

SolarTech Power Solutions

Power station generator set transformation



Overview

What is a station startup transformer?

Station Startup Transformer The Station Startup Transformer is a power transformer used to connect the power station to the transmission system so that power is available for the plant equipment when the plant is being started.

What is a generator step-up transformer?

Generator Step-up (GSU) Transformers (GSU) Generator step-up transformers (GSU) are the critical link between the power station and the transmission network, often operated day and night at full load. They must be built to withstand extreme thermal loading without aging prematurely.

What is a generator step-up transformer (GSU)?

The generator step-up transformer (GSU) takes the voltage from the generator voltage level up to the suitable transmission voltage level. These GSU transformers are located in a power station and are built as single-phase or three-phase units. There are two (2) basic technologies for designing and manufacturing: core and shell.

What is a generator transformer?

The generator transformer is the one transformer on a power station for which no standby is provided. It must be available for the generator output to be connected to the grid. For a high merit unit, high reliability is required. If its output were lost, this would necessitate running less efficient plant which is more expensive to operate.

Can a power transformer be connected directly to a generator?

Power transformers connected directly to generators can experience excitation and short-circuit conditions beyond the requirements defined by ANSI/IEEE standards. Special design considerations may be necessary to

ensure that a power transformer is capable of withstanding the abnormal thermal and mechanical aspects that such conditions can create.

What are the functions of Transformers in a power plant?

Transformers used in this plant and the roles of these transformers are as follows: Generator transformer. Raises the generator voltage to the external grid voltage during normal plant operation. Also, at plant start-up or shutdown, the generator transformer steps down the external grid voltage to the generator voltage.

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