



Anthony Holden
Alabama Technology Network

Phone: (256) 824-6289
Fax: (256)824-6970
Email: holdena@uah.edu

Scotch Plywood Company

Fulton (Clarke County)

Scotch Plywood Company installed a steam boiler and turbine in 1994 that produced heat for the dry kilns and electricity for mill operations.

This cogeneration project consists of a high-pressure steam boiler and non-condensing steam turbine to produce electricity for mill operations and heat for dry kilns. The boiler burns tree bark and sawdust to generate 60,000 lb/hr of superheated steam at 600 psig and 750 ° F. The steam is supplied to a 2500 kW turbine/generator which has an exhaust pressure high enough (90 psig) to operate three dry kilns. An air-cooled condenser is connected parallel with the kilns. Therefore, when steam demand from the kilns is reduced, power generating capacity can still be maintained by using the condenser to condense steam leaving the turbine. Condensation from the kilns and condenser is returned to the boiler to reduce the cost of raw-water heating energy and boiler feed-water chemicals.

This project consumed 48,112 tons of residue fuel and produced 228,458 ktons of steam. The energy savings of this project are 500,365 MMBtus/yr and it produces 3,722,390 kWh of electricity per year at a value of \$2,869,976.