SERVICE NOTE

Commissioning of induction motors and generators

ABB has been manufacturing motors and generators for more than 100 years. This extensive experience provides a solid basis for the company's commissioning services.

All commissioning is performed by fully trained and certified engineers to ensure that the work is done in a safe and efficient way.

Commissioning need
High voltage and hazardous area induction motors and generators and the associated cooling and lubrication systems require specialist know-how during initial commissioning.

Commissioning is a crucial part of installation and start-up. When carefully performed according to the correct procedures, commissioning is an investment in availability and reliability over the entire lifetime of the equipment.

In order to achieve reliable and safe operation, commissioning requires both product know-how and system set up experience.

ABB's certified commissioning engineers have extensive experience in motor and generator start-ups. Their know-how, combined with full support from our design department, ensures short commissioning times and trouble-free operation.

Scope
ABB's engineers utilize a set of standardized commissioning procedures, progressing systematically from preparation through to completion and hand-over.

Benefits
- Full manufacturer support
- Fully updated documentation
- Comprehensive commissioning report
- Maximized availability and reliability
- Extended equipment lifetime

Benefits based on
- Original equipment manufacturer:
  - Unrivalled knowledge of ABB motors and generators
  - Full access to ABB's R&D and design experts
- Certified commissioning engineers:
  - Fully qualified and experienced
  - Safe and effective working practices
- Specialized tools and test equipment:
  - Improved personnel safety
  - Reduced commissioning time
  - Compliance with scope requirements

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ABB induction motor

Certified commissioning engineers
ABB is the only service provider able to offer certified commissioning engineers for ABB high voltage and hazardous area induction motors and generators. The certification process is the customer's guarantee of competence, ensuring the engineer is fully qualified and trained in commissioning the equipment safely and in accordance with the manufacturer's procedures and requirements.

Preparation
Careful preparation is vital for trouble-free commissioning. A detailed schedule must be agreed between the parties to ensure that the required resources are allocated. To achieve maximum efficiency, every on-site activity is planned by ABB and includes customer-specific preparatory work, including:

- Planning on-site safety
- Preparing documents, required equipment, programming tools, software etc.
- Making travel arrangements

Commissioning procedures
Prior to energizing the system, the mechanical and electrical installations are reviewed to verify that all requirements are met. Main actions performed:

- Visual check of motor/generator and main terminal box, including foundation, cooling and lubrication system
- Electrical measurements and check of all wiring

When it has been confirmed that the complete system is ready to be energized, the main system integration activities are initiated:

- Testing and calibration of protection and monitoring settings
- Protection function verification including DCS communication
- Load run and verification of proper start-up conditions and operation including temperatures and vibration

When the correct operation is confirmed, the on-site commissioning work is finished and the installation is officially handed over to the customer. The handover typically includes an explanation of cooling, lubrication and protection systems.

Commissioning report
When commissioning is completed, the customer receives a comprehensive commissioning report, an updated settings list, connection table and circuit diagrams, and final versions of any modified drawings and settings included in the original scope of supply.

The commissioning report includes:

- Actions taken during commissioning
- Data from measurements
- Protection settings
- Summary with recommendations

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For more information please visit:

new.abb.com/motors-generators/service

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