01:12 PM
	Technician: Certification Level/No.:	Michel, Jason



Location/Equipment Information Asset ID: -ROW C C31 Work Order#: NOT ISSUED

Current Prob No: Visual/9		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

InspectionNo: 1896

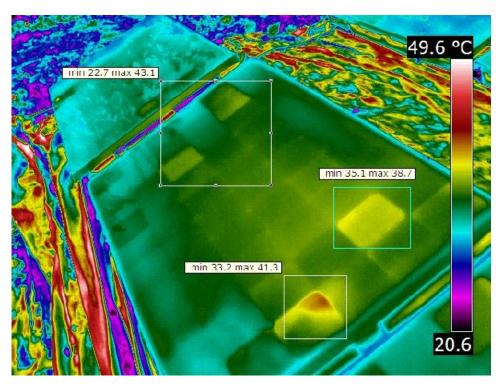
Report Date: 15/09/2012

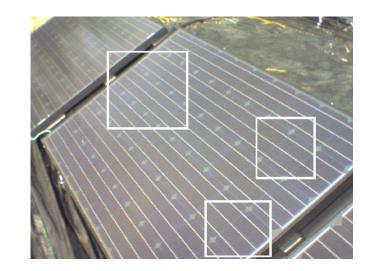
Classification: Solar Panel

Observations: Elevated Surface Temperature at AR1, AR2 and AR3

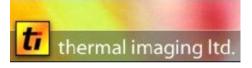
What is the Cause:

Recommendations:





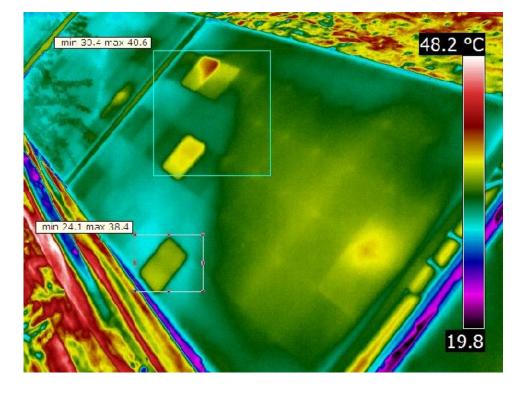
File: IR_11343A.jpg	Date: 15/09/2012	Time: 01:16 PM
File: DC_11344.jpg	Date: 15/09/2012	Time: 01:17 PM
	Technician: Certification Level/No.:	Michel, Jason

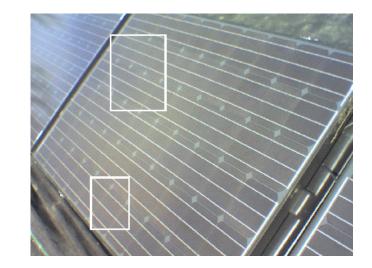


ocation/Equipment Information	
Asset ID: -	
ROW C C30	

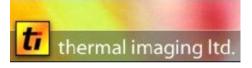
Current Prob No: Visual/10		
Is Chronic: No		
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

	1896 15/09/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1 and AR2
What is the Cause	Suspected Faulty Solar Cell(s)
Recommendation	s: Further investigation required





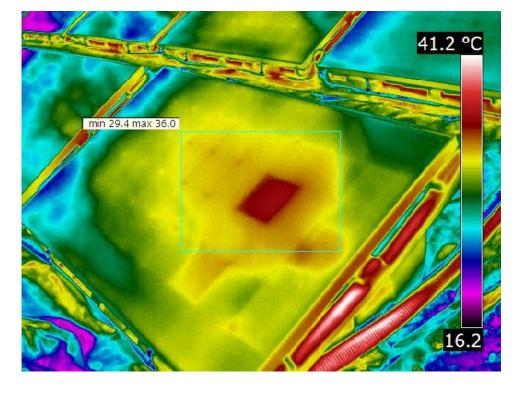
File: IR_11345A.jpg	Date: 15/09/2012	Time: 01:29 PM
File: DC_11346.jpg	Date: 15/09/2012	Time: 01:29 PM
	Technician: Certification Level/No.:	Michel, Jason



ocation/Equipment Information	
Asset ID: -	
ROW C C1	

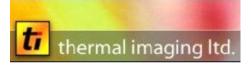
Current Prob No: Visual/11		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

InspectionNo: 1896 Report Date: 15/0	6 9/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





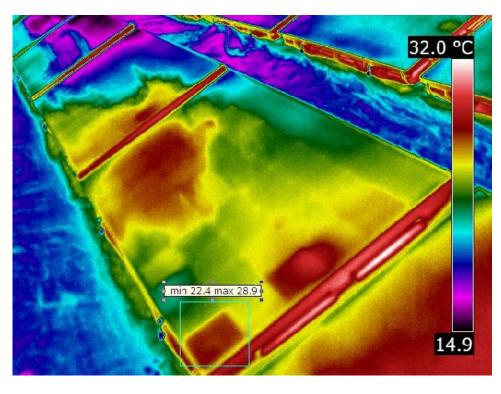
File: IR_11347A.jpg	Date: 15/09/2012	Time: 02:08 PM
File: DC_11348.jpg	Date: 15/09/2012	Time: 02:08 PM
	Technician: Certification Level/No.:	Michel, Jason



Location/Equipment Information	
Asset ID: -	
ROW I I15	

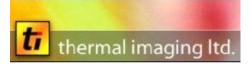
Current Prob No: Visual/12		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	4-Minor	

InspectionNo: 189 Report Date: 15/0	6 09/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1
What is the Cause:	Suspected Faulty Solar Cell(s)
Recommendations:	Further investigation required





File: IR_11367a.jpg	Date: 15/09/2012	Time: 02:18 PM
File: DC_11368.jpg	Date: 15/09/2012	Time: 02:21 PM
	Technician: Certification Level/No.:	Michel, Jason



Information			
	Information	Information	Information

Work Order#:

Current Prob No: Visual/13		
Is Chronic:	No	
Operation Priority:	Critical to operation	
Repair Priority:	3-Important	

 InspectionNo:
 1896

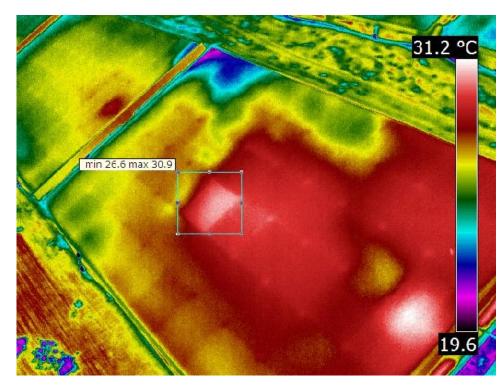
 Report Date:
 15/09/2012

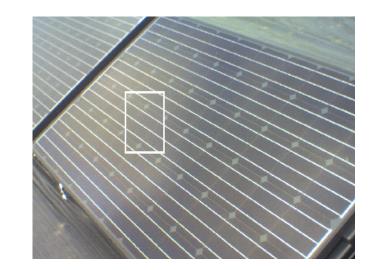
 Classification:
 Solar Panel

 Observations:
 Elevated Surface Temperature at AR1

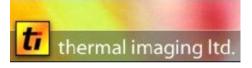
 What is the Cause:
 Value Surface Temperature at AR1

Recommendations:





File: IR_11373A.jpg	Date: 15/09/2012	Time: 02:24 PM
File: DC_11374.jpg	Date: 15/09/2012	Time: 02:25 PM
	Technician: Certification Level/No.:	Michel, Jason

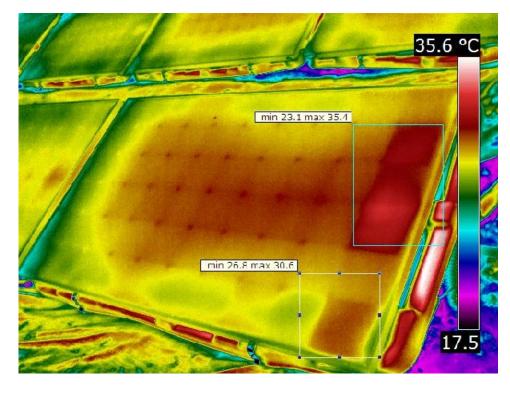


Location/Equipment Information	
Asset ID: -	
ROW N N1	

Work Order#: NOT ISSUED

Current Prob No: Visual/14			
Is Chronic:	No		
Operation Priority:	Critical to operation		
Repair Priority:	3-Important		

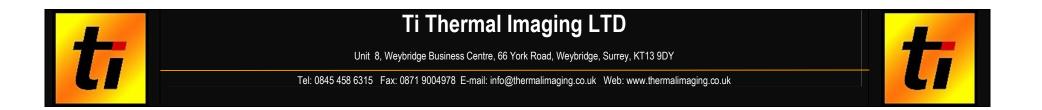
	896 5/09/2012
Classification:	Solar Panel
Observations:	Elevated Surface Temperature at AR1 and AR2
What is the Cause	: Suspected Faulty Solar Cell(s)
Recommendations	: Further investigation required





File: IR_11381A.jpg	Date: 15/09/2012	Time: 02:31 PM
File: DC_11382.jpg	Date: 15/09/2012	Time: 02:32 PM
	Technician: Certification Level/No.:	Michel, Jason

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Benchmark Baseline Trending

Full list of equipment baseline trends is also available on your Webmanager Please use your login details provided

http://193.228.155.40/inspectrend





Report generated by Ti Thermal Imaging LTD.



