SMART SERVICE
Providing Preventive and Predictive Maintenance Diagnostics for SCR Copper and Aluminum Rod Systems
INFRARED TEMPERATURE MEASURING

VIBRATION MEASUREMENT

END AND PARTING PLAY MEASUREMENT

LUBRICATION OIL ANALYSIS

SCHEDULED MAINTENANCE AND RELIABILITY TESTING
SCR SMART SERVICE PROGRAM
Scheduled Maintenance And Reliability Testing

**SCR SMART Service Program** provides preventive and predictive maintenance diagnostics for SCR copper and aluminum rod systems to determine system conditions including:

- Temperature Observations
- Vibration Monitoring
- Radial and Axial Movement Analysis
- Lubrication Oil Quality Assessment

**SCR SMART Service Program** compares observed equipment condition to optimal equipment condition for the following benefits:

- Greater Equipment Reliability by Increasing Plant Readiness
- Data Trending to Schedule Maintenance with Planned Shut-Downs
- Reduced Labor and Parts Costs from Uncontrolled Catastrophic Failures
- Identification of Otherwise Unknown Deficiencies

**SCR SMART Service Program** uses data from information recorded by SCR during a visit to the site. The initially recorded information is used to determine existing deficiencies and as a baseline for operational effectiveness at your facility. Future recorded information is compared to the baseline information to determine changes over time that may affect operational effectiveness.

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**BENEFITS**

- Reduce Production Costs
- Increase Reliability (more uptime)
- Improve Product Quality

**PREVENTS**

- Unscheduled Downtime
- Equipment Damage
- Safety Issues
SAVINGS
LABOR, PRODUCTION AND DELIVERIES
PARTS, SERVICES AND TIME
REDUCED SCRAP
**TEMPERATURE ANALYSIS REPORT**

**Example:** Temperature data was collected on the furnace blower motor.

**Purpose:** The temperatures of all motor bearings and couplings were collected to establish a baseline. The baseline data was documented so it can be compared to data collected in the future. Problems that develop over time are noted in a report for identification prior to component failure.

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**VIBRATION ANALYSIS REPORT**

**Example:** During on-site observations, moderate and extreme bearing wear as well as moderately loose housings were identified.

**Recommendation:** Disconnect the motor and output couplings, and verify that radial and axial movement is within the required 0.1 mm tolerance. Follow periodic maintenance practices to check the couplings for signs of gear wear.

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**LUBRICATION OIL ANALYSIS**

**Example:** Several test results exceeded the acceptable contamination limits. The questionable locations were resampled. The test results were confirmed and excessive amounts of water were identified. Possible sources of water intrusion include leaking seals, condensation due to low operating temperature or prolonged shut-down, outside contamination, or integrity of the oil cooler.

**Recommendation:** Correction of the water contamination source is recommended along with removal of the water or replacement of the oil.