Infraspection Institute®
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DISTANCE LEARNING
INFRARED INSPECTION OF MECHANICAL SYSTEMS

1. Basic Infrared Theory

- Heat transfer
- Electromagnetic spectrum
- Emittance, reflectance, and transmittance
- Atmospheric transmission
- IR wavebands, imaging systems, and lens materials

2. Infrared Equipment

- Selection criteria
- Range and level settings
- Image and data recording
- Self-directed learning activities for hands-on use

3. Mechanical System Inspections

- Theory and thermal signatures of problems
- Rotating equipment
- Power transmission components
- High-temperature insulation
- Fluid flow including steam systems, heat exchangers, cryogenics, etc.
- Active thermographic inspection techniques
- Standards for inspection
  - end user and thermographer responsibilities
  - safety practices
  - data gathering and report preparation

4. Implementing an IR Predictive Maintenance Program

- 9 steps to setting up a program
- Integrating with other predictive technologies
- Cross-verifying with other predictive technologies
- Why programs fail, how they succeed
- Generating standards-compliant reports