

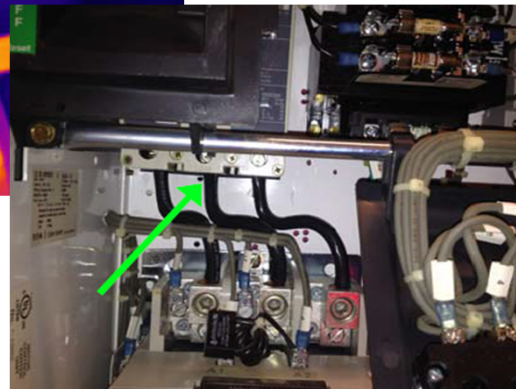
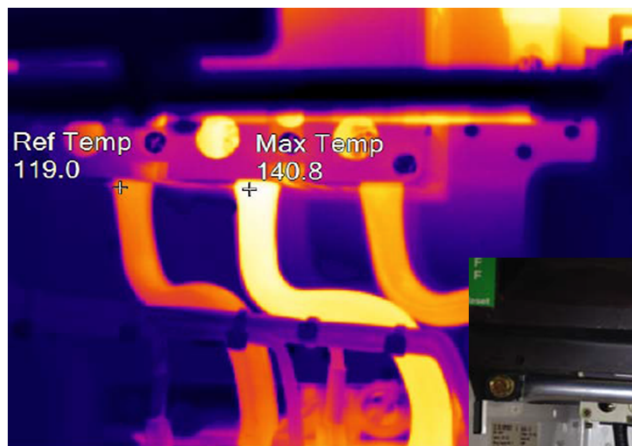
INFRARED ANALYSIS SURVEY REPORT

Sample Client

Facility A

MCC SCAN

January 2014



Sample Client

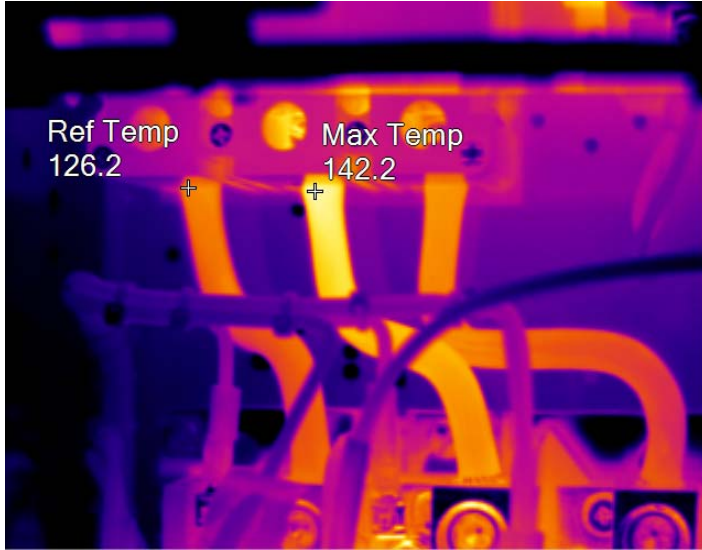
Sample Facility INFRARED RELIABILITY MATRIX

SCAN DATE	PAGE #	LOCATION	COMMENTS	CUSTOMER ACTION ITEMS	SEVERITY
01/14/14	6	P-WT-03C UF PRODUCT FORWARDING PUMP C	LINE 3 "LOAD SIDE" HAS AN EXCESSIVE THERMAL PATTERN THAT APPEARS TO BE DUE TO A LOOSE OR CORRODED CONNECTION.	CLEAN AND TIGHTEN CONNECTION IMMEDIATELY. INSPECT THE LINE AND MAKE SURE IT HAS NOT BEEN COMPROMISED DUE TO EXCESSIVE THERMAL TRANSFER.	CRITICAL
01/15/14	7	P-BPM-02 STG TURBINE LUBE OIL PUMP B	LINE 2 "LINE SIDE" APPEARS TO HAVE A LOOSE OR CORRODED CONNECTION. IT ALSO APPEARS TO BE TRANSFERRING SECONDARY THERMAL PATTERN FROM LINE SIDE TO LOAD SIDE.	CLEAN AND TIGHTEN CONNECTION AS SOON AS POSSIBLE. INSPECT THE LINE AND MAKE SURE IT HAS NOT BEEN COMPROMISED DUE TO EXCESSIVE THERMAL TRANSFER.	MODERATE
01/15/14	8	P-BPM-02 STG TURBINE LUBE OIL PUMP B	LINE 2 "LOAD SIDE" APPEARS TO HAVE A LOOSE OR CORRODED CONNECTION. THERMAL PATTERN IS NOT AS EXCESSIVE AS LINE SIDE BUT IS ELEVATED.	CLEAN AND TIGHTEN CONNECTION DURING NEXT MAINTENANCE PERIOD.	MINOR
01/14/14	3	P-BPM-1 STG TURBINE LUBE OIL PUMP A	LINE 2 "LOAD SIDE" APPEARS TO HAVE A LOOSE OR CORRODED CONNECTION. IN EARLY STAGES.	CLEAN AND TIGHTEN CONNECTION DURING NEXT MAINTENANCE PERIOD.	MINOR
01/14/14	4	BL-AQA2-01 HRSG2 AMMONIA BLOWER 1	LINE 2 "LINE SIDE" APPEARS TO HAVE A LOOSE OR CORRODED CONNECTION. IN EARLY STAGES.	CLEAN AND TIGHTEN CONNECTION DURING NEXT MAINTENANCE PERIOD.	MINOR
01/14/14	5	BL-AQA2-01 HRSG2 AMMONIA BLOWER 1	LINE 2 "LOAD SIDE" APPEARS TO HAVE A LOOSE OR CORRODED CONNECTION. IN EARLY STAGES.	CLEAN AND TIGHTEN CONNECTION DURING NEXT MAINTENANCE PERIOD.	MINOR

