NTFB
Combustion Equipment USA, Inc.

2008 Beijing Olympics

A Case Study

Synopsis

2008 Beijing Olympics backup power adopted NTFB low NOx burners and applied NTFB's CCS and BMS control systems for a remote control center operation and field automation control without operators.

Business Situation

The need for reliable and redundant power for all Olympic Games structures was stressed by the International Olympic Organization. The Beijing Olympic Committee required a supplier who could work together with the local utility company. The main power system provided power to 37 venues in three cities: Beijing, Qingdao and Hong Kong. This included 30 MW of un-interruptible power to broadcast the opening ceremonies to over 496 million viewers around the world.

Technical Challenge

The technical challenge was the selection of the second utility service. As a solution, the Beijing Olympics Game 2008 Committee agreed on the use of a steam generation system capable to be on-line in less than one second upon loss of normal power. It was **a** sound requirement since an interruption in proper lighting levels during competition could impact concentration of the athletes, disrupt broadcast of the event, and result in an extended power outage.

"The advances in technology that help bring these dreams to fruition depend on an infrastructure of power, control and communication that's as cutting edge and dependable as the results expected from the entire project. Selecting the proper products designed for, and with a proven track record of reliable operation, which incorporate the most appropriate user and application integration flexibility necessary, at competitive costs play an important part in helping to make these projects a success." M.J. Kornblit, P.E

Solution

NTFB partnered with Shanghai Sifang Boiler Manufacturer to build two 38.5 MW steam generation boilers to assist the 300 MW backup energy systems. NTFB responded to the challenge by providing a customized combustion control system (CCS) and a burner management system (BMS) to manage the two NTFB burners and valve trains system. In addition, NTFB proprietary software allows remote monitoring and control of all burner functions and safety features.

There were more than 25 NTFB engineers and technicians involved in this project. NTFB's communication plan allowed working efficiently with boiler manufacturer personnel and other contractors involved in the project. NTFB products were delivered on time and the startup and commissioning process was completed on schedule.

Benefits

The burners proved to be a reliable source of power to the 2008 Beijing Olympic. Today, the systems are still operational in the Beijing power grid and provide energy to part of the city. NTFB made possible the creation of a low emission, efficient and economical energy source delivering a carefully engineered turnkey project on schedule.

Source:
M.J. Kornblit, P.E., Sr. Systems Engineer, GE Beijing 2008 Olympic Games Solutions. "Power Distribution Systems For The Beijing 2008 Olympic Games."

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