Equipment Baseline Trending Report By Inspection Order

Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW A

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

Page: 1



Equipment Baseline Trending Report By Inspection Order

Current Inspection No: 1896

September 15, 2012

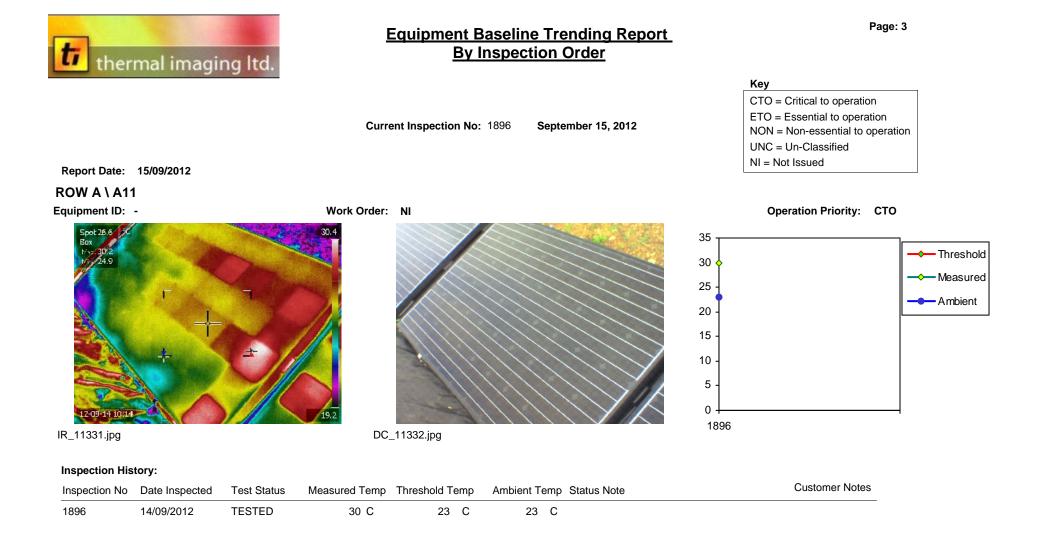
Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012		NI = Not Issued	
ROW A \ A10			
Equipment ID: -	Work Order: NI	Operation Priority: CTO	
Spet 25.1 *C Pr.:: 26.6 Fri: 22.4 Fri:: 22.4 Image: Comparison of the second secon	33 11 11 02 121	→ Threshold → Measured → Ambient	
Inspection History:			
Inspection No Date Inspected Test Status Me	easured Temp Threshold Temp Ambient Temp Status Note	Customer Notes	

1896 14/09/2012 TESTED 30 C 25 C 25 C

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging

Page: 2



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Equipment Baseline Trending Report By Inspection Order

Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW A \ A12

Equipment ID: -

Work Order: NI



1896 14/09/2012 TESTED 29 C 25 C 23 C

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Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW B

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW B \ B12

Equipment ID: -

Work Order: NI



1896 14/09/2012 TESTED 42 C 25 C 23 C

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Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW B \ B13

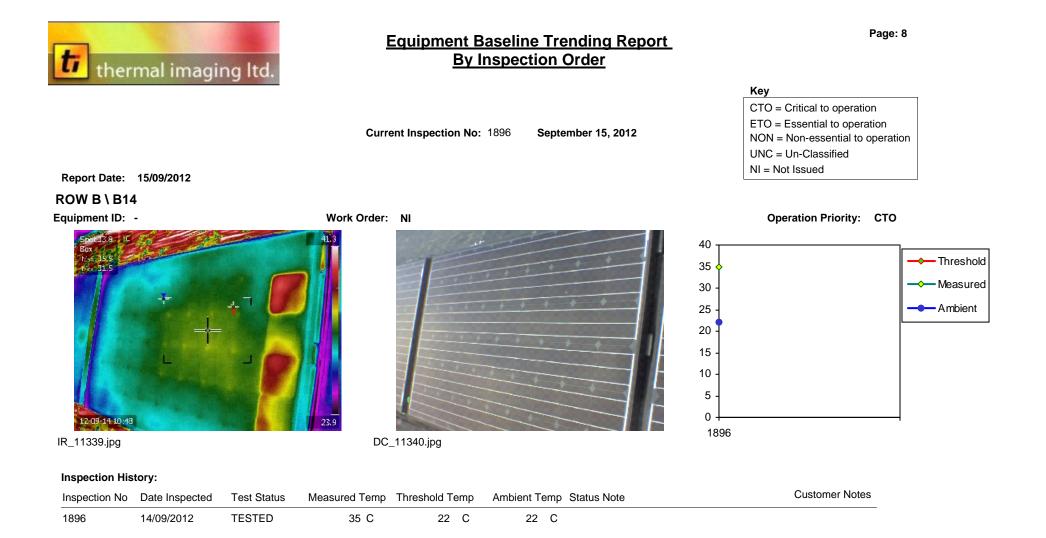
Equipment ID: -

Work Order: NI



1896 14/09/2012 TESTED 38 C 25 C 23 C

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging





Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW C

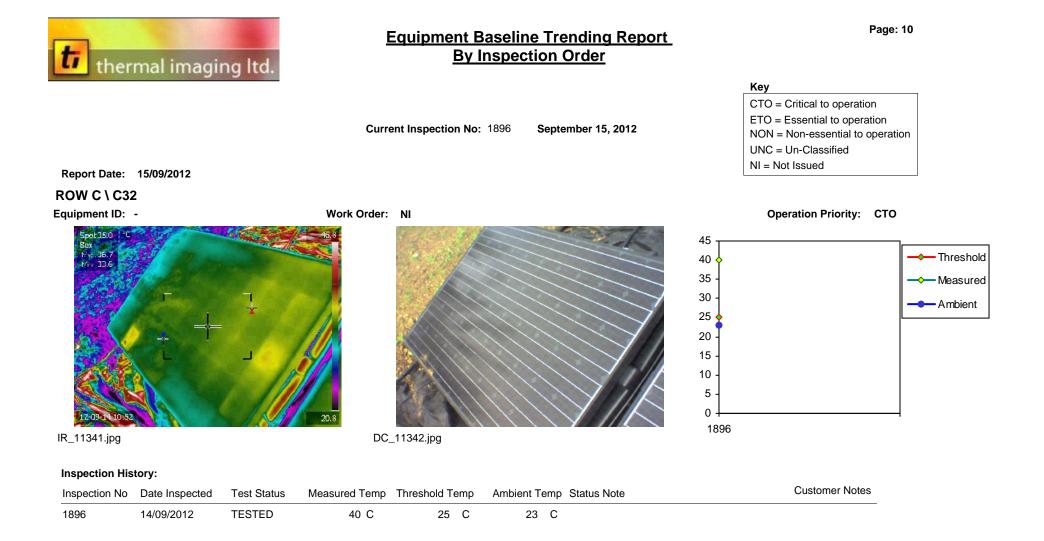
Equipment ID: -

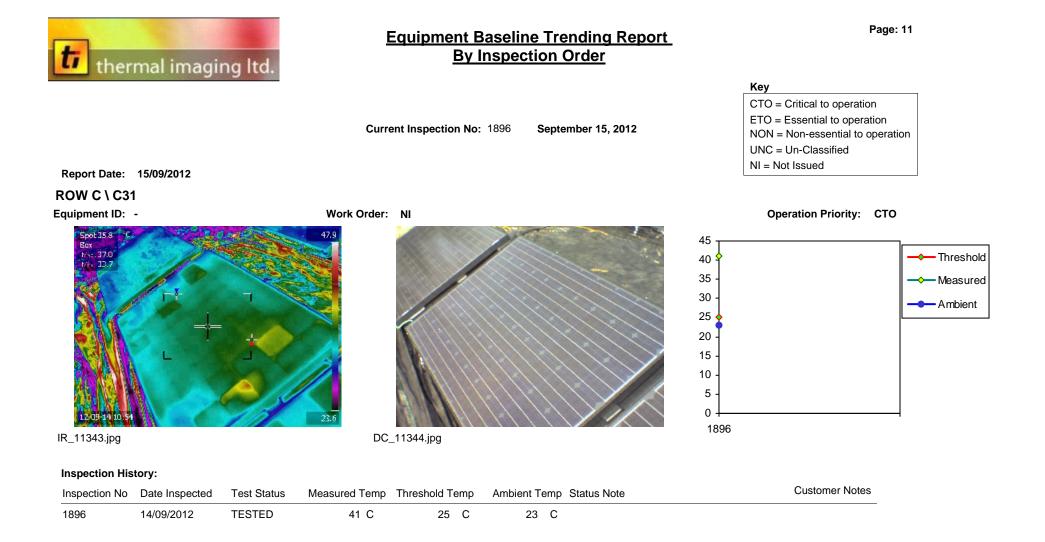
Work Order: NI

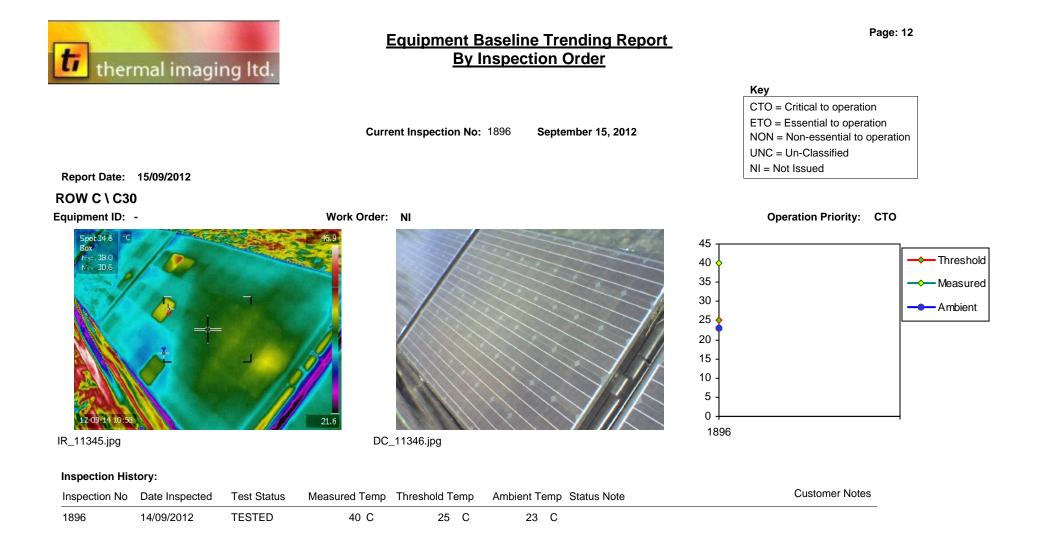


Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging





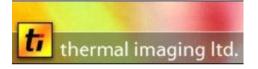




Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Equipment ID:	-		Work Order:	NI				Operation Priority: 0	то
Spot 34.8 *C Box V*:: 36.0 V*: 29.3 IR_11347.jpg			40.0 19.1 DC_	_11348.jpg			40 35 30 25 20 15 10 5 0 1896		← Threshold ← Measured ← Ambient
Inspection His								Queterer Neter	
Inspection No	Date Inspected	Test Status M	leasured Temp	Threshold Temp	Ambient Temp	Status Note		Customer Notes	
1896	14/09/2012	TESTED	36 C	25 C	23 C				

