

SAUDER WOODWORKING COMPANY: A WASTE WOOD ELECTRIC GENERATING FACILITY

NEIL H. JOHNSON
SFT, Inc.
Toledo, Ohio

Discussion by:

John W. Norton
Dayton, Ohio

The author has presented an excellent paper describing considerations that went into the development and implementation of the subject facility. The use of some photographs in the paper was particularly helpful.

The photo on p. 240 shows open structural members around the bottom of the key air pollution control elements. For very little additional capital cost, these areas can be enclosed with plain uninsulated sheet metal. This pays huge dividends when it comes to maintenance and repair work in windy, cold, or rainy weather. Why is such an enclosure not commonly included in such projects? The cost is minimal — usually less than 1% of total project cost — and it pays for itself in only perhaps two inclement weather repair projects. In addition, such enclosures provide a more attractive appearance and offer additional storage space for maintenance and repair parts.

Pages 240 and 241 state that the Selective Catalytic Reduction system (SCR) is located between the Electrostatic Precipitator (EP) and the economizer. It is also stated that the temperature into the SCR is expected to be 650°F. That seems to be an excessively high temperature.

The author sites "high energy costs" as essential to project economics. This is usually the case. It is an important issue in all energy recovery projects. However, it is unclear from the paper just what the economic agreement is between the power company and the Sauder Woodworking Company. Could the author expand on this facet?

This was an excellent and detailed paper worthy of note. It appears that the facility can probably function well. Perhaps the author would be so brave as to commit to a re-visitation of this subject facility two years later at the ASME 1996 Solid Waste Processing Division Conference. This

would allow a discussion of the facility operation experiences. We have many optimistic presentations like this of facilities about to begin production, but we have too little literature about plant operating experiences. Engineers and designers must learn from common problems so that new plants do not have to repeat the learning curve yet again.

AUTHOR'S REPLY

The equipment to be maintained under the EP's hoppers are rotary seal feeders, screw conveyors, and chain conveyers. The hoppers do have heaters. Start-up on wood was last winter, and no problems were encountered, even though January was especially cold. It will remain to be seen what future winters bring in the form of maintenance problems. As far as costs are concerned, when the EPA forced the addition of an SCR, the capital budget was severely stressed.

The design temperature of 650°F into the EP does not seem excessively high when you consider the number of utility EPs that were designed for 700°F. The actual temperature during the performance tests was 600°F.

As can be seen on page 238 of the book, the agreement between Sauder Woodworking Company (SWC) and Toledo Edison Company (TECO) had many facets. The agreement has a tenure of fifteen (15) years. Note that the rate SWC pays is a sliding scale and the TECO payment to SWC is based on avoided costs at the time of generation. The capacity payments from TECO to SWC starting in 1999 are also on a sliding scale for the remaining nine (9) years of the contract. Describing the details of the contract would be a subject on its own.

The author would be willing to provide an update to the paper in 1996. However, at that time he will be retired. A suggestion would be to contact Ronald C. Lutwen, President of SFT regarding an updated paper.