

UPTIME'S **2010** PDM PROGRAM OF THE YEAR



Back Row From Left:
 Greg Osenga - *Electrical Supervisor*,
 Jeremy Holiness - *Electrical Planner*,
 Gary Latham - *PdM Analyst*,
 Vince Bellik, *PdM Technician*,
 Robert Monthie, *Control Engineer*.
Front Row From Left:
 Brian Brzinski - *Director of
 Maintenance and Engineering*,
 Ron Biskup - *Mechanical Supervisor*,
 Ed Lazzaro - *Mechanical Planner*.
Not Pictured:
 Marie Getsug - *former Reliability Engineer*,
 Teri Tippett - *Implementation Assistant*

FutureMark Paper Equipment

Vibration:

- CSI 2130
- Fluke 180 Analyzer

IR Thermography Imager:

- Fluke Ti30
- Electrophysics HotShot HD-XT

Ultrasound:

- UE Systems Ultraprobe 10000
- Grease Caddy 201

MCE:

- All-Test Pro online and offline units

FutureMark Paper Program Highlights

FutureMark Paper Company is located in Alsip, Illinois. The mill was built in 1968 to manufacture recycled newsprint. It was converted to a lightweight coated mill in 2002. The unique feature of this mill is that it's the only major manufacturing facility in all of North America producing coated mechanical paper with more than 90 percent recycled content. FutureMark's coated publication papers typically contain more than 90 percent recycled fibers, with 30 percent of the total fiber mix coming from post-consumer waste. FutureMark Paper is focused on rigorous high quality and environmental sustainability in every aspect of its business, including its maintenance and reliability program.

The maintenance and reliability program has been transformed through a multi-pronged approach to success. With the help of a consulting partner, we first focused on business process redesign. All the predictive tools and reliability methods available would not be sustainable without a proper process, and accountabilities to drive the process. We generated processes for work identification, reliability strategy identification, planning, scheduling, work execution, and execution follow-up.

After planning and scheduling became more efficient, we analyzed our equipment and failure history.

An equipment identification and criticality exercise was performed, as well as an analysis of what areas and equipment were failing and/or were the most costly to maintain. Based on our findings, we used RCM II, MTA, and RCFA to attack the highest priority equipment in the mill. Our first area results yielded more than 2,200 failure modes

and approximately 94 proactive rounds that were being performed by both operators and maintainers.

Concurrently, we contracted a third-party predictive service provider to help us realize our vision. Our predictive maintenance program is comprehensive, performing vibration analysis, IR thermography scans, ultrasound surveys, oil analysis, motor circuit analysis, and NDT. We perform vibration analysis using both CSI 2130 and asset health manager and Fluke 810 vibration tester. Certified analysts use the 2130 for highly critical equipment, and all our mechanical technicians have been trained to use the Fluke unit for medium to low criticality equipment. Findings from these predictive systems are then verified by an analyst. We have found that this reduces the workload of the analyst and has allowed for expansion of the vibration program to include a proactive balance program. We have trained all our technicians to use IR thermography cameras. We use a Fluke Ti30 and an Electrophysics HotShot HD-XT for both electrical and mechanical surveys. Airborne ultrasound is performed by our technicians with an Ultraprobe 10000 for air leaks, arcing, tracking, and lubrication. Oil samples and analyses are performed by an external lab on all critical gearboxes and bearing lubrication systems. Online and offline MCE testing is performed using ALL-Test Pro units.

We have also applied RCM methodologies to new equipment installations, which have reduced energy usage and maintenance costs. The program's analysis and implementation phase began in October of last year. To date we have realized more than \$2,000,000 in cost avoidance and savings: 10% from RCM II, 10% from ultrasound, 5% from IR, 50% from vibration analysis, 10% from precision maintenance practices, and the balance from increased workforce utilization, reducing overtime and increasing FTE as a result of increased inspections.



Best
Green
Reliability
Program

FutureMark Paper