



Case Study

Centennial Hills Hospital Chiller & Boiler Plant Optimization

Mechanical Contractor: LMS Boiler Services
Boilers: Cleaver Brooks-Flextube
Burner: S.T. Johnson NOXmaticT



The Challenge

Centennial Hills Hospital had operated two (2) Cleaver Brooks 300 HP Flextube Boiler with Sure-Fire™ burners supported with FGR since 2007. When the Department of Air Quality Management reviewed their operating permit, it was determined that the existing burners could not satisfy the emission limits.

The Solution



LMS Boiler Services delivered a S.T. Johnson NOXmatic™ Type-A burner system. This NOXmatic™ burner does not require flue gas recirculation to achieve ultra low NOx emissions, thereby eliminating the added expense of installing, operating and maintaining an FGR system.

The NOXmatic™ Type-A burner incorporates S.T. Johnson's trademark axial-flow air blower arrangement with swing-open housing to provide easy access to all burner internals for ease of maintenance. This allowed S.T. Johnson to provide a streamlined, compact package which was a direct replacement of the existing Cleaver Brooks SureFire™ burners and minimized installation work. The result was a very clean, quick and cost-effective installation.

Each S.T. Johnson NOXmatic™ burner took a total of four days to install and commission after arriving on the site. The burners passed the source test with flying colors. Final performance parameters were as follows:

NOx limit: 9 ppm @ ref. 3% O2 dry
NOx emission actual: 8 ppm @ ref. 3% O2 dry
CO emission actual: <3 ppm @ ref. 3% O2 dry

These boilers are sized as redundant, yet with one boiler running >\$5,000 was saved in gas the first month.