

Case Study

Centennial Hills Chiller and Boiler Plant Optimization

Site Information

User: Centennial Hills Hospital
Location: Las Vegas, NV
Boiler: Cleaver Brooks-Flextube
Contractor: Lawyer Mechanical Services, Inc.
Burner: St. Johnson NOXmatic™
Emission Limit: <9ppm NOx



Situation

Centennial Hills Hospital had operated (2) two Cleaver Brooks 400 HP Flextube Boilers 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.

Solution

Lawyer Mechanical Services, inc., a division of Lawyer Trane, delivered a St. 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 Sure Fire™ burners and minimized installation work. The result was a very clean, quick and cost-effective installation.



Results

Each St. 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 fly-ing 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.

For more information, please contact Lawyer Mechani-

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Paul Mehl-Boiler team leader with over 30 years of experience