STG Turbine Lube Oil Pump A



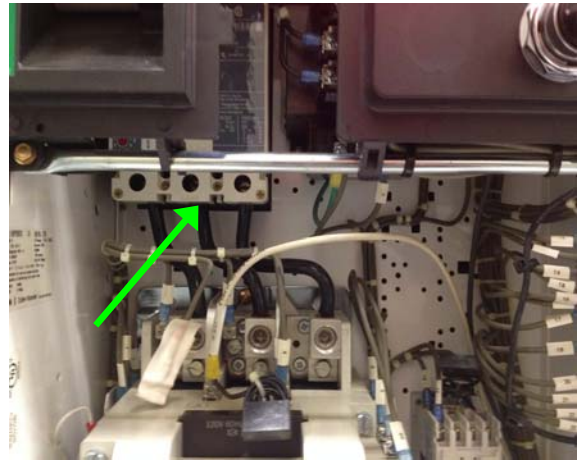
Inspection Date:	1/14/2014 10:03:00 AM	Associated Unit:	Steam Turbine
Equipment	STG Lube Oil Pump-A	Description:	Line 2 connection
Recommended Action	Clean and tighten connection	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Minor
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



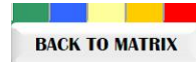
IR001455.IS2 1/14/2014 10:03:00 AM

Line 2 “load side” appears to have a loose or corroded connection. This could also be due to overtightening. At this time the defect is in very early stages.

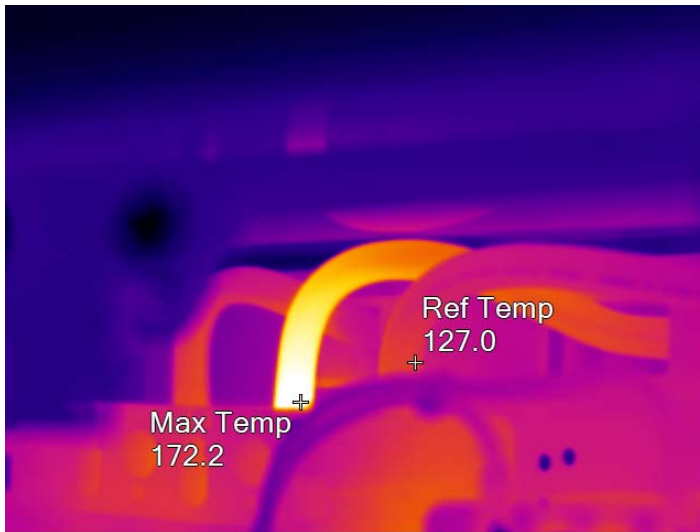
Recommend Clean and tighten connection during next maintenance period. Ensure connections are set to correct torque. Rescan in 6 months to verify repairs were effective.