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key
CTO = Critical to operation
ETO = Essential to operation
NON = Non-essential to operation
UNC = Un-Classified
NI = Not Issued

Report Date: 15/09/2012

°C

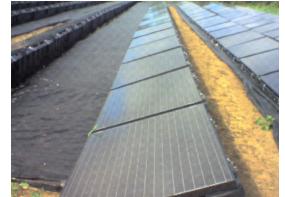
ROW D

Equipment ID: -Spot 23.8

Min 13.4

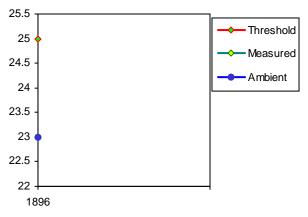
Box Nec. 37.8 Work Order: NI

40.8





Operation Priority: CTO



IR_11355.jpg

12-09-14 11:25

Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW E

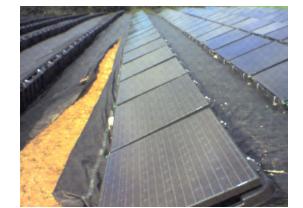
Equipment ID: -

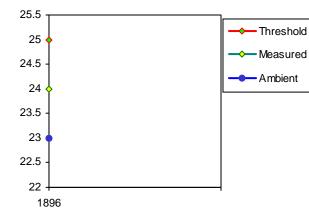
Spot 26.1 °C Box

Mat. 34.2

Work Order: NI

34.0





IR_11357.jpg

DC_11358.jpg

Inspection History:

12-09-14 11:28

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	

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Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW F

Equipment ID: -

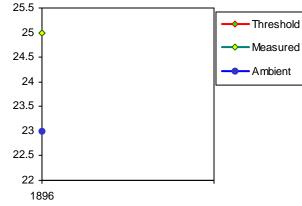
Box Mac. 30.8

Nin 15.0

Work Order: NI

31.5





IR_11359.jpg

DC_11360.jpg

Inspection History:

12-09-14 11:29

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

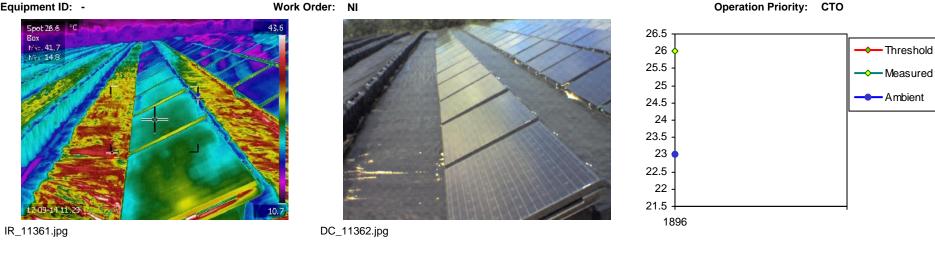
Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW G

Equipment ID: -

Work Order: NI



Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	26 C	26 C	23 C	

Page: 17

- Measured



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW H

Equipment ID: -

Spot 25.1 °C Box

Ne:: 36.0

Nin 15.0

Work Order: NI

36.8



DC_11364.jpg

Operation Priority: CTO



Inspection History:

12-09-1

IR_11363.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

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Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW I

Equipment ID: -

Box Mar. 31.5

Spot 26.0 °C

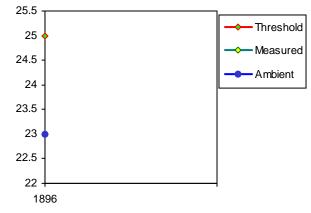
1D.8

Work Order: NI



DC_11366.jpg

Operation Priority: CTO



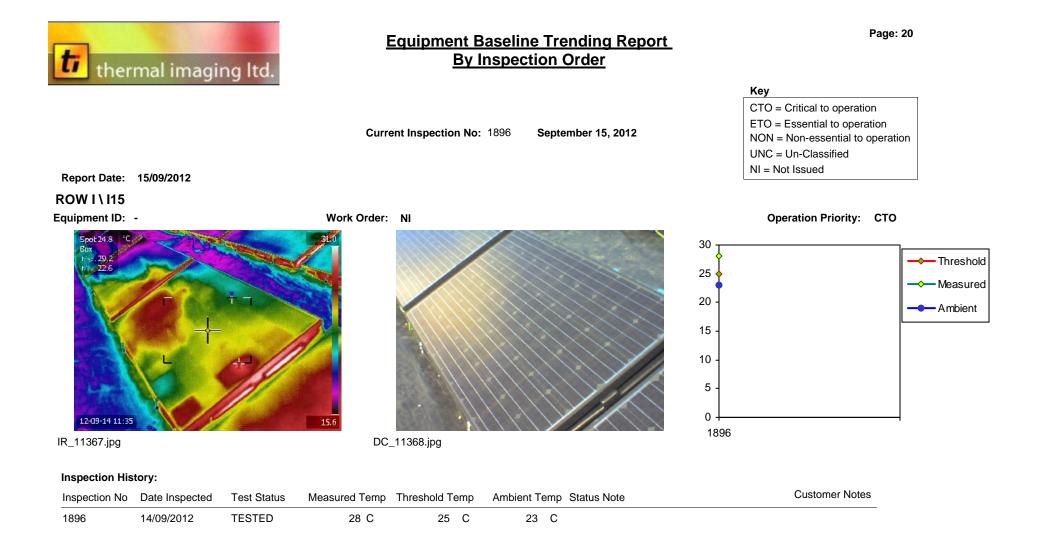
Inspection History:

2-09-14 11:32

IR_11365.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	

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Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW J

Spot 26.9 Box

Mar. 31.3

Min 17.8

Work Order: NI

32.1

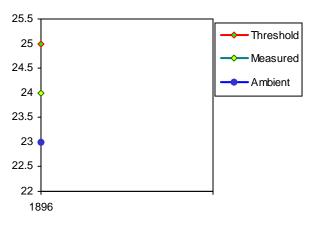




DC_11370.jpg

Equipment ID: -

Operation Priority: CTO



Inspection History:

12-09-14 11:38

IR_11369.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896 S

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW K

Equipment ID: -

Ns:. 51.8

Min 19.1

Spot 21.5 °C Box Work Order: K

52.4

11.





Inspection History:

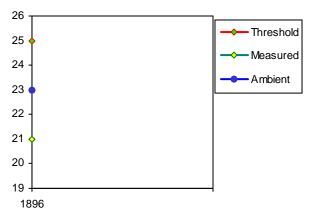
12-09-14

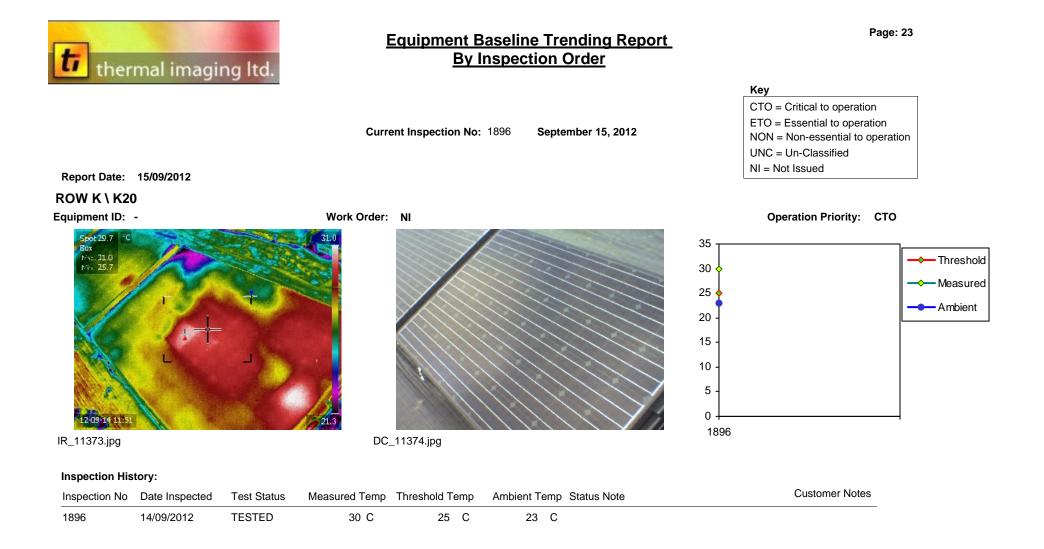
IR_11371.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	21 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging









Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

25.5

25

24

1896

24.5

23.5 -23 (22.5 -22 (21.5 -21 -20.5 -

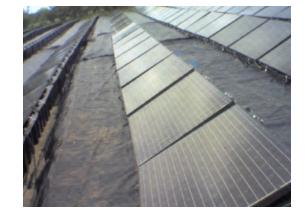
Report Date: 15/09/2012

ROW L

Equipment ID: -

Spot 22.7 °C Box

Msc. 27.9 Min 18.5 Work Order: NI





12-09-14 11:53

DC_11376.jpg

Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	22 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging

