

ARTICLE

ABB supplies a power protection solution to Gülermak in Turkey



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01 Gülermak factory in Turkey

Production of heavy duty steel requires an uninterrupted power supply. Without this continuous power feed, industrial producing machines can shutdown resulting in catastrophic events. This can lead to loss of revenue and high production costs, which could potentially have an impact on the steel production line. ABB's PCS100 Active Voltage Conditioner (AVC) is eradicating these potential risks by providing a reliable and efficient solution. This will provide a continuous power regulation with an efficiency rate exceeding 98 percent.

ABB's power electronics team has provided a turn-key solution comprising of a PCS100 Active Voltage Conditioner (AVC) for a leading mass transport, railway and industrial company, Gülermak in Turkey. This innovative solution will help protect the company's CNC machines from production shutdown, minimizing material costs.

In modern CNC systems, end-to-end component design is highly automated using computer-aided design (CAD) and computer-aided manufacturing (CAM) programs. The programs produce a computer file that is interpreted to extract the commands needed to operate a particular machine via a postprocessor, and then loaded

into the CNC machines for production. Since any particular component might require the use of a number of different tools-drills, saws, etc., modern machines often combine multiple tools into a single "cell". In other cases, a number of different machines are used with an external controller and human or robotic operators that move the component from machine to machine. In either case, the complex series of steps needed to produce any part is highly automated and produces a part that closely matches the original CAD design.

Previously, when the CNC machines shut down as a result of power sags, the steel component being produced had to be destroyed or "started over" as the CNC machine programming the design had to start from the beginning of the code (rather than from where the fault occurred). This led to increased production costs in material waste due to power quality problems.

Gülermak chose ABB's 375 kVA PCS100 AVC as a sound solution because of the system's small footprint in design and modularity. Other factors were its high efficiency rate (up to 98 percent) and continuous online regulation (continuous power regulation of +/- 10 percent and +/- 15

percent short term), meant that Gülermak could rely on ABB to deliver a product that is both energy efficient and reliable in power protection.

The ABB PCS100 AVC has a power rating ranging from 160 kVA to 20 MVA. It is an inverter based system that protects sensitive industrial and commercial loads from voltage disturbances. Providing fast, accurate voltage sag and surge correction as well as continuous voltage regulation and load voltage compensation, the PCS100 AVC has been optimally designed to give required equipment immunity from the level of voltage sags expected on the AC supply network.

Gülermak is a global player in engineering and construction of heavy industrial steel constructions and is located in Turkey. The company specializes in engineering and building heavy steel constructions throughout Europe, Russia, North Africa and the Middle East.

To find out more about ABB's power protection solutions:

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Additional information

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