**Press Release**

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**September 2022 Projects**

**50Hertz awards major contract to MR**

**Two MSCDN plants secure power transmission in Saxony-Anhalt**

The transmission grid operator 50Hertz will expand its substation near Bad Lauchstädt in southern Saxony-Anhalt into an important hub for the transport of renewable energies. High investments are planned there which will soon be implemented with regional and international companies. The Power Quality business unit of Maschinenfabrik Reinhausen (MR), located in Erfurt (Thuringia), in cooperation with Omexom EBEHAKO GmbH, received an order for the construction of two so-called MSCDN systems. The Lauchstädt substation is, among other things, the starting point for the southwest coupling line ("Thuringian Power Bridge") on which renewable electricity will be transported southward.

"We can do energy transition," says a delighted Wilfried Breuer, Managing Director of Maschinenfabrik Reinhausen. "With the MSCDN systems in Bad Lauchstädt, we are once again demonstrating our comprehensive system expertise in our own country, adding to transmission grid operators Tennet and Amprion who also already rely on MR technology. Our specialists in Erfurt have already installed such systems several times worldwide and will also ensure reliable completion in Saxony-Anhalt." The abbreviation MSCDN stands for Mechanically Switched Capacitor with Damping Network. The reactive power compensation systems have a capacity of 300 MVAR each and provide static reactive power. Completion of the work as well as commissioning is planned for 2025.

These systems are necessary because in the future fewer and fewer thermal power plants with large generators will automatically regulate the voltage by providing reactive power. In the case of power generation from renewable energies -predominantly wind and solar power - the provision of reactive power for voltage maintenance, which was previously secured by large power plants, must be replaced. The MSCDN, which are installed at specific points in the transmission grid, would serve this purpose. Only with the right ratio of active to reactive power can electricity flow at all in an AC grid. It is needed to build up and dissipate a magnetic field 50 times per second and thus maintain the voltage while the current is being transported. If there is too much reactive power in the network, less active power is transported; if there is too little reactive power, the voltage drops and power supply faults can occur.