Page: 24

----- Ambient

- Measured



Current Inspection No: 1896 Second

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW M

Equipment ID: -

Box Med. 28.3

Spot 21.9 °C

Nin 14.7

Work Order: NI

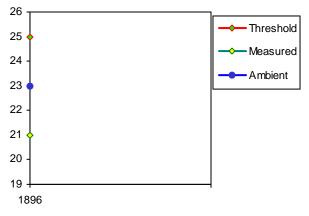
28.6

8.4





Operation Priority: CTO



Inspection History:

12-0

IR_11377.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	21 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW N

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW N \ N1

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	35 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

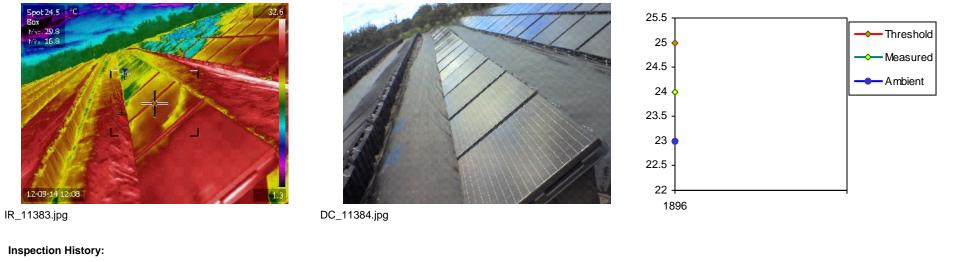
Operation Priority: CTO

Report Date: 15/09/2012

ROW O

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

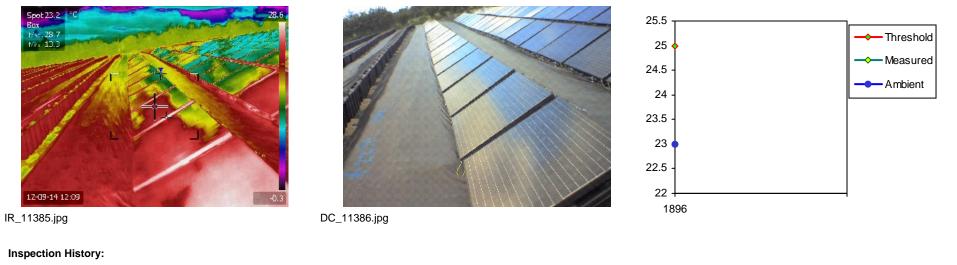
Operation Priority: CTO

Report Date: 15/09/2012

ROW P

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW Q

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	16 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW R

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	15 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW S

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	20 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW T

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	18 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW U

Equipment ID: -

Spot 19.4 °C Box

Mag. 30.6

Min 15.3

Work Order: NI



Inspection History:

12-09-14 12

IR_11395.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	19 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging

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----- Ambient

- Measured



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW V

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896 Se

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW W

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

KeyCTO = Critical to operationETO = Essential to operationNON = Non-essential to operationUNC = Un-ClassifiedNI = Not Issued

Report Date: 15/09/2012

°C

ROW X

Equipment ID: -

Spot 21.0 Box

Mst. 44.2

Nin 13.9

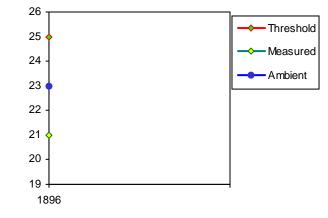
Work Order: NI

44.0





Operation Priority: CTO



Inspection History:

12-09-14 12:23

IR_11401.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	21 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896 S

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW Y

Equipment ID: -

Nec. 42.3

Nin 15.3

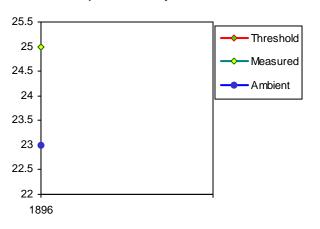
Spot 22.8 °C Box Work Order: NI

43.0



DC_11404.jpg

Operation Priority: CTO



Inspection History:

12-09-14 12:27

IR_11403.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW Z

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AA

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	



Current Inspection No: 1896 S

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AB

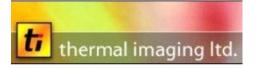
Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	23 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896 S

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AC

Equipment ID: -

Work Order: NI



Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key
CTO = Critical to operation
ETO = Essential to operation
NON = Non-essential to operation
UNC = Un-Classified
NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AD

Box Mac. 46<u>.8</u>

Equipment ID: -

Spot 28.6 °C

Nin 15.6

Work Order: NI





2-09-14 12:3

.

Inspection History:

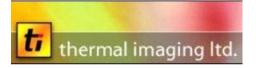
Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	22 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging

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----- Ambient

- Measured



Current Inspection No: 1896

September 15, 2012

Кеу
CTO = Critical to operation
ETO = Essential to operation
NON = Non-essential to operation
UNC = Un-Classified
NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AE

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

ROW AF

Equipment ID: -

Spot 30.0 °C

Box Msc. 54.5 Mini 20.7

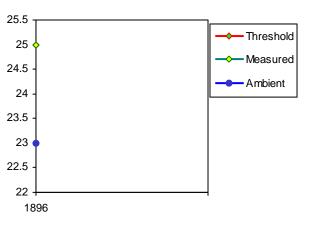
Work Order: NI

50.4



DC_11418.jpg





Inspection History:

12-09-14 12:39

IR_11417.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AG

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AH

Equipment ID: -

Work Order: NI



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	24 C	25 C	23 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Operation Priority: CTO

Report Date: 15/09/2012

ROW AI

Equipment ID: -

Box Not: 53.3 Not: 25.4

Spot 39.1 C

Work Order: NI



IR_11423.jpg

12-09-14 12:51

DC_11424.jpg

Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	25 C	25 C	25 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging

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----- Ambient

- Measured



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

INVERTER ROOM \ INVERTER 1

Equipment ID: INVERTER 1

Spot 28.9 Box 34.0 Mec. 33.8 Min 24.4 12-09-14 12:53 18.8



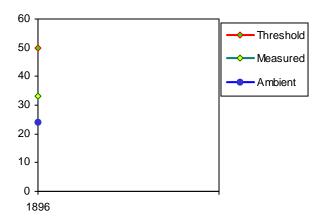
Inspection History:

	STREET, STREET	100
DC	11426.jpg	



Work Order: NI

Operation Priority: CTO



Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	33 C	50 C	24 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

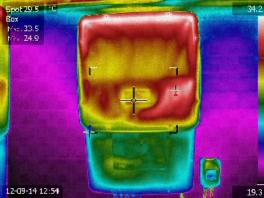
September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

INVERTER ROOM \ INVERTER 2

Equipment ID: INVERTER 2



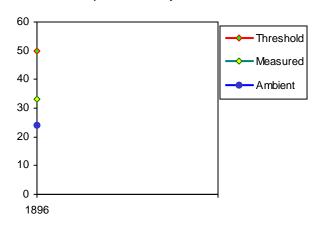
IR_11427.jpg





DC_11428.jpg

Operation Priority: CTO



Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	33 C	50 C	24 C	



Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

INVERTER ROOM \ INVERTER 3

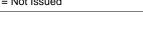
Equipment ID: INVERTER 3



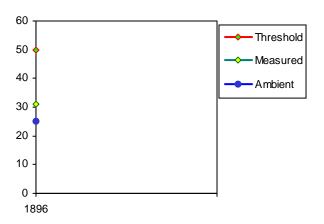
Work Order: NI



DC_11430.jpg



Operation Priority: CTO

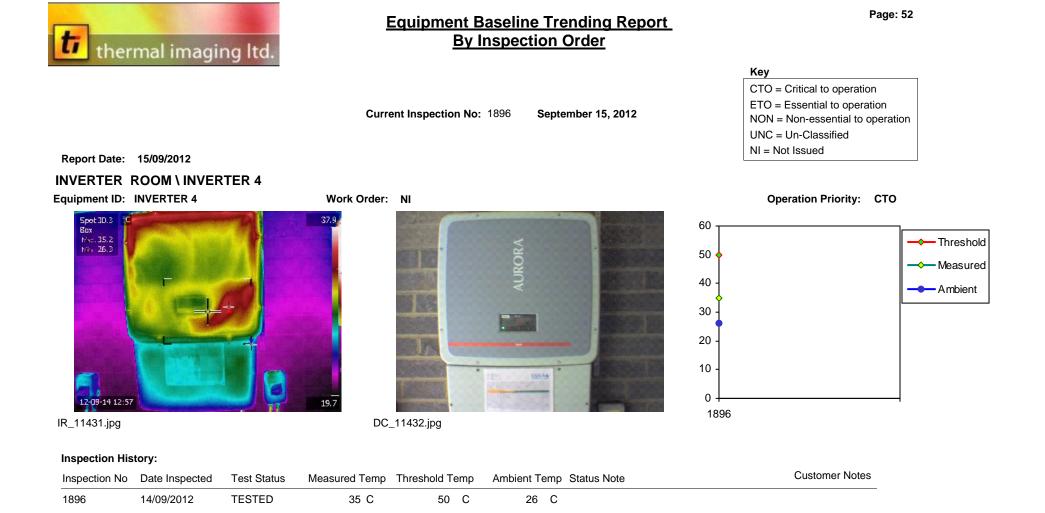


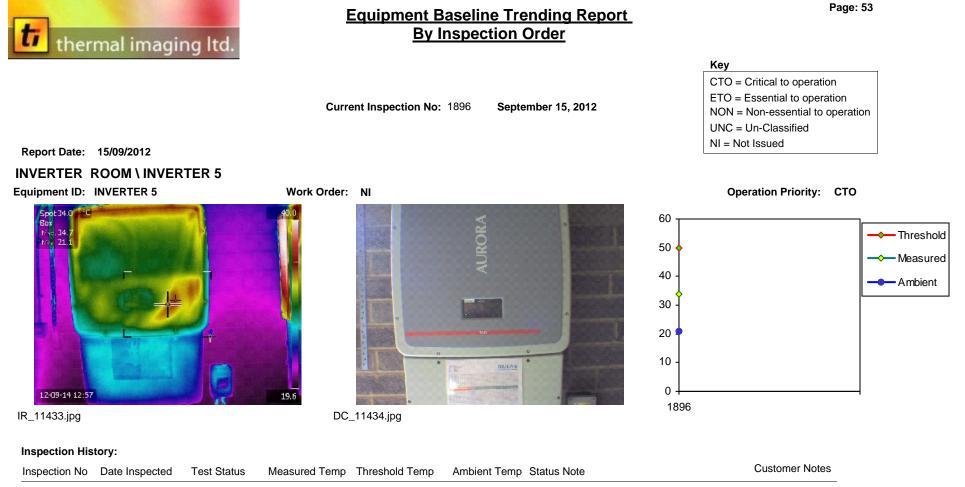
Inspection History:

