



General Electric Plastics

Mount Vernon, Indiana

Boiler House Expansion

Problem

The GE Plastics plant in Mt. Vernon, Indiana required an expansion of its existing boiler capabilities due to growth of their Lexan plastic business. This would be the second expansion of Boiler House 2 in 5 years.

Resolution

A decision was reached to add a single 200,000 lbs/hr natural gas boiler to the existing boiler house. Specifically, GE Engineering Services team was charged with the installation of one (1) B&W 200,000 lbs/hr boiler operating at 600 psig and 550° F. This expansion would increase the boiler capacity of this boiler house to 1 million lbs/hr of steam.

The current boiler house consists of two (2) 200,000 lbs/hr pulverized coal units and two (2) 200,000 lbs/hr natural gas units. The capacity increase would expand the existing boiler house #2 building including all civil works, structural steel and shell material. In addition, new ancillaries were required with this boiler including deaerator, duplex feed water pumps and MCC room.



Project Description

The project involved the installation of one (1) new 200,000 lbs/hr B&W boiler operation @ 600 psig and 550° F. Similarly, it included the installation of stacks and an economizer, a 5 MW turbine generator, new synchronous switch gear, a deaerator and boiler feed water pumps, and mechanical and electrical interconnections. The project also encompassed the implementation of civil works and foundations for the new building expansion including the erection of the structural steel and shell and the civil works and foundations for a new turbine building. Additionally, the project involved site preparation, in-depth engineering mechanics, and project development.

End Result

To add value to this "must do" project, a 5.0 MW back pressure unit was installed adjacent to new building expansion which contributed to the significant savings in the project.