Name	Temperature
Ambient Temperature	70°F
Max Temperature	142.2°F
Reference Temperature	126.2°F
Max over Reference Temperature	16°F

HRSG 2 Ammonia Blower 01


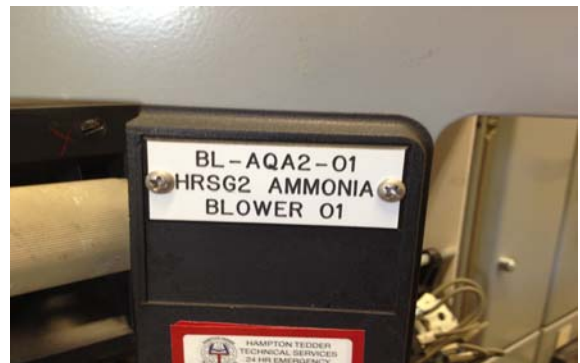
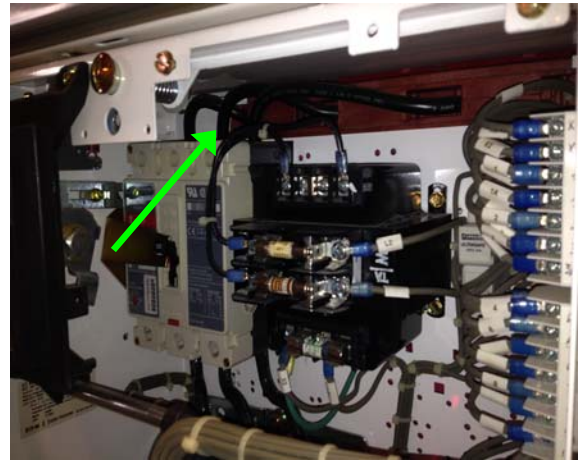
Inspection Date:	1/14/2014 10:43:00 AM	Associated Unit:	HRSG-2
Equipment	Ammonia Blower 01	Description:	Line 2 connection
Recommended Action	Clean and tighten connection	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Minor
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



IR001456.IS2 1/14/2014 10:43:00 AM

Line 2 “line side” appears to have a loose or corroded connection. This could also be due to overtightening. Thermal pattern indicates this defect is in relatively early stages.

Recommend Clean and tighten connection during next maintenance period. Ensure connections are set to correct torque. Rescan in 6 months to verify repairs were effective.

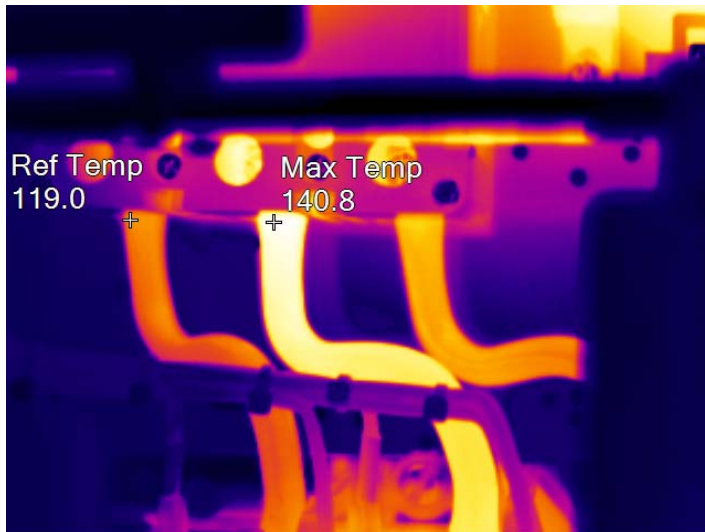


Name	Temperature
Ambient Temperature	70°F
Max Temperature	172.2°F
Reference Temperature	127°F
Max over Reference Temperature	45.2°F

HRSG2 Ammonia Blower 01



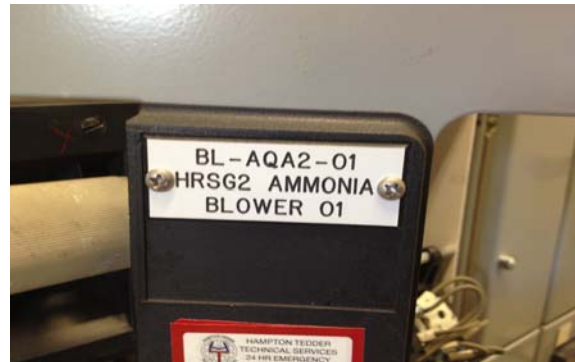
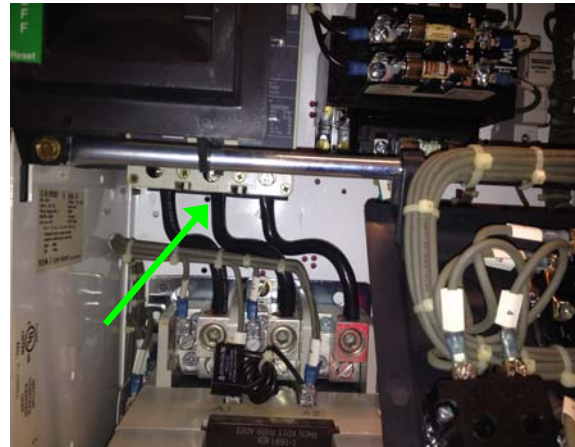
Inspection Date:	1/14/2014 10:43:00 AM	Associated Unit:	HRSG-2
Equipment	Ammonia Blower 01	Description:	Line 2 connection
Recommended Action	Clean and tighten connection	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Minor
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



