WINDING ANALYSIS
Services

Winding Analysis provides 3 tests to establish the condition of your motor winding insulation. This information will help you to reduce motor failures that can result in costly downtime, lost production, safety hazards, and increased maintenance costs. This program can be used to trouble shoot or eliminate the motor windings as the source of a failure or can be used as a trending tool so we can monitor the dielectric strength of your winding insulation over a period of time.Winding Analysis is a critical component to our **Predictive/Preventive Maintenance** and **Motor Reliability** programs.

Winding Analysis is performed in your facility when the equipment is not in operation.

Motors can be tested at the motor control or motor connection box. This testing can be applied to:

- AC or DC Motors
- Synchronous Motors
- Wound Rotor
- Exciters
- Transformers
- Coils
- Any type of winding.

Electrom TIG 12-D Winding Analyzer
- Safe non-destructive test.
- Uses DC voltage
- Leakage viewed in Micro-Amps

OFF-LINE Tests
- 1-Minute Megger Test
- Hipot Test
- Surge Test

ON-LINE TESTS
- Voltage/Amps per phase
- Rotor Bar Tests

Let us help you take the guesswork out of your machinery maintenance with our Predictive Maintenance On Site Service Programs

WINDING ANALYSIS SERVICE

Magneto Electric *Winding Analysis* will help you to:

- **Maximize motor reliability**
- **Optimize motor life**
- **Decrease unplanned downtime**
- **Improve plant safety**
- **Minimize repair costs**

Be in the know when it comes to motor windings

Magneto Electric
Service Company Limited - Since 1946

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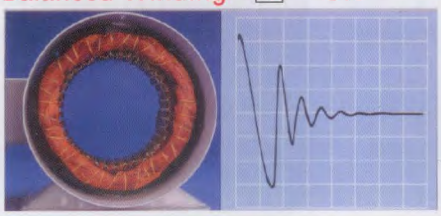
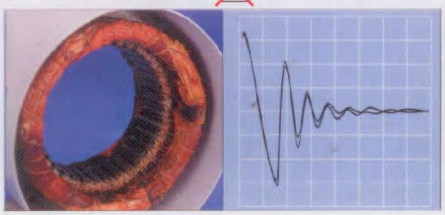
www.magnetoelectric.com

SURGE COMPARISON WAVEFORM CHART

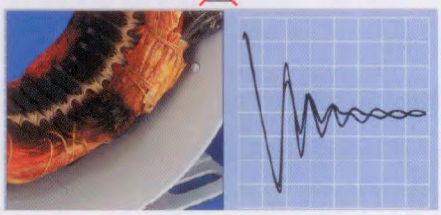
Balanced Winding ☑ OK



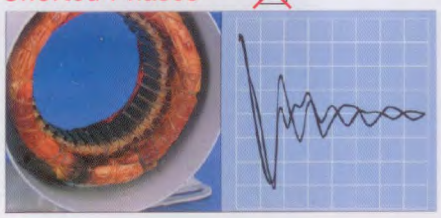
Shorted Turns ☒



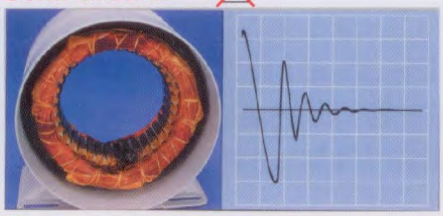
Shorted Coils ☒



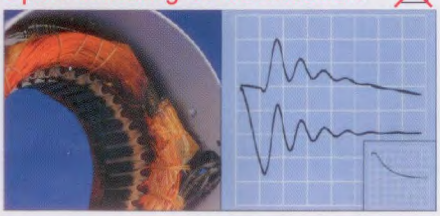
Shorted Phases ☒



Solid Ground ☒



Open Winding or Connection ☒



ABC Company
FITNESS REPORT

SERIAL #	DESIGNATION	MOTOR	BRUSH	COMMENTS
VC-8-1211-VC	LINE 4 22-04 PULLER	4	2	Motor must have ben cleaned since last year. Must be accessed and inspect brushes
01NS591843CAY	LINE 5 AUXILIARY EXTRUDER	4	AC	Brushes at 75%
56022-AM	LINE 5 23-05 ROLL FORMER	4	3	Brushes at 50%. Motor must have been cleaned since last year.
SC-1-128-XC	LINE 5 09-05 EXTRUDER	1	3	Both windings failed. Commutator and windings contaminated with dirt. Brushes at 50%
Replaced with AC	LINE 5 22-05 PULLER	4	AC	DC motor replaced with AC.
PD-1-270-PD	LINE 7 23-07 ROLL FORMER	1	3	Armature failed tests. Commutator and armature windings contaminated with dirt. Brushes at 50%.
T18R1301J-RN	LINE 9 09A-00A EXTRUDER	4	2	Could not access brush covers. Must be accessed and inspect brushes.
37MN323208	TPV EXTRUDER	4	2	Must be accessed and inspect brushes.
1KS585347-PD	LINE 9 09-09 EXTRUDER	4	4	Brushes at 75%.
	LINE 9 09A-09PVC EXTRUDER	4	3	Brushes at 50%.
00453690-S27-03	LINE 9 09-009B EXTRUDER B	4	2	Must be accessed and inspect brushes.
WC-1-127-WC	LINE 9 23-09 ROLL FORMER	3	2	Armature show a high leakage. Will monitor. Must be accessed and inspect brushes.

Repair Priority Codes

Requires Immediate Attention	1
Requires Corrective Action	2
Monitor Closely	3
OK-Continue to Monitor	4
No Test/AC Motor	NT/AC

MEGOHM- One million ohms of resistance .Usually measured with an electronic or crank type Megohmmeter.
GROUND RESISTANCE- The resistive value of dirt and moisture across the ground insulation.
LEAKAGE CURRENT- The measurement of microamps or milliamps of current across a resistive path to ground.
HIPOT-(High potential) Used for testing the dielectric strength of the ground insulation.
SURGE TEST- An impulse test used to determine the dielectric strength of the interturn insulation (turn to turn,phase to phase) in a coil or winding.
COMPARISON TEST- The comparison of two waveforms from two windings during the Surge Test. Shorts in one winding will cause a separation between the two waveforms.