IR_11429.jpg

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	14/09/2012	TESTED	31 C	50 C	25 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging





1896 15/09/2012 TESTED 34 C 50 C 21 C

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

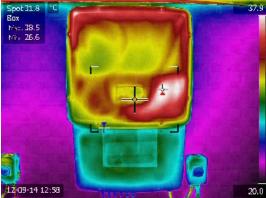
September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

INVERTER ROOM \ INVERTER 6

Equipment ID: INVERTER 6

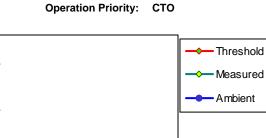


IR_11435.jpg

Work Order: NI



DC_11436.jpg





60

50

Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	15/09/2012	TESTED	34 C	50 C	21 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

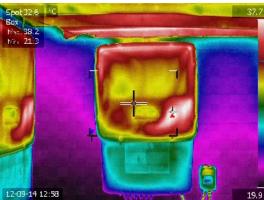
September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

INVERTER ROOM \ INVERTER 7

Equipment ID: INVERTER 7



IR_11437.jpg

Work Order: NI



DC_11438.jpg

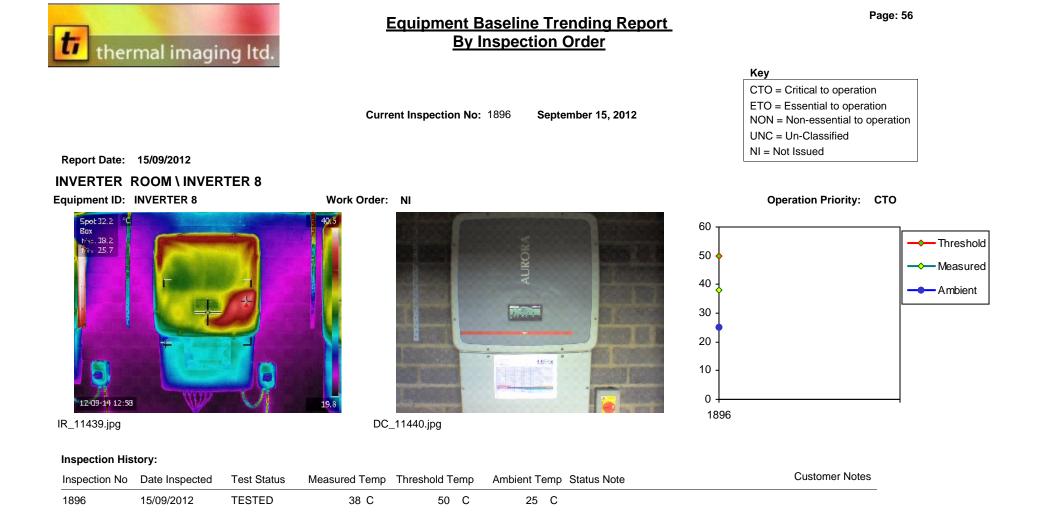
Operation Priority: CTO

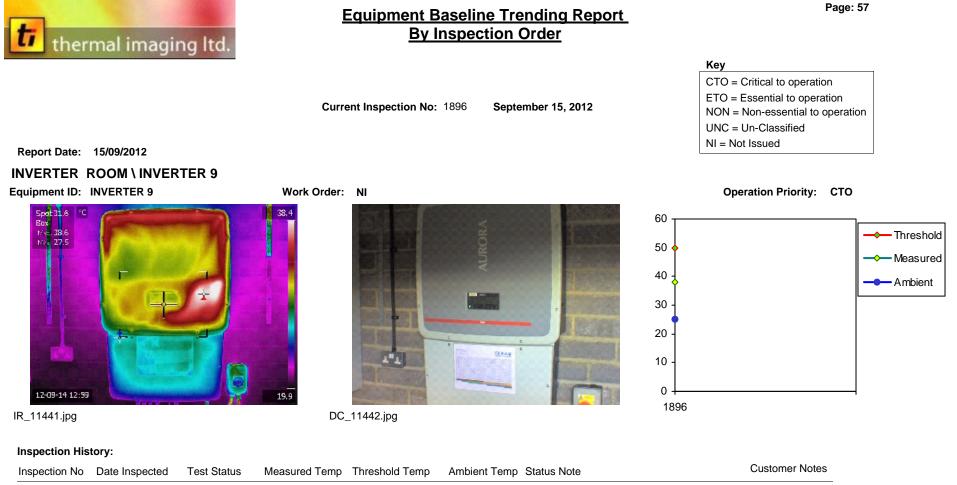


Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	15/09/2012	TESTED	38 C	50 C	26 C	

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging





1896 15/09/2012 TESTED 38 C 50 C 25 C

This report was generated by InspecTrend and this inspection was performed by: TI Thermal Imaging



Current Inspection No: 1896

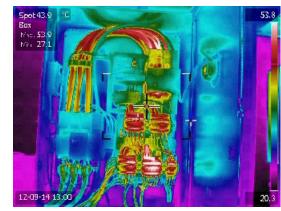
September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

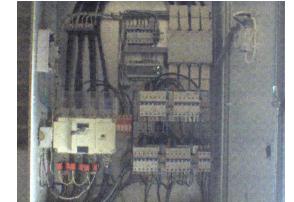
Report Date: 15/09/2012

INVERTER ROOM \ KWH GENERATED METER

Equipment ID: KWH GENERATED METER



IR_11443.jpg



DC_11444.jpg

Work Order: NI

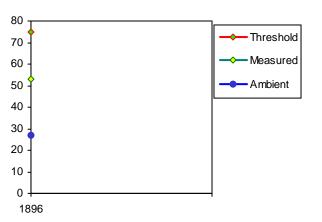
Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	15/09/2012	TESTED	53 C	75 C	27 C	

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Operation Priority: CTO





Current Inspection No: 1896

September 15, 2012

Key CTO = Critical to operation ETO = Essential to operation NON = Non-essential to operation UNC = Un-Classified NI = Not Issued

Report Date: 15/09/2012

Mar. 35.4

Min 20.8

Work Order: NI

32.8



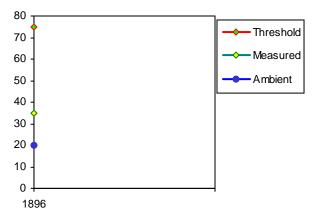
DC_11447.jpg

INVERTER ROOM \ BUSBAR

Equipment ID: BUSBAR

Spot 27.4 ^eC Box

Operation Priority: CTO



IR_11446.jpg

12-09-14 13:02

Inspection History:

Inspection No	Date Inspected	Test Status	Measured Temp	Threshold Temp	Ambient Temp Status Note	Customer Notes
1896	15/09/2012	TESTED	35 C	75 C	20 C	



Work Order Documentation pages

Fax or Email back Corrective Work Orders

Also available on your Webmanager Problems page Please use your login details provided

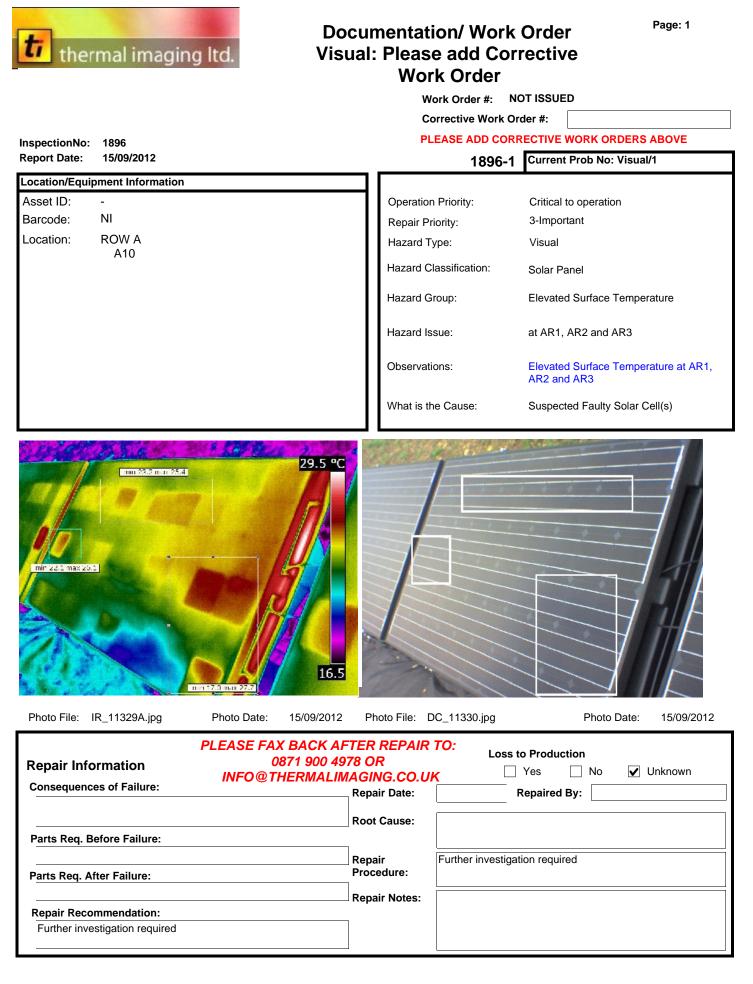
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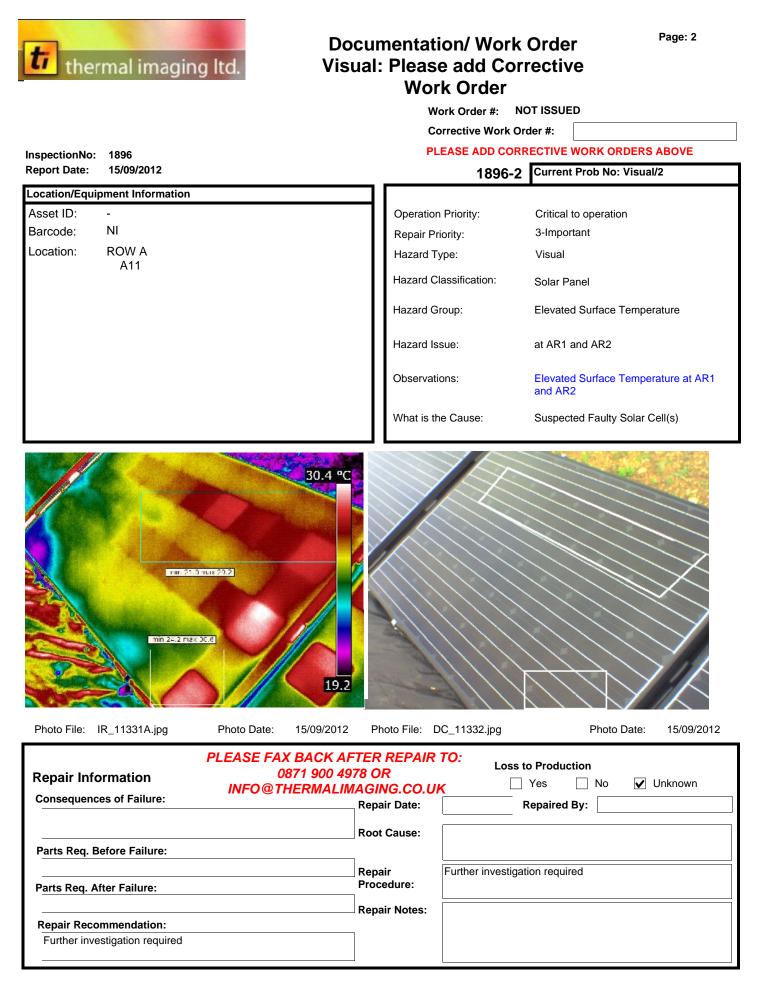


