

WOOD PRODUCT MANUFACTURING

Quality Low-Voltage Rewind Eliminates Unplanned Downtime



- **Application** = Dryer ID Fan
- **Motor Type** = AC Induction
- **Manufacturer** = Baldor
- **HP** = 400
- **Voltage** = 460
- **RPM** = 1160
- **Frame** = L449T
- **Enclosure** = TEFC

The Challenge

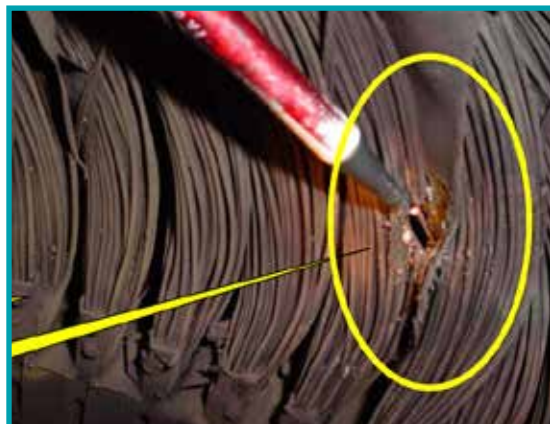
An OSB (Oriented Strand Board) facility was having multiple failures on their dryer ID fan motor. Unplanned downtime at this facility can reach up to \$7,500 per hour. The facility sent the motor to IPS for analysis and repair.

The Solution

During initial inspection, the following findings were documented:

- Phase paper unevenly applied in winding, increasing possibility of phase-to-phase shorts
- Some stator windings are void of resin, which will result in insulation failure due to contamination, vibration and electrical stresses

All IPS stator repairs receive either a double dip and bake process or Vacuum Pressure Impregnation (VPI) process to ensure windings are fully protected by resin. Phase paper is applied evenly by hand during the rewind process, and IPS only uses high quality, inverter duty wire on all rewinds.



Lack of phase paper coverage resulted in a phase-to-phase short



IPS rewinds provide complete coverage of phase paper every four coils

TOTAL COST OF OWNERSHIP (TCO)



The Savings

The IPS rewind motor has operated reliably for several years without incident, eliminating all unplanned downtime and repair costs of the plants Dryer ID Fan motor and missed production by the plant. Prior to IPS, the motor had failed three times in one year, resulting in an unplanned Total Cost of Ownership (TCO) of \$88,200. Even though the IPS rewind was approximately 32% more expensive than that of the competitor, the customer experienced documented annual savings of \$62,800 in the first twelve months, when compared to the prior year.

COST ITEM	COST DESCRIPTION	ANNUAL TCO	IPS SOLUTION
Production	Unplanned Downtime (Plant)		
	Total events (Qty. / Year)	3	0
	Reduction in Capacity* (\$ / Hour)	\$1,500	\$0
	Avg. time per event (Hours)	8	0
	Sub-Total (\$ / Year)	\$36,000	\$0
Labor	Unplanned Downtime (Labor)		
	Total events (Qty. / Year)	3	1
	Mtn. labor rate (\$ / Hour)	\$25	\$25
	Mtn. personnel per event (Qty.)	2	2
	Avg. time per event (Hours)	8	8
Sub-Total (\$ / Year)	\$1,200	\$400	
Materials	Repair		
	Total events (Qty. / Year)	3	1
	Avg. repair cost (\$)	\$17,000	\$25,000
Sub-Total (\$ / Year)	\$51,000	\$25,000	
1st Year TCO =		\$88,200	\$25,400
IPS SOLUTION SAVINGS =			\$62,800

* Issue did not shut the operation down, but reduced production by 20%, \$7500/hr in downtime x 20% = \$1500

The Conclusion

The quality of your motor rewind takes you well beyond the initial cost of repair. IPS industry knowledge and repair specifications provide quality repairs the first time. If you are currently not using IPS for your electric motor and generator repair and would like to receive more information about TCO documented savings, contact your local IPS sales representative.



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