IR001457.IS2 1/14/2014 10:43:00 AM

Line 2 “load side” appears to have a loose or corroded connection. This could also be due to overtightening. Thermal pattern indicates this defect is in relatively early stages.

Recommend Clean and tighten connection during next maintenance period. Ensure connections are set to correct torque. Rescan in 6 months to verify repairs were effective.

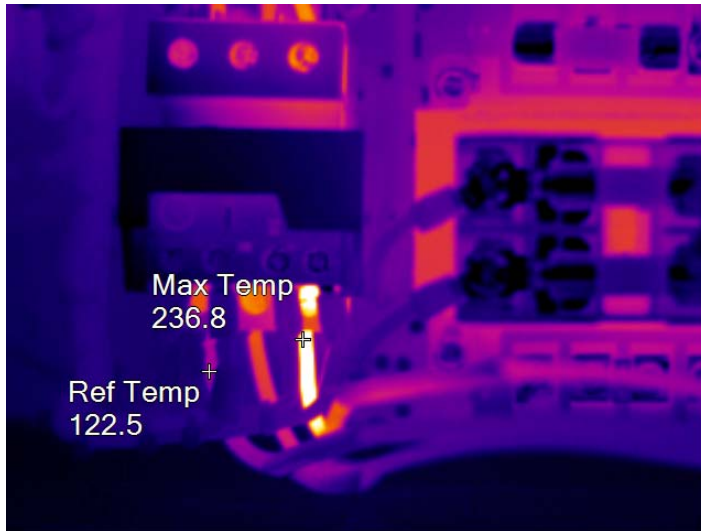


Name	Temperature
Ambient Temperature	70°F
Max Temperature	140.8°F
Reference Temperature	119°F
Max over Reference Temperature	21.8°F

UF Product Forwarding Pump C



Inspection Date:	1/14/2014 12:26:00 PM	Associated Unit:	Water Plant MCC Room
Equipment	Product Forwarding Pump C	Description:	Line 2 connection
Recommended Action	Clean and tighten connection immediately.	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Critical
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



IR001458.IS2 1/14/2014 12:26:00 PM

Line 3 “load side” (second row back with the blue insulation) has an excessive thermal pattern that appears to be due to a loose or corroded connection. At this time the defect is in a critical stage and corrective action should be taken immediately.

Recommend Clean and tighten connection immediately. Inspect the line and make sure it has not been compromised due to excessive thermal transfer.

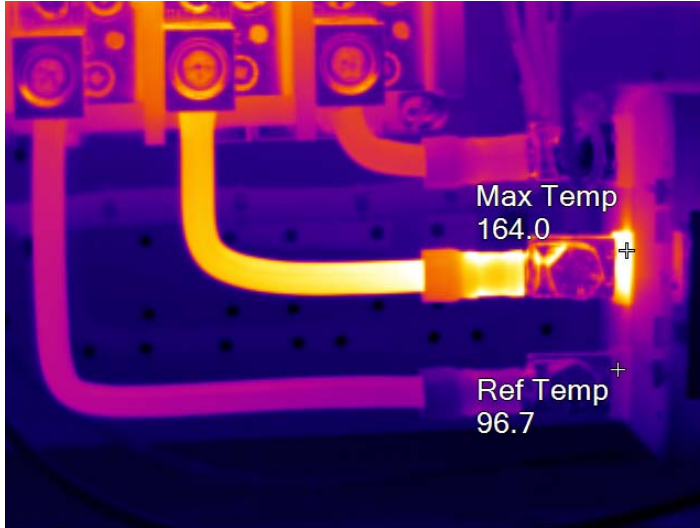


Name	Temperature
Ambient Temperature	70°F
Max Temperature	236.8°F
Reference Temperature	122.5°F
Max over Reference Temperature	114.3°F

