Smith Boiler Installation Earns High Marks from Russell Sage College

Russell Sage College located in Troy, New York, is a college for women and a member of The Sage Colleges, which includes the coeducational Sage College of Albany. The school needed to replace five, old one-piece fire tube boilers designed to provide steam for heating and domestic hot water for dormitory space, the college's main athletic facility, a cafeteria, as well as the fine arts center and an auditorium.

The college turned to Carrier Corporation's Commercial Service Division of Middletown, Conn., to design an updated and more efficient heating system. Al Berry, project engineer for Carrier explained the problem. "Each of the failing boilers was housed in a separate boiler room in the basement of the building that it was heating. To make the system more efficient, we wanted to centralize the boiler room and feed low pressure steam to several buildings from one location. Not only would a centralized boiler system be less expensive to install, but it would also be easier to manage and provide for maximum efficiency."

The criteria for the new boilers were that they meet an efficiency rating established by NYSERDA, the New York State Energy Research and Development Authority.

Due to the space limitations and the location of the central boiler room, the new boilers would have to be sectional and installed and assembled on location in the boiler room. The college also wanted a system that had vastly improved efficiency and would help them cut energy consumption in the long-run. We specified the Smith Series 28HE for several reasons," said Berry. "First, it is a sectional boiler and available in several sizes and in different output capacities. Second, the Smith 28 HE boiler was the only steam boiler we found that met the 83.5% minimum efficiency rating set by NYSERDA."

"We initiated this project in order to gain energy improvements," said Bob Pattee, director of facilities, planning and management at The Sage Colleges. "We anticipate a payback for the new boiler system in terms of years, not decades," he said.

FPI Mechanical of Cohoes, N.Y., was hired to install the system. "Our part of the project was to turn the plans into reality," said Joe Herkenham, of FPI Mechanical. The new boilers were brought into the facility in sections and assembled on location in the boiler room. Three Smith boilers were specified for the job to meet the college's heating and hot water demands year round. The two large 17-section boilers were designed to handle the winter heating and hot water requirements while the smaller, eight-section, boiler was designed to provide sufficient domestic hot water during the spring and summer months when it is not necessary to heat the facility.

Smith cast iron boiler sections are precision-machined to ensure dimensional accuracy. In addition, graphite port connectors provide the installation ease of a gasket and the longevity of a push nipple to minimize callbacks. The graphite connectors are made from flexible, inert carbon material and provide a lifetime seal that is impervious to chemicals, flue gases and high temperatures.

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FPI Mechanical had installed another large sectional Smith Boiler in an apartment complex in Albany, NY recently, so the Russell Sage project went smoothly and on schedule.

The system was designed so that each boiler would fire alternatively – one on, the other off. This would not only provide a regular cycle for the boilers, but it would also allow one boiler to be serviced without a heating loss to the facility if necessary.

Not only was the project completed on time, but the boilers performed very well in their first semester away at college.

For more information about Smith Cast Iron Boilers call **413-562-9631** or visit **www.smithboiler.com**.