

SKF S2M Magnetic Bearings for combined heat and power generation plant

The challenge is the direct coupling of a 9 MW gas turbine to a high speed electric generator (6,090 r/min) connected to a frequency converter, suppressing the need of a gearbox and oil lubrication.

How to support this 10,000 kg, rigid, shaft line (turbine-generator)?

The SKF solution: 4 radial magnetic bearings, and a thrust magnetic bearing, controlled thanks to our know-how and experience in large turbomachinery applications.



View of a 400 mm diameter radial magnetic bearing

Advantage

- Oil-free and contact-free rotation
- High efficiency
- High reliability
- Optimized rotor dynamics
- Increased safety of the plant

Features

- Grid power: 9 MW
- Speed: 6 090 r/min
- Total rotor weight: 10 tons
- Total rotor length: 10 m



The gas turbine drives the electric generator and provides heat (hot water) in a cogeneration plant

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