

# BENNING

World Class Power Solutions

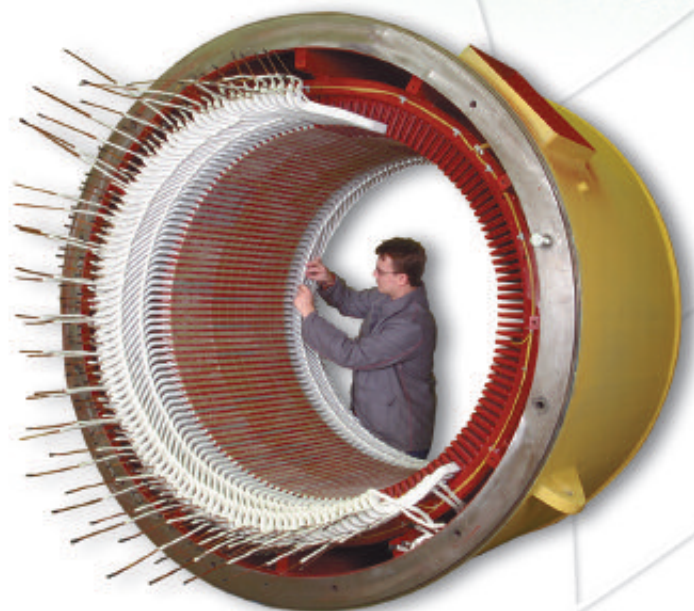


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## Electrical Machine Service

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Overhaul, conditioning,  
On-Site Service and Diagnostics





## Your partner for Electrical Machine Service

### Overhaul of electrical machines since 1938

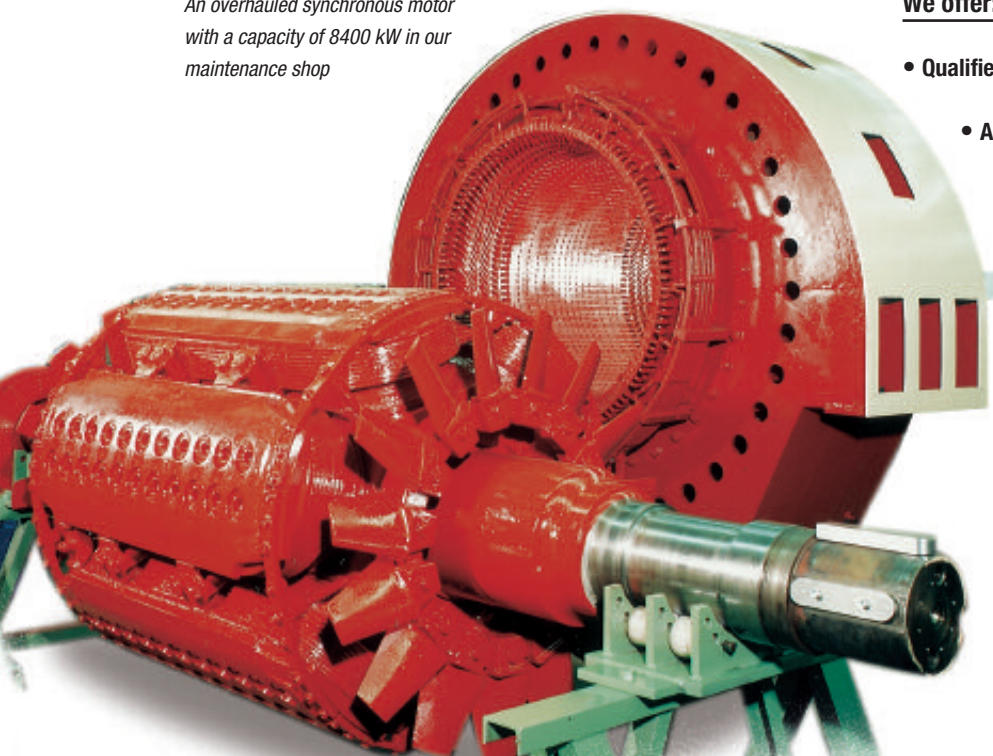
- DC motors
- AC motors LV
- AC motors HV up to 10 kV
- Dry type transformers



BENNING Factory II, D-46397 Bocholt, Germany

Overhaul of a DC Motor 2000 KW with armature rewinding

An overhauled synchronous motor  
with a capacity of 8400 kW in our  
maintenance shop



### We offer:

- Qualified employees
- Advanced manufacturing processes
- Diagnostic reports
- Performance analysis
- Short delivery time