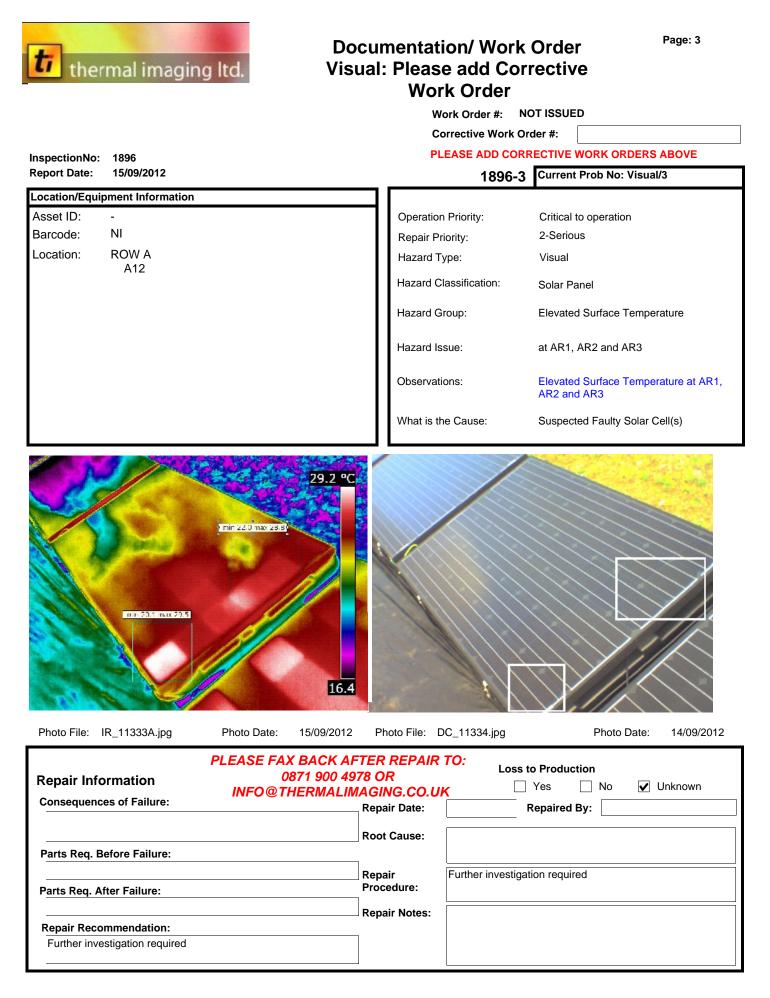


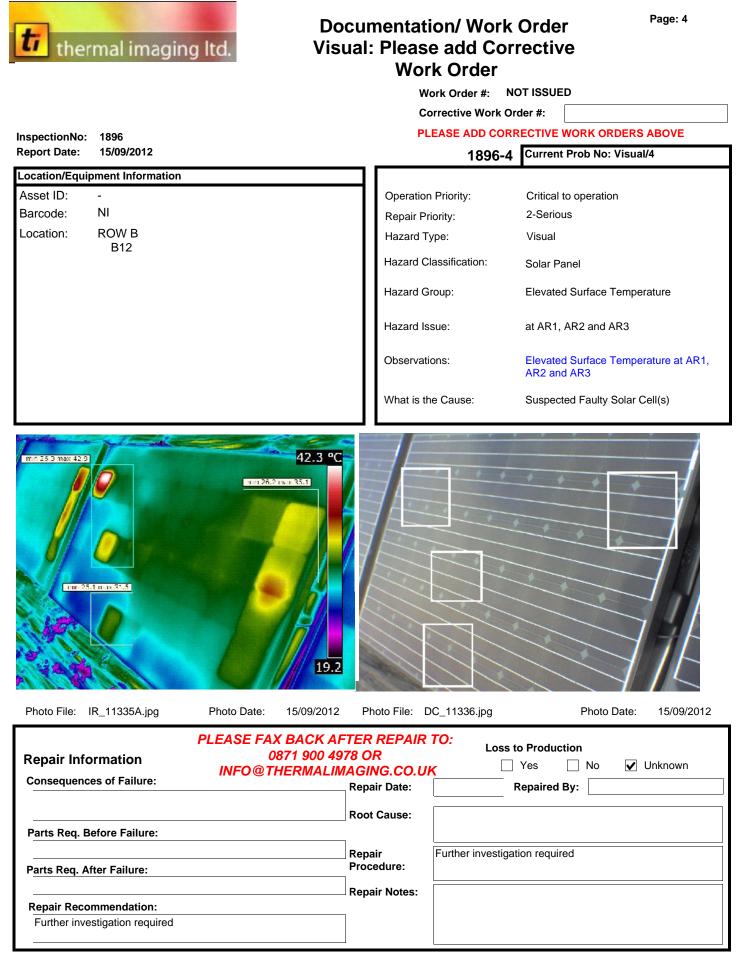
Report generated by Ti Thermal Imaging LTD.

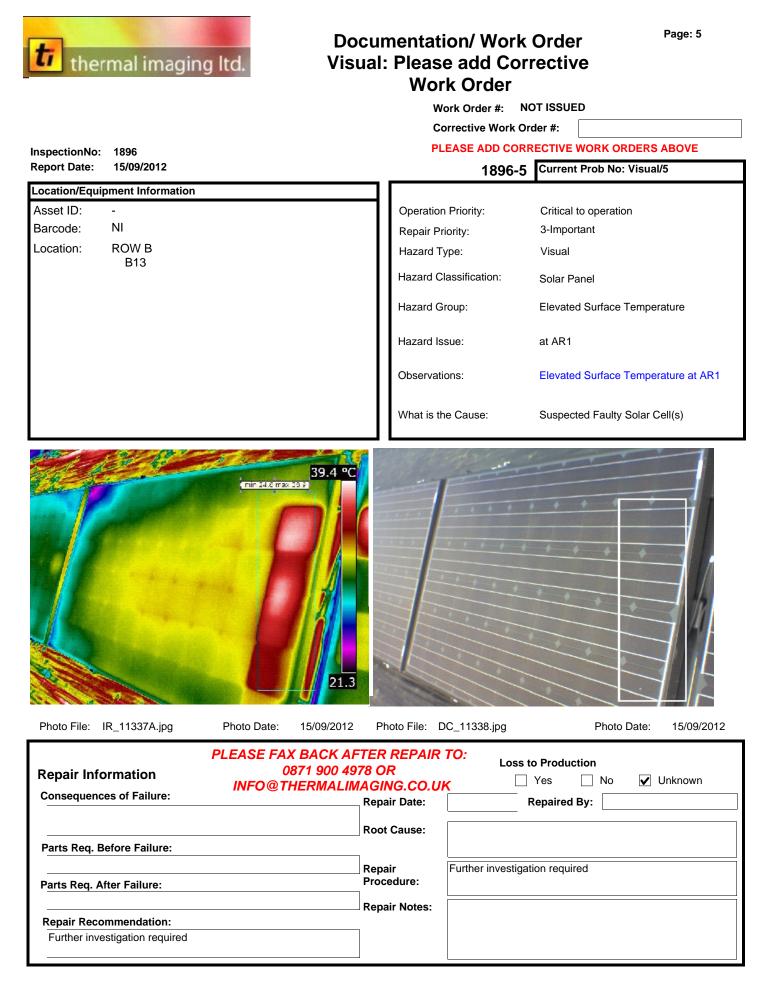
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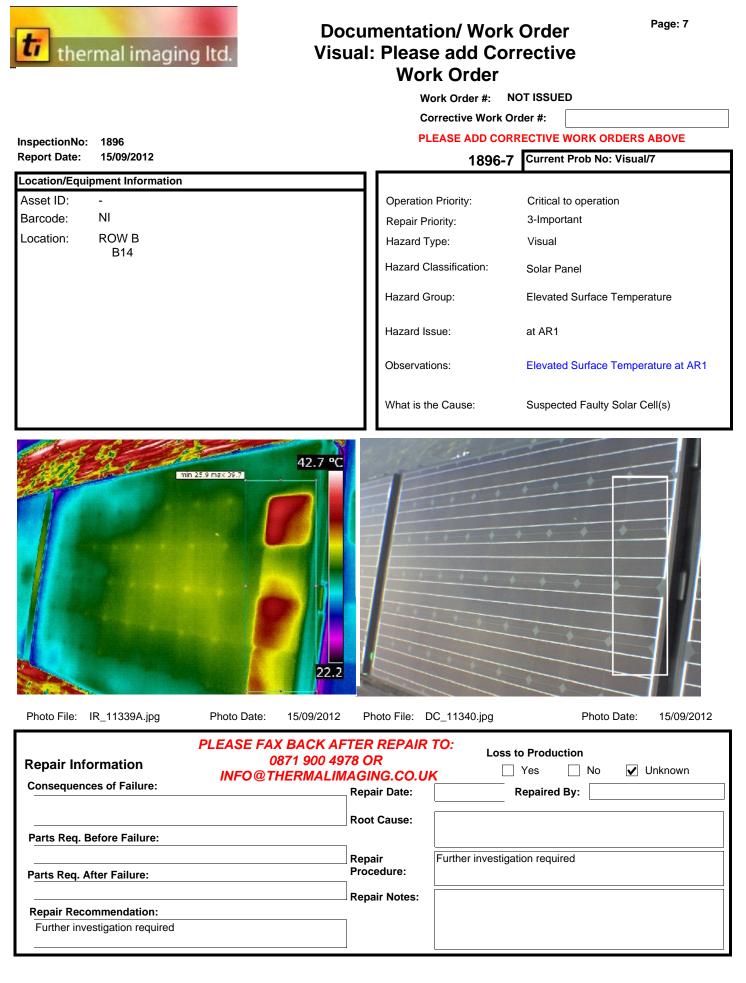


