

Electrode Boiler Installation – 31,000 KW

RR Donnelley, Spartanburg, SC

Client Benefits

As a world-class commercial printer of catalogs and large publications, R. R. Donnelley (“Donnelley”) was facing ever increasing competition from overseas printers and paperless transactions over the internet. Energy costs had risen significantly with the recent increase in natural gas pricing.

The Opportunity

Donnelley was searching for ways to reduce costs and had turned its attention to energy expenses. It could not significantly reduce the amount of steam it used, but it could lower steam cost by using electricity instead of natural gas to produce steam.

The Solution

Peregrine performed an analysis of Donnelley’s steam usage and compared the cost of making steam with natural gas to that of making steam with electricity. 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:

- New 46 ft. x 52 ft. (30 ft. high) foundation and building.
- A 330 ft. 33,000 KW electrical feed buried and encased in a concrete duct bank.
- Precision Model HVJ-438 electrode boiler rated at 33,000 KW capable of producing 104,000 lb/hr of steam at 12,500 volts.
- Allen Bradley PLC controller tied directly into Donnelley’s existing boiler control system.

