

UPTIME'S PDM PROGRAM OF THE YEAR

2010



Hibbing Taconite Company

- CSI 2120 Data Collector RBMWare
- AMS Machinery Health Manager
- Oil Analysis- Fluid Life WinRoast/myLab Software
- Mikron 7815 Infrared Camera

Best
Vibration
Mobile
Fleet

Hibbing Taconite Company Vibration Anyalysis Program Highlights

Historically at Hibbing Taconite, major component replacements have been planned and scheduled based on the manufacturer's estimated component life. With the ever-increasing costs of these components and the ability of new tools to better determine the actual condition of components, Hibbing Taconite Company has transitioned away from this practice to condition-based component replacement. We have been aggressively implementing the predictive maintenance tools such as Vibration Analysis, Oil Analysis, and Infrared technologies to provide us with a level of information that was

not previously available. Utilization of these technologies provides an accurate picture of the health of our assets and components. Armed with these technologies, we have been able to substantially extend the life of our critical components well past the manufacturer's recommendations. This has had a direct impact on our bottom line. In the past, the ability to utilize these predictive technologies on

heavy mobile equipment, particularly vibration analysis, has been difficult at best. Through some creative thinking of the reliability team and the process of trial and error, Hibbing Taconite has been successful in applying the predictive maintenance technologies to take mobile equipment maintenance to a higher performance level.

In the last few years the shift to a solid PdM program from time-based component change out has allowed us to defer equipment downtime and component replacement saving significant money and increasing equipment operating time. All of which directly impacts the bottom line. Added risk is managed through close

monitoring of the component condition to ensure no unplanned surprises occur.

The use of vibration and infared analysis along with other predictive technologies, has supported our Proactive Maintenance strategy by allowing us to identify and correct issues before they cause component failure. This eliminates unscheduled mobile equipment downtime and provides more equipment operating time. Mean Time Between Failure has increased as the predictive maintenance solutions have found, eliminated or minimized the small delays. This provides for a higher percentage of planned and scheduled maintenance and therefore more efficient corrective action maintenance, again reducing overall maintenance cost.



From Left: Dean Weiberg – Maintenance Manager, Jake McLwain – Maintenance Supervisor, Jack Croswell – Mine Manager, Jeff Cowling – Maintenance Planner, Nick Maki – Reliability Engineering Manager, Tim Dickson – Maintenance Planner, Jim Devyak – Maintenance Electrician, Dave Eddy – Section Manager Mine Maintenance, Bruce Bjelland – Electrical Maintenance Planner, Jim Fetzik – Maintenance Mechanic, Mike Yonkovich – Automotive Mechanic. Not Pictured: Jen Nelson – Maintenance Schedule

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