

INFRARED THERMOGRAPHIC SURVEY

For

ABC Company, Inc.
123 Any Street
Any Town, US 12345

Survey Performed

March 2, 2015

By
JR Smith
Director / Level III Thermographer
HSB Thermography Services
Ronald_Smith_Jr@hsb.com
(216) 588-1381

ABC Company, Inc.
123 Any Street
Any Town, US 12345

Dear Mr. Johnson,

Thank you for allowing HSB Thermography Services to provide this service. We trust that this report proves helpful and is of assistance to you.

The scope of work included the following areas:

Outside Substation, Load Centers, Motor Control Centers, Control Panels, Breaker Panels, and Disconnects.

Equipment not surveyed during this visit includes de-energized, lightly loaded, inaccessible and/or deemed by facility personnel to be non-critical.

As a result of this service the following Findings are presented for your review:

1 CRITICAL
1 SEVERE
2 ALERT
0 ADVISORY

Should you have any questions or comments concerning this report or our services, we are here to assist you. Please feel free to call me at (216) 588-1381 or email Ronald_Smith_Jr@hsb.com

Sincerely,

JR Smith

Director
HSB Thermography Services

COMMENTS

The criteria used to categorize findings in this report are based on the potential effect that a failure will have on operations and production.

CRITICAL- Failure of this component will have a significant impact on operations or the facility and require costly repairs.

SEVERE- Failure is not expected to go beyond the component listed and should have minimal impact on operations or the facility; repair costs could be significant.

ALERT- Failure is of a routine nature and repairs can be made easily and at a reasonable cost. Cost is, more often than not, limited to labor and a few minor parts.

ADVISORY- Helpful information based on sound engineering judgment.

Infrared thermographic surveys are non-contact, non-destructive examinations used to find abnormal or unexpected thermal patterns or temperature differentials. These thermal patterns may indicate such conditions as loose connections, overloaded circuits or phases, deteriorated or damaged insulation or refractory, or excessive or unwanted friction, among others.

To perform the thermographic survey of your facility, HSB Thermography Services used the FLIR Thermacam infrared imaging system. This system utilizes the latest developments in un-cooled technology to generate the most accurate data available.

The calibration for this system is certified traceable to The National Institute of Standards and Technology, NIST, USA and the Swedish National Testing and Research Institute, SP. This calibration is based on the International Temperature Scale (ITS-90).

The Findings of this survey are in the following pages. These conditions warrant your attention.

Inspection Summary

Finding No.	CATEGORY	Location Area	Equipment Location	Equipment ID	Est. Repair Cost Before Failure	Est. Repair Cost After Failure
1	CRITICAL	Outside Substation	Main Transformer	East Secondary Bushing	\$5,000	\$78,000
2	SEVERE	Raw Materials	Pellet Feeder	Main Breaker	\$100	\$4,000
3	ALERT	Packaging Dept.	Palletizer No.3	Fuse No.1673	\$25	\$40
4	ALERT	Press Dept.	Press No.22	Disconnect	\$50	\$475

Total Estimated Repair Costs Before Failure	\$5,175
Total Estimated Repair Costs After Failure	\$82,515
Cost Avoidance =	\$77,340

**Before and After costs- This estimate is based only on direct damage to the equipment and does not include the costs of business interruption, extra expenses, spoilage, etc.*

For more information or comments contact:

JR Smith- Director of HSB Thermography Services
Cleveland, OH
216-588-1381
Ronald_Smith_Jr@HSB.com

Western Region

Steve Woods LVL II Thermographer
St. Louis, MO
618-973-7835
Steven_Woods@hsb.com

Jim Nelson LVL II Thermographer
Dallas, TX
903-217-7016
Jimmy_Nelson@HSB.com

Richard Toth LVL III Thermographer
Yuma, AZ
916-995-2267
Richard_Toth@hsb.com

Rick Stafford LVL II Thermographer
Los Angeles, CA
951-457-1229
Rick_Stafford@hsb.com

Eastern Region

Bill Viot LVL II Thermographer
Hartford, CT
860-281-2541
William_Viot@HSB.com

Sandy Sanor LVL II Thermographer
Alexandria, VA
571-277-4727
Sandy_Sanor@HSB.com

Norm Gaver LVL II Thermographer
Charlotte, NC
704-892-3421
Norman_Gaver@HSB.com

Ken Zavacki LVL II Thermographer
Chicago, IL
773-213-4105
Kenneth_Zavacki@HSB.com