

Testing Times

A newsletter for the electrical construction and maintenance industry

Volume 9 No. 3

Infrared Surveys:

A lot for a little

What is it?

An infrared survey or infrared thermography is a means to measure the temperature of electrical and electromechanical equipment. All electrical components give off some amount of heat. A special camera is used to determine the difference between normal operating temperatures and overheated conditions. These abnormal conditions are often referred to as "hot spots."

Why do I need one?

Electrical equipment begins a life of deterioration as soon as it is energized. Excessive heat is a major contributor to decreased efficiency and life expectancy. Common examples of "hot spots" include loose or corroded connections, overloaded conductors and unbalanced loads, to name a few. These conditions, if undetected, can cause a host of power related problems including:

- increased equipment deterioration
- need for more spare parts
- increased maintenance costs



An infrared survey gives you the most bang for your buck with your testing dollars

- shortened equipment life expectancy
- unexpected component failure
- unplanned outages
- increased personnel risk

Who should perform my infrared?

Infrared cameras are readily available, but an inexperienced, untrained operator can find a "hot spot," misinterpret it as a problem, initiate repairs, and find that they were unnecessary. Infrareds (IR) need to be performed by a technician trained to know the difference between normal operating conditions and problem areas.

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Power Quality: We need your input!

Hood-Patterson & Dewar has a new employee, Bill Moncrief, who is a power quality expert. Bill is going to contribute power quality related articles to future *Testing Times* issues. In order to cover the topics that you would like to read about, please send us your PQ suggestions. What issues and problems do you face? What questions can we answer for you? Send your suggestions to Lyn Cosby at fax number (404) 299-3534 or e-mail Lcosby@hoodpd.com. We will mention your name in the *Testing Times*. We want to make the *TT* as useful as possible for you!



**News
you can
use!**

We're Growing !!!

Hood-Patterson & Dewar is pleased to announce that we have opened a second office. In addition to our Atlanta home office, HP&D can be found in Plano,

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HOOD - PATTERSON & DEWAR

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Trained operators have studied infrared theory, basic heat transfer, IR equipment operation, temperature measurement techniques, how to conduct an inspection, what anomalies to look for, how to analyze the information, and how to prepare the report. Make sure your infrared operator is properly trained and **certified** to avoid finding unreal problems and making unnecessary repairs.

When do I do an infrared?

An infrared is valuable at any point in the life of your electrical system. It can be used shortly after start up when equipment is brand new and still under warranty. We recommend IR surveys be performed every year at most facilities. The IR report gives you an excellent predictive and preventive maintenance tool. Trends and equipment deterioration can be spotted. Repairs or replacement can be scheduled and performed during planned outages.

Infrareds are the least invasive, least demanding, and least expensive form of electrical testing. Unlike most electrical testing which requires an outage, IRs **need** to be performed under load, i.e., under normal operating conditions. This means an IR can be scheduled during normal working hours. The survey is most efficiently performed with at least 2 people; an electrician to remove and replace equipment covers and the infrared technician to operate the camera. The majority of facilities can be completed in one day. The cost for a one day infrared usually runs under \$1,000.00. For your testing dollars, infrareds give you the most bang for your buck.

Benefits of an Infrared Survey

The benefits of a good infrared program are many, including increased safety, greater system security, increased revenue by decreasing downtime, reduced outage costs, improved and less expensive maintenance, reduced spare parts inventory and reduced operating costs. If you don't have an IR program, start one today. ❖

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inside:

- Infrared surveys
- Power quality input
- New Texas office
- Infrared coupon

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Texas, a suburb of Dallas. HP&D Texas offers all the same services that you've come to expect from our Atlanta office. They can be reached at :

Phone (972) 447-8326

FAX (972) 381-4201

5068 West Plano Pkwy, Suite 300
Plano, TX 75093

Infrared Coupon

We have an offer to make you. If you have never used H-P&D for an infrared survey, call us to schedule one and receive a 10% discount off our standard IR rate. If you are an existing client (a contractor, consulting engineer, etc.) you can bring us a new facility and still qualify for the discount. Call (404) 296-5990 and ask for Freddy Sprague.