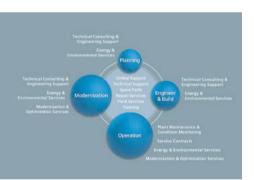


# Maintenance and inspection of electric motors and converters





# Technology-based services for a greater competitive edge

Minimum downtime and the optimum use of staff and resources are key to sustainable success in industry. Siemens provides the basis for greater productivity, flexibility, and efficiency with technology-based services throughout the lifecycle of an industrial plant – reliably, globally, and around the clock. In-depth technology and product knowledge as well as industry expertise within Siemens' global network of experts ensure a considerable competitive edge.

## The challenge:

Ensure the highest possible availability
For industrial plant operators facing
international competition, one thing is
critical – ensuring maximum plant and
system availability. Drives are a main
focus. They must function smoothly
under sometimes difficult conditions.
Even with sophisticated design and top
production quality, electric motors and
converters must be regularly inspected
and maintained by qualified personnel
to prevent unplanned downtime and the
associated costs.





## The solution: Customized inspection and maintenance

To get the best possible results, Siemens Industry Services experts adapt all maintenance intervals to the specific operating conditions and environments of each machine. Continuous operation in highly contaminated environments (dirt, dust, aggressive atmospheres) makes regular maintenance and inspection especially important.

#### Maintenance services

- Cyclical assessment of system condition with data measurement and diagnosis
- Analysis of data and implementation of further measures
- Product life cycle monitoring and advice on replacements
- Maximizing plant service life
- Minimizing component wear
- Avoidance of unplanned production downtime and costs

A maintenance contract also ensures fast, expert help in an emergency. Siemens' worldwide service organization offers comprehensive maintenance programs that can be adapted to specific customer requirements and preferences.



#### Maintenance contract coverage

- The requested maintenance intervals are defined,
  - for example semiannual/annual (according to necessity and conditions)
- Measurement and capture of current condition of electrical machines and converters
- Performance of device-specific tests using specially developed checklists
- Remote support and availability of a technical contact,
  - during working hours or around the clock (24/7)
  - Access and connection with teleservice support (communication with electric machines)
- Contractually agreed times
  - Working hours (Mo-Fr / Sa-Su)
  - Reaction time: Call-back time by onduty personnel for hotline support
  - Arrival time: Time elapsing between requesting a service call and arrival of the service person at the agreed site
  - Service time: Defined time within which services are to be performed

- Spare parts, service materials, tools
  - Parts stock based on site conditions
- Training of customer's service personnel, definition of individual training modules
  - Transfer of basic skills for electric machines
  - Transfer of added skills for diagnostic support and fast fault elimination by remote support

### Scope of inspection service

- If no maintenance agreement is in place, we recommend annual inspection based on the use, stresses, and ambient conditions of the system
- Capture of the current condition data of electric motors and converters
- Device-specific inspection using specially developed checklists
- Definition of necessary further steps

# The benefit: Perfect performance

- Perfect functioning of plants and systems at all times
- Dependable production conditions
- Planned maintenance downtime instead of unplanned loss of production time
- One-time evaluation of system condition through measurement and diagnosis
- Determination of maintenance needs
- Analysis and recommendations for efficient spare parts stocking
- Determination of opportunities to improve system and ambient conditions

For further information and support, please contact your local Siemens partner: siemens.com/services/partner

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