



Additional Information on Equipment Condition Monitoring Systems

Why is Continuous Equipment Monitoring Important?

In modern operating conditions for industrial equipment, continuous monitoring systems have become critically important for ensuring reliability and safety. Timely defect detection helps prevent accidents and reduce maintenance costs.

Key Reasons for Implementing Monitoring Systems

Based on our experience, the key reasons why industrial companies implement such systems are:

- High cost of equipment downtime
- Need for real-time condition monitoring
- Difficulty in planning repairs without reliable information
- Risk of hidden defect development

Technical Capabilities of the Monitoring and Diagnostics System (SMiD):

- Real-time continuous monitoring
- Data recording every 30 minutes
- Automatic trend analysis
- Defect zone localization through two-point measurements
- Defect development prediction through scenario analysis

System Implementation Stages:

1. Preparation:

- Technical documentation and methodological literature analysis
- Research program development
- Patent research

2. Technical Implementation:

- Equipment installation
- Integration with station SCADA system



Monitoring Methods

We apply a comprehensive approach covering all key parameters:

- 1. Vibration Diagnostics**
 - Vibration impact measurement
 - Destructive parameter assessment
- 2. Electrical Discharge Activity (EDA) Monitoring**
 - Partial Discharge (PD) monitoring
 - Spark detection
- 3. Magnetic Field Analysis**
 - Rotor field shape control
 - Magnetic characteristic changes assessment

Monitoring Equipment:

- Electrical discharge activity sensors (4-8 units)
- Stator active part vibration sensors (6-10 units)
- Rotor field control sensor (1-2 units)
- Server cabinet with workstation

Monitored Parameters:

Stator:

- PD in core rod insulation
- Sparking in magnetic circuit
- Active part vibration

Rotor:

- Insulation condition
- Vibration parameters

System Advantages:

- Comprehensive monitoring approach
- Modern diagnostic methods
- Expert data analysis
- Customized solutions
- Personnel workload reduction from routine checks



What Benefits Do You Get?

1. Condition Monitoring

Continuous real-time monitoring allows tracking parameter changes, ensuring timely defect detection.

2. Improved Quality and Accuracy of Defect Detection

The system uses highly sensitive sensors to detect even minor anomalies such as vibrations, electrical discharges, and magnetic field changes.

3. Maintenance Planning

Long-term trend analysis and defect development forecasting help determine optimal maintenance schedules, minimizing downtime and costs.

4. Spare Parts Procurement Planning

Accurate equipment condition data enables effective spare parts and materials procurement planning, eliminating unnecessary expenses.

5. Prevention of Unplanned Equipment Failures

Early defect detection reduces the risk of sudden failures, crucial for critical production processes.

6. Accident Prevention

The monitoring system allows prompt response to dangerous trends, significantly reducing the likelihood of serious accidents.

Summary

Our company offers professional equipment condition monitoring systems using modern methods and technologies. We help our clients ensure reliable and safe operation of their power systems.

Contact Information

☎ Phone: +51 961 355 555

✉ Email: info@electroguardia.com

🌐 Website: <https://electroguardia.com>