

METAL & STEEL PRODUCTS

On-Site Preventive and Predictive Maintenance Services



- **Application** = Crane Motor
- **Motor Type** = DC
- **Manufacturer** = GE
- **HP** = 60
- **Voltage** = 500
- **RPM** = 1150
- **Enclosure** = DPG

The Challenge

A steel pipe mill in Alabama has been under-staffed in their maintenance department for an extended period of time. As a result some of the maintenance inspections on the plants cranes have been delayed or not performed. Loss of a single gantry crane reduces production capacity at the mill by 50%.

The Solution

IPS field service technicians are experienced in preventive and predictive maintenance service of electric motors, and provide scheduled visual inspections of the plants cranes. During a recent inspection, IPS identified a bearing issue on one of the crane motors, and recommended replacement due to the fact that there was movement in the bearing housing. Because the issue was found before a catastrophic failure, the customer was able to replace the motor during a scheduled outage, avoiding costly unplanned downtime.



IPS field service technicians use state-of-the-art technologies and test equipment for the most accurate predictive maintenance results. On-site diagnostics include vibration analysis (left) and laser temperature readings (right).



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TOTAL COST OF OWNERSHIP (TCO)



The Savings

Maintenance costs drop as you shift from emergency purchases and unscheduled downtime to planned service. Since IPS field service technicians were able to correct the issue before a catastrophic failure, the customer was able to replace the motor during a scheduled downtime. Otherwise, the customer would have been forced to completely replace the failed motor and incurred costly lost production. A loss of \$65,000 in downtime and 50% capacity reduction yielded \$195,000 for the (6) hours that it takes to remove and replace these gantry crane motors. There was also a savings in that the motor could be reconditioned, as opposed to completely replaced after catastrophic failure. IPS annual cost for performing the crane inspections is only \$8,500.

COST ITEM	COST DESCRIPTION	ANNUAL TCO	IPS SOLUTION
Production	Unplanned Downtime (Plant)		
	Total events (Qty. / Year)	1	0
	Reduction in Capacity* (\$ / Hour)	\$32,500	\$0
	Avg. time per event (Hours)	6	0
	Sub-Total (\$ / Year)	\$195,000	\$0
Materials	Repair		
	Total events (Qty. / Year)	1	1
	Avg. repair cost (\$)	\$20,000	\$8,500
	Sub-Total (\$ / Year)	\$20,000	\$8,500
1st Year TCO =		\$215,000	\$8,500
IPS SOLUTION SAVINGS =			\$206,500

* Issue did not shut the operation down, but reduced production by 50%, \$65,000 hr in downtime x 50% = \$32,500

The Conclusion

Well-planned maintenance is imperative to the operation of electric motors and generators. It can also help you lower spending by extending system and component service life. If you are currently not using IPS for preventive and predictive maintenance of your electric motors and generators and would like to receive more information about TCO documented savings, contact your local IPS sales representative or visit www.ips.us or www.ips.ca.



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