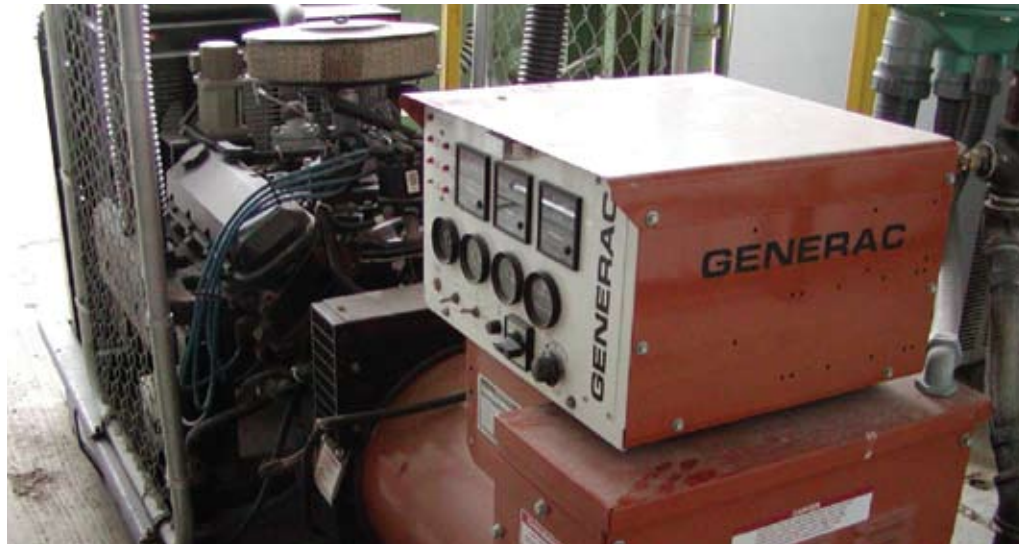


HIGH PRESSURE KILNS

POWER SOLUTIONS
CASE STUDY of
CERALOX®



GENERAC HELPS KEEP THE HEAT ON

UNITS

60 kW Natural Gas Genset
with CTTS (Closed Transition
Transfer Switch)

LOCATION

Tucson, Arizona

Tucson, Arizona is situated in the warm, arid climate of the Sonoran Desert, just 40 miles north of the Mexican border. Keeping hot is usually not a problem — unless, that is, your company operates a high temperature ceramic kiln that needs to stay in the range of 1100 to 1200 degrees Centigrade. That's the challenge faced by the Ceralox® division of Sasol North America, a firm that makes high purity and ultra high purity alumina products. Ceralox products are used throughout the world in industries demanding the highest levels of alumina purity and consistency, combined with tailor-made physical properties. To ensure that their high temperature kilns remain online at the Tucson facility, Ceralox relies on a Generac generator set to provide backup electricity in the event that utility power is interrupted.

optic devices, computer chip substrates, synthetic hip joints, fluorescent and sodium lights, orbiting satellite windows, and bar code scanners.

Experience has shown that severe thunderstorms are the most likely cause of a power outage in the Tucson area. These intermittent but powerful storms are characterized by lightning strikes that can wreak havoc and disrupt utility power unpredictably. Since even a brief loss of power will adversely affect the operation of the kilns and the production process, Ceralox needs to make certain they've got power regardless of an outage.

Their solution? A 60 kilowatt natural gas fueled Generac genset and a Generac closed transition transfer switch (CTTS). This combination of standby generator and automatic transfer switch allows Ceralox to provide uninterrupted power during threatening weather.

“Whenever thunderstorms are approaching the Tucson area, we start up the generator,” says Al Williams, maintenance supervisor. “To avoid any outage problems, we transfer the load onto the genset and generate our own power for the duration of the storm.”

High purity aluminum oxide is a key ingredient in numerous compounds, especially where high clarity and extreme hardness are required. Ceralox's product is more than 99.9% pure, which is essential for the demanding requirements of making such diverse products as synthetic gems (clear sapphire and ruby), crystal watch faces, laser

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The CTTS allows seamless load transfer between utility and generator.

“Whenever thunderstorms are approaching the Tucson area, we start up the generator,” says Al Williams, maintenance supervisor at the Ceralox facility. “To avoid any outage problems, we transfer the load onto the genset and generate our own power for the duration of the storm. This keeps the production process going regardless of the weather.”

The closed transition transfer switch is the key to providing uninterrupted power during the transfer of the load. The moment that occurs, the CTTS instantly switches the electrical load to the running generator and disconnects it from the utility source. This essentially seamless transfer of the load onto the standby generator keeps the kilns fully powered.

The particular attributes of the closed transition transfer switch are what allow the load transfer to occur in this manner, without delay. The design of the CTTS makes possible the voltage synchronization between the utility and the running genset prior to the transfer, and allows the load to be safely and quickly shifted from one source to the other without delay or dangerous backfeed.

Once the storm has passed, the CTTS transfers the load back to the utility. After that occurs, the generator is shut down and resumes its standby role. If an unanticipated power outage occurs, it can be up and running and ready to take on the load within ten seconds.

“The genset is located outside, under an awning,” Al Williams says. “It was delivered to us in July of 2001 by Simonsen Generator Service, and our electricians made all the necessary connections. We perform the periodic maintenance ourselves, and rely on Simonsen for technical assistance if needed. The unit has really worked well for us.”

GENERAC®

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