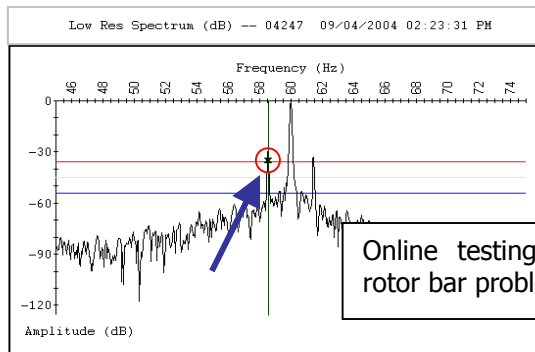




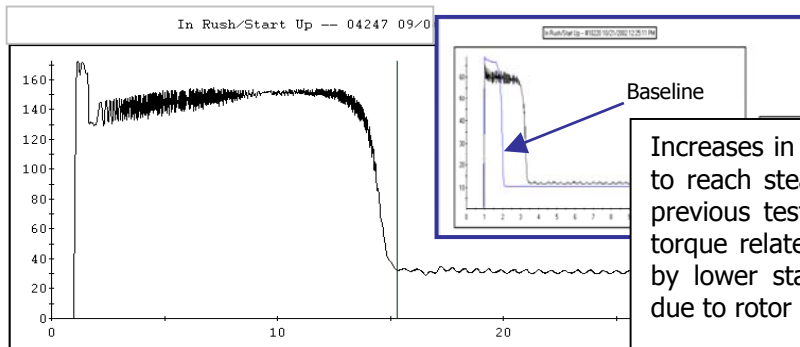
Fault Zone – Rotor

Rotor health refers to the integrity of the rotor bars, rotor laminations, and end rings of the squirrel cage induction motors. In a joint study by EPRI and General Electric, rotor defects were estimated to be responsible for approximately 10% of the motor failures. The rotor, although responsible for only a small percentage of the motor problems, can influence other fault zones to fail.

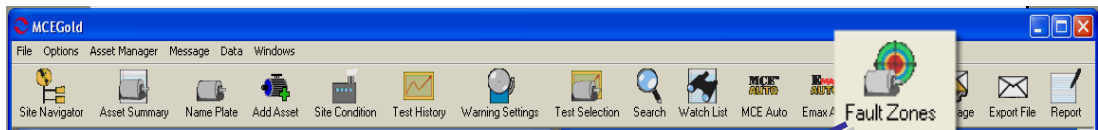
MCE™ motor circuit analysis uses inductance measurements taken from each phase of the stator windings and compares them at different rotor positions to further define the condition of the rotor. Advanced systems like EMAX provide simultaneous analysis of all three phases in its current signature analysis, which is an advantage over analyzing a single current. Using inductance measurements, current analysis, and other rotor testing technology provides the user with the ability to see very early changes in the magnetic signature of the rotor.



Online testing results indicate a severe rotor bar problem at 60% FLA.



Increases in the start-up time required to reach steady state as compared to previous tests are a result of load or torque related issues and are affected by lower start-up current and torque due to rotor defects or lower voltage.



Fault Zone	Test Type	Date	Condition Code	
Power Circuit	Voltage Imbalance (%)	0.39	4/19/2003 12:41:49 PM	Good
	Positive Imbalance (%)	0	4/19/2003 12:45:21 PM	Good
Power Quality	Voltage THD (%)	0.47	4/19/2003 12:41:49 PM	Good
	Current THD (%)	1.43	4/19/2003 12:41:49 PM	Good
Insulation	RTG (Mavg)	2100.00	4/19/2003 2:45:21 PM	Caution
	PS	1.25	4/19/2003 2:58:05 PM	Caution
Stator	CTG (gF)	185500.00	4/19/2003 2:45:21 PM	Good
	Imp. Imbalance (%)	1.18	4/19/2003 12:41:49 PM	Good
Rotor	Inductive Imbalance (%)	0.41	4/19/2003 12:45:21 PM	Good
	Ly Asymmetry (Delta dB)	32.22	4/19/2003 12:44:23 PM	Review
Air Gap	Eccentricity			
	Peak One (Delta dB)	-8.34	4/19/2003 12:49:35 PM	Insufficient Data
	Peak Two (Delta dB)	1.00	4/19/2003 12:49:35 PM	Insufficient Data
	Peak Three (Delta dB)	-5.02	4/19/2003 12:49:35 PM	Insufficient Data
	Peak Four (Delta dB)	-13.32	4/19/2003 12:49:35 PM	Insufficient Data
RIC (Eccentricity)	Not Tested			

The MCEMAX powered by MCEGold™ provides a Fault Zone Report, which is a one-page summary of the test results relevant to the six fault zones. The Fault Zone Report may be reached directly through the Fault Zones icon on the toolbar.