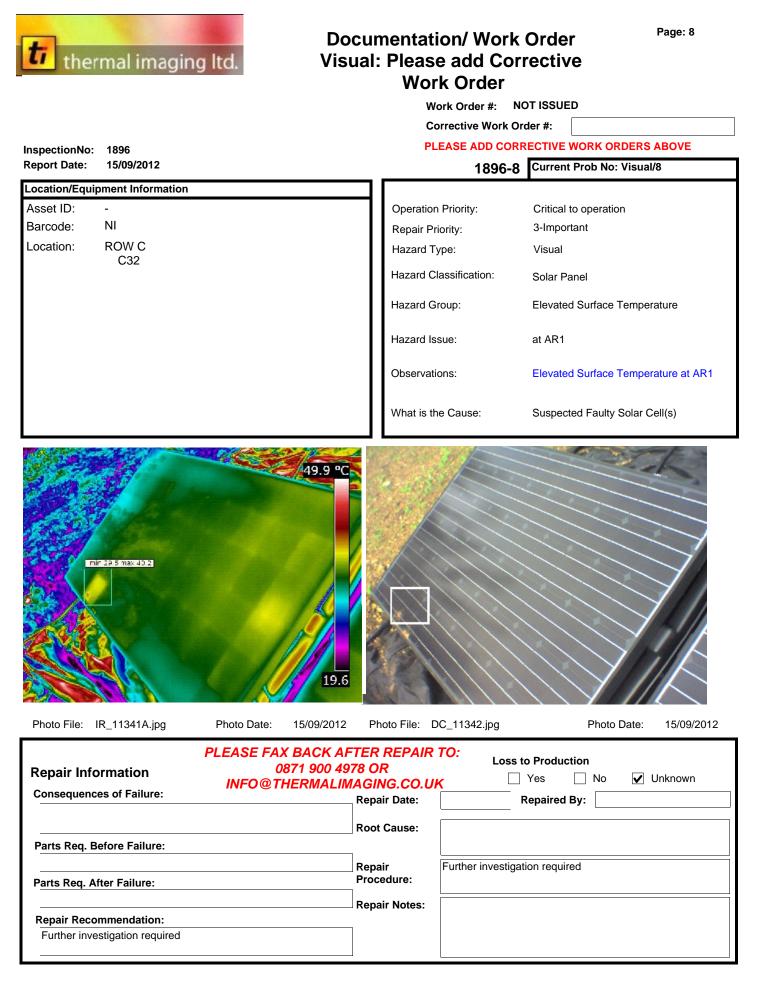


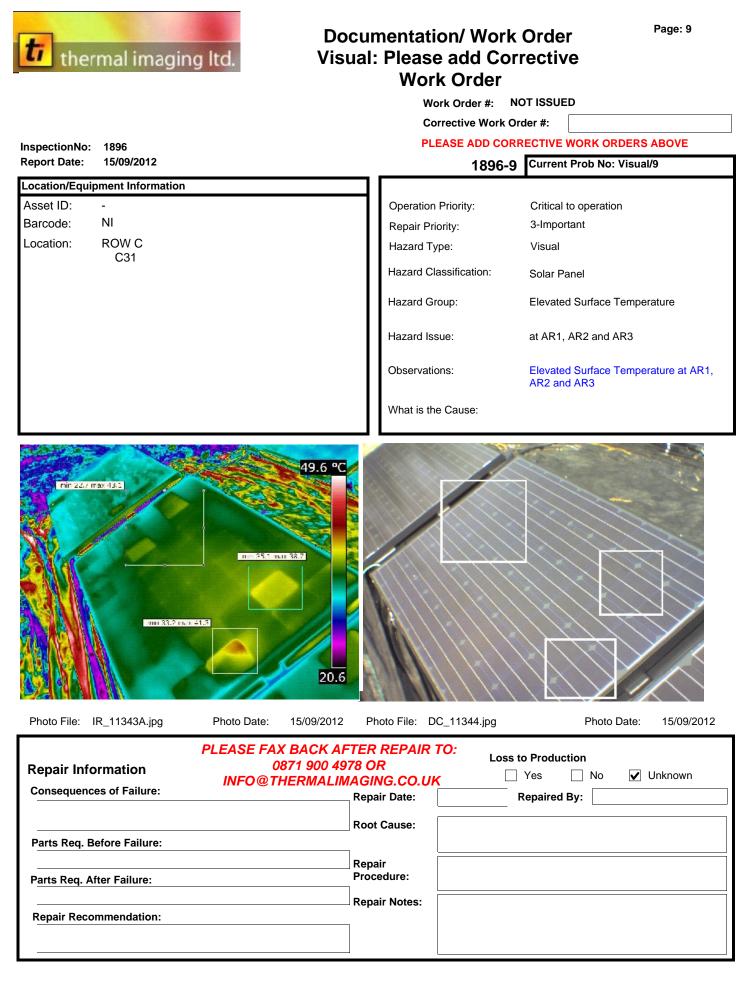


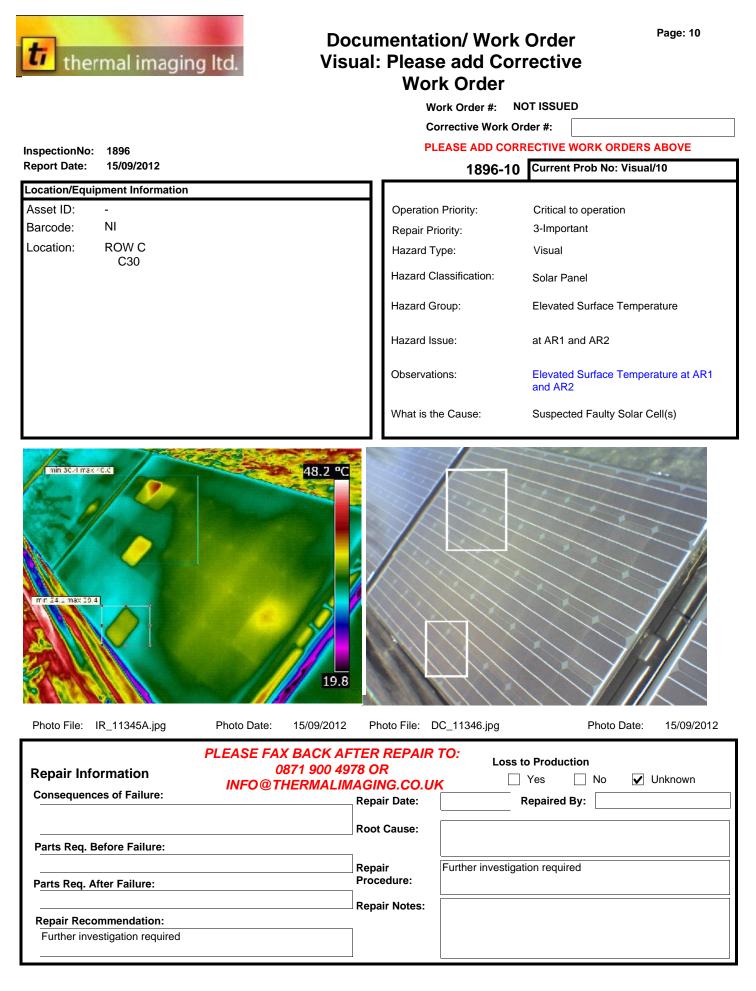


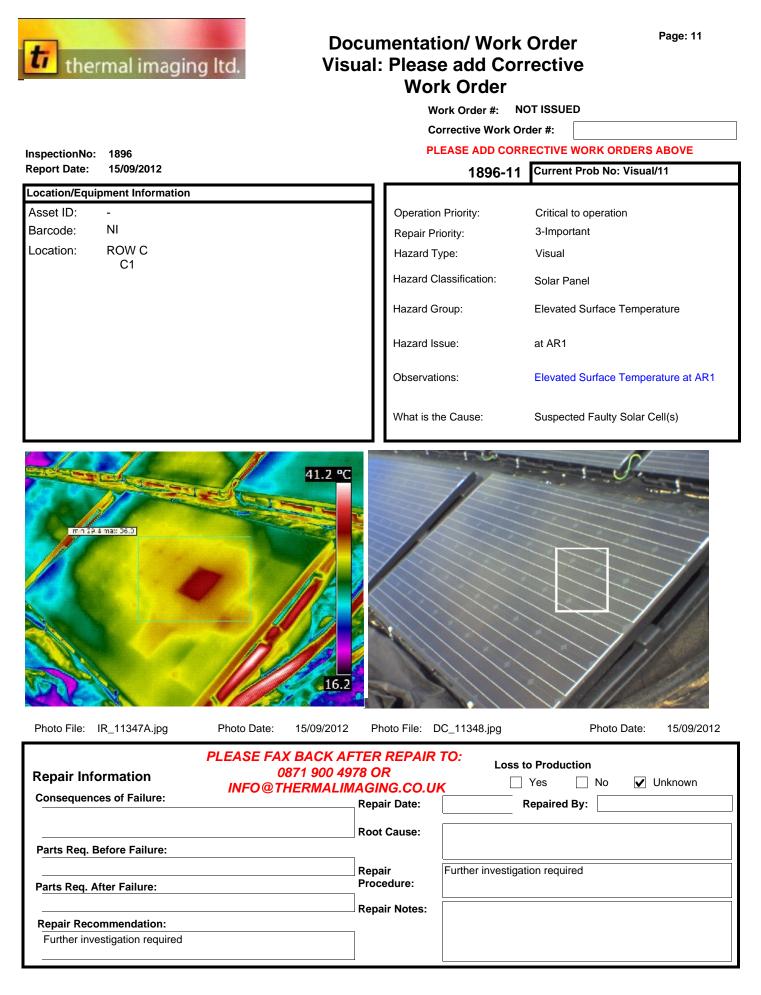


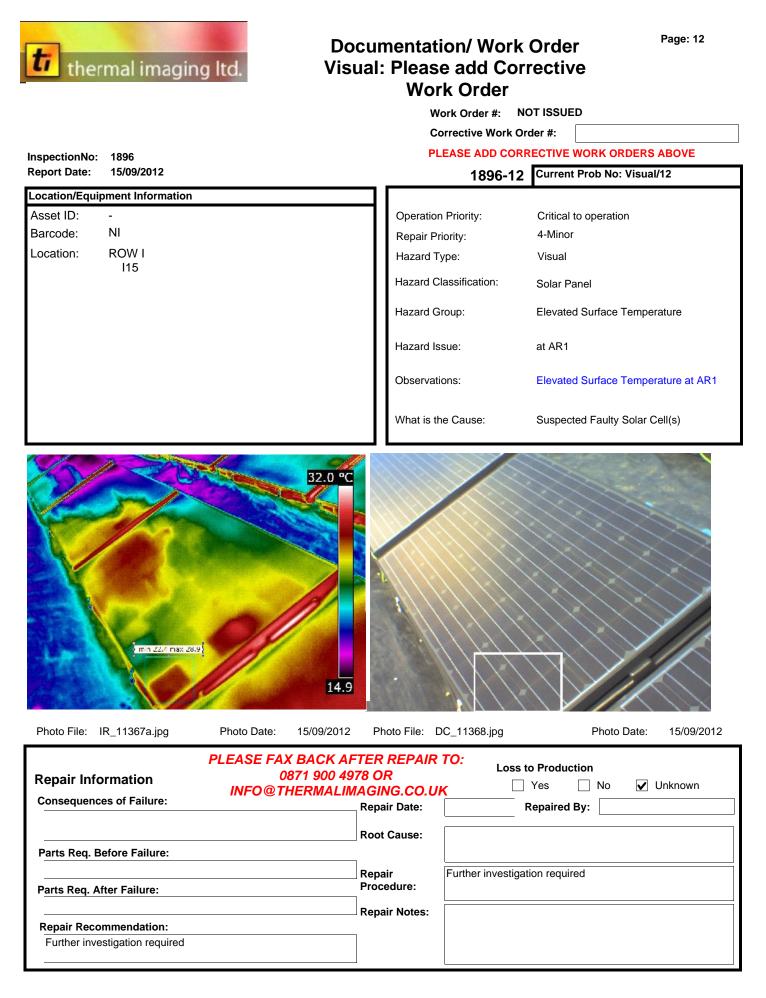


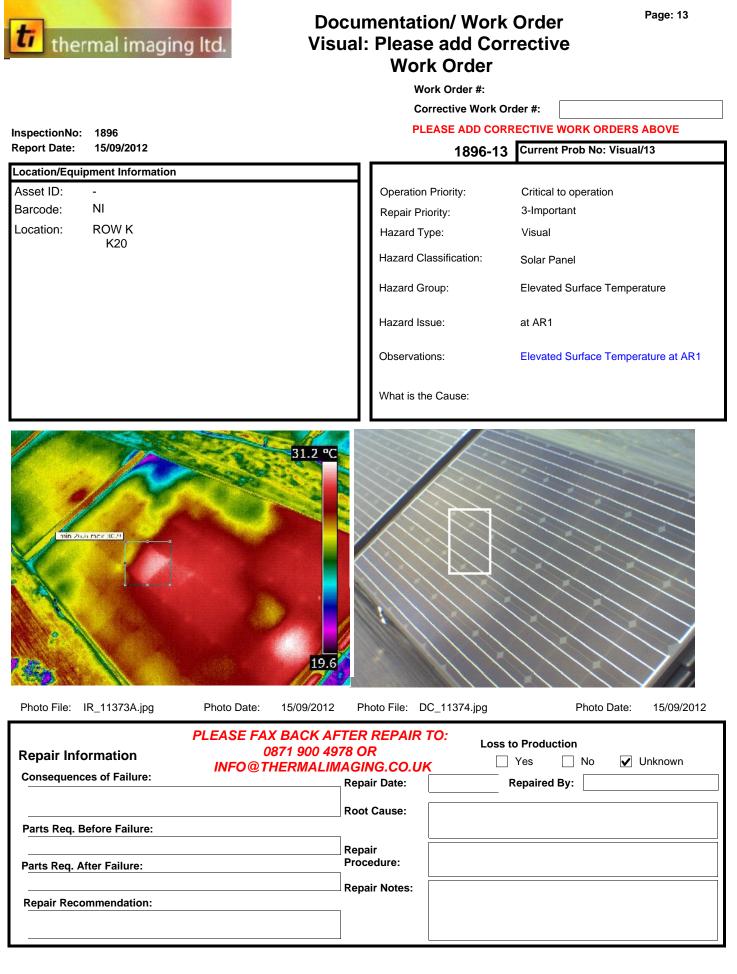


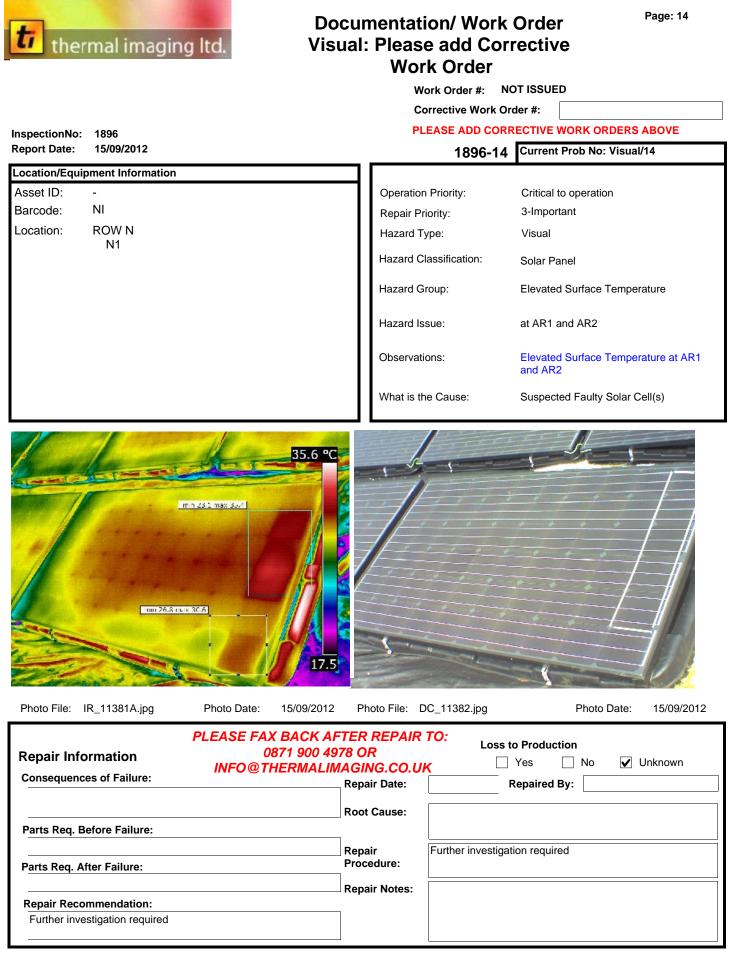














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Client Work Appraisal

We are continually trying to improve our service and ensure that all our inspections are carried out to the highest standards. Please use the form below to add your comments, anonymously if you prefer and send back to us at the address above or:

Email: <u>info@thermalimaging.co.uk</u> Fax: +44 870 9004971

TI Job Number: (Optional)	Excellent	Good	Mediocre	Poor	Comments
Office:					
Response time to enquiry					
Content of information sent on enquiry					
Telephone and email manner					
Price					
Value					
Engineer:					
Time keeping					
Appearance					
Code of conduct					
Subject knowledge					
Method of work					
Engineer flexibility					
Inspection Specification:					
Equipment and software					
Report content					
Report delivery time					
Report retrieval					
Other Comments:					



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