

# CASE STUDY #9151

Industry:	Utility	Fault Zone:	Rotor
Motor:	Induction	Location:	MCC
HP:	200	Voltage:	4160
FLA:	275	Speed:	1175

## Summary

A large vacuum pump motor was discovered to be running at higher than normal temperatures. Vibration data was checked and it was determined that levels were elevated as well, though readings were not conclusive enough to identify the source of the fault. PdMA was called in to perform EMAX testing.



Current analysis testing revealed high sidebands at pole pass frequency with a 29 db differential from the 60 Hz peak. These results indicated the presence of a defective rotor, likely with multiple broken bars. The motor was removed from service and sent to a motor shop for evaluation. Upon inspection, a total of 8 rotor bars were found to be cracked or broken. The heat generated from the rotor defects had severely damaged the stator insulation. The decision was made to rewind the stator and repair the rotor at a cost of \$13,000.

**TOTAL SAVINGS: \$75,000**

