

WATCHMAN Onsite™ - FOR INTERNAL USE ONLY

Infrared Thermography

Shawn Whitfield

- Electrical distribution and switchgear
- High resistance connections
- Blown fuses
- Partial short circuits
- Uneven load distribution
- Thermal insulation and Refractory
- Insulation voids
- Broken or cracked refractory
- Wet insulation
- Furnace tubes
- Blocked tubes
- Tube coking
- Mechanical components
- Bearing and coupling examination (limited application)

Lubrication Consulting & Analysis

Jim Disney

- Consulting
- Lubrication program management
- Lubricant selection and acceptance testing
- Lubricant storage and handling
- Lubricant distribution design
- Lubrication interval optimization
- Lubricant Analysis
- Wear Particle analysis
- Contaminate analysis

Vibration Testing

Don Rainey, Terry Cullen

- Routine machine vibration testing
- Vibration troubleshooting
- Condition monitoring program setup & training

Electric Motor Circuit Testing

Phil Shaffett

- Offline Motor Testing
- Motor winding insulation condition
- Power circuit resistance to ground – incipient shorts to ground
- Phase imbalances – phase-to phase and turn-to-turn incipient shorts
- Motor Current Signature Analysis
- loose or broken rotor bars
- rotor eccentricity
- mechanical defects in inaccessible motors (e.g. inside nuclear containment)

Stationary Battery Testing

Phil Shaffett

- Charger condition and operation
- Individual cell charging condition
- Battery temperature measurement
- Cell capacity by internal resistance method
- Intercell resistance for circuit path integrity
- Load cycle and discharge depth monitoring

Onsite Dynamic Balancing

Carl Eyman, Laurent LaPorte

- 1 to 4 planes
- Multi-speed, multi-load

Precision Machine Alignment Services

Carl Eyman, Laurent LaPorte

- Laser Alignment
- Geometrical

Line Shaft & Reduction Gear Alignment

Laurent LaPorte

- Bore site bearing alignment
- Line shaft alignment
- Strain Gauge Method
- Jack Load Method
- Bearing and Reduction gear “Blue Check” and “Lead Wire Check”

Engineering Services/Consulting

Carl Eyman, Laurent LaPorte

- Experimental Modal Analysis
- 3D Operation Deflection Shape (Structures, Machines, Components)
- Field and Sea trial Instrumentation
- Ship board vibration analysis
- Vibration Troubleshooting
- Vibration Acceptance testing

Reciprocating Engine & Compressor Analysis

Steve Short

- Cylinder pressure vs. crankangle
- Cylinder pressure vs. volume
- Vibration vs. crankangle
- Ultrasonic energy vs. crankangle
- Cylinder displacement
- Ignition analysis
- Compressor valve temperatures
- Power cylinder balancing

Torque and HP measurements

Laurent LaPorte

- Shaft Torsional Analysis
- HP readings

Points of Contact

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