# Decades of experience and reliability

## Winding experts

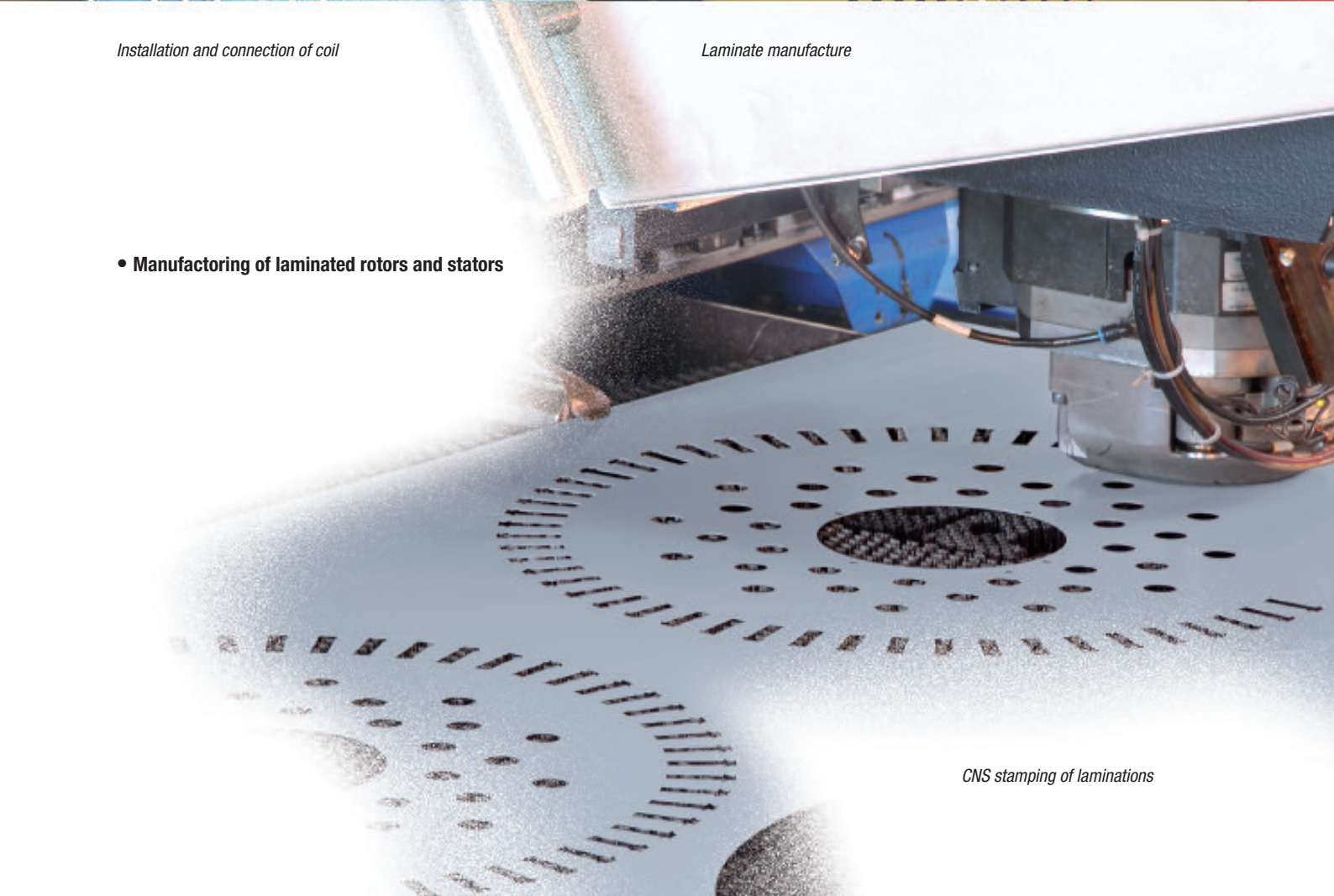
- High voltages coils up to 10 kV
- Vacuum impregnation



