

Electrode Boiler Installation – 12,000 KW

Spartanburg Regional Health Care System, Inc., Spartanburg, SC

Client Objective

Spartanburg Regional Health Center (“SRHC”) was facing increasing steam energy cost. Energy costs had risen significantly with the recent increase in natural gas pricing and the hospital wanted to reduce and better manage their energy cost.

The Opportunity

SRHC was searching for ways to reduce and manage their energy costs and they started by focusing on reducing their consumption of high cost natural gas by installing an electric boiler.

The Solution

Peregrine performed an analysis of SRHC’s steam usage that compared the cost of making steam with natural gas to that of making steam with electricity. During the discussion, SRHC mentioned that they needed an alternate electric feed as a back-up. Duke Energy had quoted them a cost of \$1.3 million to install an alternate feed. Peregrine, through knowledge of the utility industry, was able to work with Duke Energy to provide the necessary switches to allow the electric boiler feed to be used as an emergency alternate power feed. Peregrine proposed a Precision HVJ-228 12 MW electrode boiler, which was capable of supplying their entire 150 psi steam load. Peregrine provided all design, procurement, construction services, start-up and training in a turn-key lump sum contract. The project saved enough in gas costs to pay for itself in less than 18 months.

The following is an overview of the scope of work:

- Pad mounted switch which allows the electric boiler feed to serve as an emergency alternate electric feed; thus, saving SRHC approximately \$1.3 million.
- Precision Model HVJ-228 electrode boiler rated at 12,000 KW capable of producing 40,000 lb/hr of steam at 13,200 volts.
- Allen Bradley PLC controller tied directly into SRHC existing boiler control system for remote operation.

