

(6) Field Trial of a High Capacity Gas-Fired Paper Dryer

This project builds on a pilot scale dryer project funded by the U.S. Department of Energy. From the results of that project, a preliminary and final design will be completed, a gas-fired system constructed and a field trial conducted.

Total project cost: \$1,424,850

Funding request: \$634,850

Project Lead: Minnesota Department of Commerce, State Energy Office Project

Participants: Western Michigan University; Gas Technology Institute; Boise Paper Solutions; Groupe Laperriere & Verreault; Flynn Burner, Corp.

Patents

None.

Presentations/Publications

There was no presentation made during the reported quarter.

There was project information included in DOE/ITP brochure "Forest Products Technologies: Public Private Partnerships Produce R&D Results". See enclosed.

Progress in Past Quarter and Current Status

<u>Milestones:</u>	<u>Date</u>	<u>Status</u>
Draft full-scale GFPD design developed	12/31/04	done
Final GFPD design completed	06/30/05	done
GFPD components fabricated, purchased, assembled	12/31/05	in progress
Baseline test/auditing completed	12/31/05	done
Field trial completed	06/30/06	
Final Technical Report	08/20/06	

The following activities were performed during the reported period:

- Field Trial Agreement was executed all the project partners and forwarded to LPI for approval
- The entire GFPD system was specified (including high temperature felt, lubrication, etc.)
- Field engineering proposal was obtained from OMNNI Associates

Issue: LPI has requested to suspend their participation until funding for 2nd drum fabrication will be developed.

The reason is: "LPI has reviewed the economics surrounding the installation of a gas fired paper dryer, assuming a 3% increase in drying, and concluded that the cost of installation, combined with the increased operating costs associated with fuel and clothing, makes the project cost prohibitive".

- GTI discussed the above issue with GL&V and FBC and encouraged them to invest their funds into 2nd drum fabrication with further cost reimbursement from LPI upon successful field trial (GL&V should discuss this option with LPI in mid January 2006).

- GTI initiated a discussion with Canadian Gas Company that was interested in investing to GFPD technology. Proposal for the second drum system is in progress. Meeting is scheduled for the end of January 2006.

- WMU has completed analysis of the drying process. Parties have agreed to install the gas-fired dryer t can 21 (heating the bottom side of the sheet). In this location the effect of the new dryer is to counter the curl present in the sheet. Thus any new tendency to curl is opposite to the existing curl.

Plans for Next Quarter

The planned activities are contingent to LPI decision to proceed further with double-drum system:

- Finalize and approve the entire GFD system design and specification
- Execute the Field Trial Agreement
- Provide necessary engineering support to GL&V and FBC
- Draft a measurement/data collection system and Field Trial plan/matrix for partners' review

- - WMU plans to continue to participate in the conference calls and to provide analysis of the effect of any installation on sheet properties.