



Virginia Tech Boiler Superheat Upgrade Project

Boiler superheat upgrade at Virginia Tech increases power production

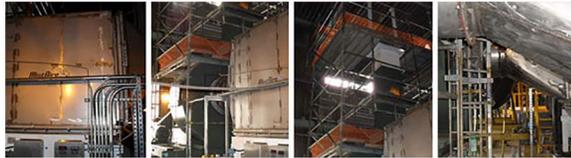


Project Description

This project was comprised of adding superheat surface within one of the boilers in order to increase power production from the turbine generator that produces electricity for the campus. Prior to completing this upgrade, two boilers were required to produce the needed energy for the turbine generator; and this project resulted in only one boiler operating to produce the same energy.

Superheat surface within the boiler was added by removing a portion of generating tubes and replacing them with superheat tubes. In total, approximately 1,100 tubes were replaced. The greater heating surface increased the operating temperature of the boiler by 200 degrees, thereby increasing power production from the turbine generator.

The project required a complete tear-down of the boiler side walls and roof, which included the replacement of the boiler skin and casing as well as new insulation and refractory. The major challenge of this project was the limited physical access to the equipment requiring significant labor combined with a very tight deadline for project completion.



Why Waco Was Chosen?

Due to several successful projects Waco has completed at Virginia Tech over the years, the firm has a very solid reputation at the university, resulting in a maintenance contract. Additionally, Waco's R-stamp with National Board Inspection Codes, certifying Waco's ability to work on boiler and pressure vessel repairs and alternations, was a contributing factor to Waco getting this project.

Summary of Results

Walter Mandzak, an experienced boilermaker and Sean Davies, an experienced project manager, led the Waco team to complete this project. The superheat upgrade project was fully tested and succeeded at increasing power production from the boiler. The overall cost of the project to Virginia Tech was about half what was originally estimated. This project represents a great example of Waco's technical expertise and ability to complete projects efficiently as a means to reduce expenses to the university.

Corporate Office

5450 Lewis Road
Sandston, VA 23150
Phone: (804) 222-8440

38592 Brett Way, Suite 7
Mechanicsville, MD 20659
Phone: (301) 290-1333
Fax: (301) 290-5222
Toll Free: (888) 742-7219

844 Cottontail Trail
Mt. Crawford, VA 22841
Phone: (540) 434-7390

1326 Cavalier Blvd.
Chesapeake, VA 23323
Phone: (757) 558-3100

11839-A Canon Blvd.
Newport News, VA 23606
Phone: (757) 873-2205

1520 West Main Street
Radford, Virginia 24141
Phone: (540) 633-6311
Fax: (540) 633-6411

1554 Bladen Loop Rd
Bladenboro, NC 28320
Phone: (910) 648-5468

703 West Main Street
Covington, VA 24426
Phone: (540) 962-5161

