

Press Release

8-MVA generator for transformer tests

Two German drive technology manufacturers have custom-tailored a motor-and-generator system for the testing of large-scale transformers: Menzel Elektromotoren and Hempel Elektromaschinenbau collaborated to design a special drive solution for a wide frequency range 50 Hz to 100 Hz. Menzel has built a customized generator for 100 Hz operation and achieved an extremely low THD value – while the specification calls for $\leq 3\%$, the test run verified an even lower factor of $< 0.5\%$, confirming a near-ideal voltage amplitude. The entire drive system was put through a 24-hour test run under load in Menzel's Berlin test field. Menzel provided the documentation, electric connection, and commissioning on site according to Hempel's specifications. Hempel configured both the process control system for the transformer testing and the high-voltage protection. The entire drive system is mounted on a swing base. It comprises a synchronous generator with a rated power of 8 MVA and a rated voltage of 6000 V, a 2500-kW squirrel-cage induction motor, a frequency converter, and accessories, which Menzel configured for the application: coupling, oil supply, voltage and current transformers, and excitation control unit. The speed range is 750 to 1500 rpm. Both machines are robust and feature cooling type IC26 and IP23 ingress protection. The special design enables the largest transformer manufacturer in the Middle East to take up the production of larger-sized, extra-high voltage power transformers.

More about customization of rotating frequency converters:

<https://www.menzel-motors.com/specialized-motors/converter/>



Illustration: The drive system for transformer inspections was manufactured and tested under load in Berlin

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About Menzel Elektromotoren

Based in Berlin, Menzel Elektromotoren GmbH has been manufacturing and distributing electric motors for more than 90 years. The medium-sized company specializes in the delivery of large electric motors, including special models, within the shortest possible time. The product range comprises high and low voltage motors, DC motors, transformers, and frequency inverters. Services include motor production and short-term adaptation of stocked motors to application-specific requirements. In order to ensure fast deliveries to the customer at all times, the company maintains a very extensive inventory including more than 20,000 motors with a maximum performance of up to 15,000 kW. Qualified engineering, experienced staff, and state-of-the-art production and testing facilities help Menzel provide excellent reliability. Menzel operates subsidiaries in the UK, France, Italy, Spain, and Sweden, and cooperates with numerous partners worldwide.

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