*Installation and connection of coil*

*Laminate manufacture*

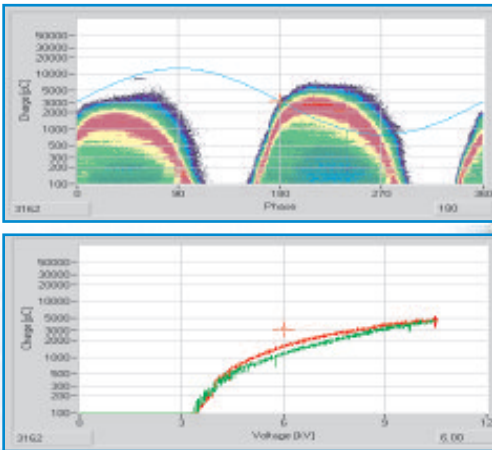
- Manufacturing of laminated rotors and stators



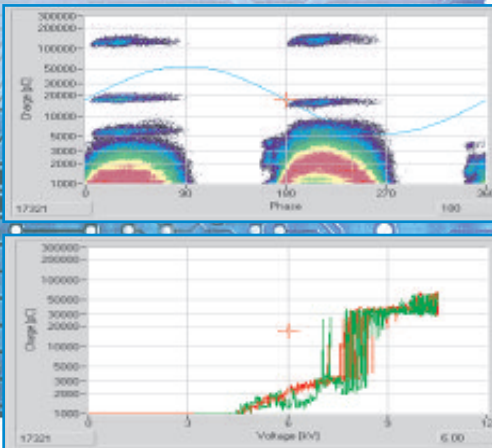
*CNC stamping of laminations*



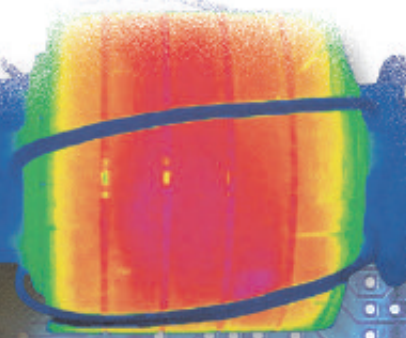
# Fault diagnosis using detailed performance analysis



Example of a new motor



Example of a motor at the end of its life



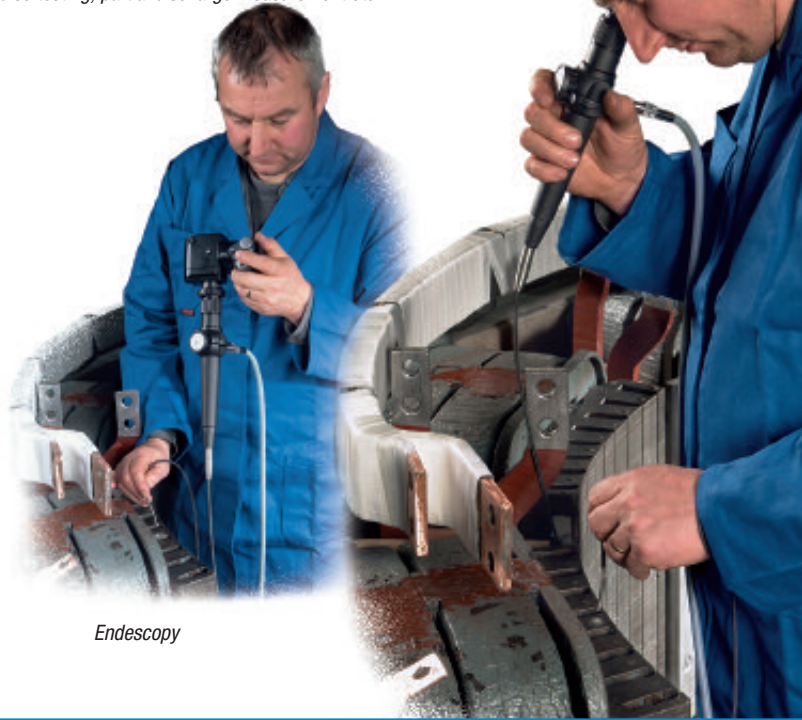
Electrical performance analysis to measurements loss tangent test VDE, for example: high voltage test, impulse testing, partial discharge measurement etc.

## Electrical analysis:

- Resistance
- Isolation
- Partial discharge values
- Shock impulse
- Tan delta
- Polarization index
- High voltage

## Mechanical analysis:

- Frequency
- Vibrations
- Noise
- Arrangement



Endoscopy

# BENNING

BENNING Elektrotechnik und Elektronik GmbH & Co. KG  
 Robert-Bosch-Straße 20 • D-46397 Bocholt  
 Tel.: ++49/(0)2871/93-269 • Fax: ++49/(0)2871/93-357  
[www.benning.de](http://www.benning.de)

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ISO 9001

ISO 14001

SCC