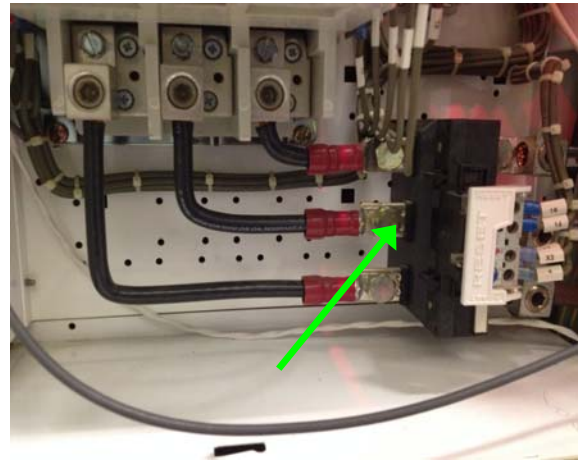
STG Turbine Lube Oil Pump B



Inspection Date:	1/15/2014 10:05:00 AM	Associated Unit:	Steam Turbine
Equipment	STG Lube Oil Pump-B	Description:	Line 2 connection
Recommended Action	Clean and tighten connection ASAP	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Moderate
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



IR001463.IS2 1/15/2014 10:05:00 AM



Line 2 “line side” appears to have a loose or corroded connection. This could also be due to overtightening. At this time the defect is in moderate stages. It also appears to be transferring secondary thermal pattern from line side to load side.

Recommend Clean and tighten connection as soon as possible. Inspect the line and make sure it has not been compromised due to excessive thermal transfer. Ensure connections are set to correct torque. Rescan in 6 months to verify repairs were effective.

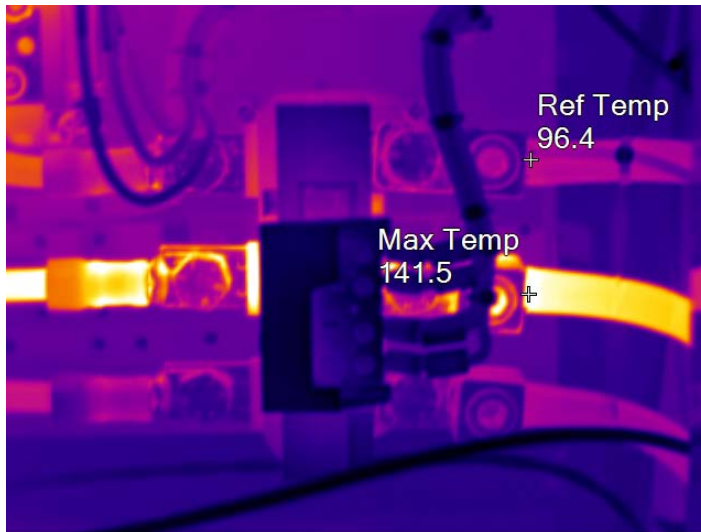


Name	Temperature
Ambient Temperature	70°F
Max Temperature	164°F
Reference Temperature	96.7°F
Max over Reference Temperature	67.3°F

STG Turbine Lube Oil Pump B



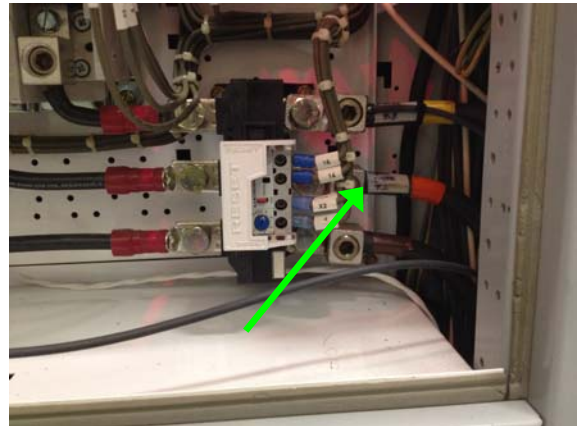
Inspection Date:	1/15/2014 10:05:00 AM	Associated Unit:	Steam Turbine
Equipment	STG Lube Oil Pump-B	Description:	Line 2 connection
Recommended Action	Clean and tighten connection	Potential Problem	Loose or corroded connection
Emissivity:	0.95	Repair Priority:	Minor
Camera Manufacturer	Fluke Thermography	Inspected By:	Jesse Vanhoy



IR001465.IS2 1/15/2014 10:05:00 AM

Line 2 “load side” appears to have a loose or corroded connection. This could also be due to overtightening. The thermal pattern is not as excessive as line side but is elevated and should be inspected.

Recommend Clean and tighten connection during next maintenance period. Ensure connections are set to correct torque. Rescan in 6 months to verify repairs were effective.



Name	Temperature
Ambient Temperature	70°F
Max Temperature	141.5°F
Reference Temperature	96.4°F
Max over Reference Temperature	45.1°F