

WHELCO INDUSTRIAL, LTD.



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SERVICE CENTER EVALUATION

Company Name: _____

Number of Years in Business: _____

Hours of Operations: _____

CEO, Owner: _____

Who controls Operations: _____

Do you provide free pickup & delivery? Yes No _____

Emergency Service? Yes No _____

Division Manager (this location): _____

Number of Employees Company Wide: _____

Number of Employees at this location: _____

Number of Technicians with: 15 + years _____

10 + years _____

5 + years _____

Under 5 years _____

BUILDING AND EQUIPMENT SUMMARY

Building Size (*this location*): _____

Area dedicated to work (*this location*): _____

Overhead Crane Capacity: _____

Electrical Supply for No Load Testing: _____

Bake Oven Size: _____

Burn-Off Oven Size: _____ Water Suppression: Yes No

Dip Tank Size: _____

Core Loss Tester: Yes No Make: _____

Winding Analyzer: Yes No Make: _____

Balancing Equipment: Yes No Make: _____

IN-HOUSE REPAIR CAPABILITIES CHECKLIST

- Random Wound Polyphase AC Motors
- Form Wound AC Motors
- Single Phase AC Motors
- DC Motor Repair
- Field / Interpole Rewinds
- Armature Rewinds
- Gearbox Repair
- Transformer Repair
- Machine Shop / Mechanical Repair
- Babbitt Bearing Repair
- UL Explosion Proof Motors
- Component Level Board Repair
- Solid State / Engine Driven Welder Repair
- Field Services
- Crane Maintenance
- Switch Gear / Circuit Breaker Testing
- Servo Motor Repair / Testing

Do you offer a motor management program? Yes No

Do you offer an asset management program? Yes No

Do you have an Industrial Electronic Lab?: Yes No

FIELD SERVICE CAPABILITIES CHECKLIST

If you do have a Field Service Department does it offer the following:

Field Balancing?	Yes	No	<u>Equipment:</u>
Vibration Analysis?	Yes	No	<u>Equipment:</u>
Laser Alignment?	Yes	No	<u>Equipment:</u>
Winding Analysis?	Yes	No	<u>Equipment:</u>
Power Quality Analysis?	Yes	No	<u>Equipment:</u>
DC Brush Maintenance?	Yes	No	_____
DC Brush Surveys	Yes	No	_____
Thermography?	Yes	No	_____
New Equipment Installation:	Yes	No	
Oil Analysis?	Yes	No	<u>Lab:</u>
Ultra Sonic Testing?	Yes	No	<u>Equipment:</u>
Cryogenic Cleaning?	Yes	No	

TRAINING / SAFETY / CERTIFICATES

INSURANCE CARRIER:

Agent Name: _____
Type of Coverage: _____
Telephone Number: _____

Workers' Compensation Experience Modification Rate (EMR) Data:

A) EMR is: Interstate Rate
 Intrastate Rate
 Monopolistic State Rate
 Dual Rate

B) EMR for last three years: _____ 2004
_____ 2005
_____ 2006

C) State of Origin:

D) EMR Anniversary Date:

SAFETY & HEALTH MANAGEMENT:

YES

NO

Do you have or provide Company paid safety / health training:

Do you have a written Safety & Health Prgram?

Does the program address the following key elements?

a) Management commitment and expectations?

b) Employee Participation?

c) Resources for meeting safety & health requirements

Does the program include work practices and procedures such as:

a) Equipment Lockout and Tagout (LOTO)

b) Confined Space Entry

c) Injury & Illness Recording

d) Personal Protective Equipment

e) Compressed Gas Cylinders

f) Powered Industrial Vehicles (Crane, forklift, JLGs, etc.)

g) Housekeeping

h) Accident / Incident Reporting

I) Unsafe Condition Reporting

j) Emergency Preparedness (including an Evacuation Plan)

k) Waste Disposal

Do you have written programs for the following:

a) Hearing Conservation

b) Respiratory Protection

Where applicable have employees been:

-Trained

-Fit Tested

-Medically Approved

c) Hazard Communication

d) Program to support the contractors requirements of the OSHA Process Safety

Management of Highly Hazardous Chemicals; Explosives and Blasting Agents

Standards (29 CRF 1910).

Do you have a substance abuse program?

If yes, does it include the following?

a) Pre-placement Testing

b) Random Testing

c) Testing for Cause

d) DOT Testing

Do your employees read, write, and understand English such that they can perform their job tasks safely without an interpreter?

If no, provide a description of your plan to assure that they can safely perform their jobs.

GENERAL SHOP PROCEDURES

INITIAL CALL:

What type of paperwork is generated when a pick-up is called in (provide example)?

What is your procedure for handling after hour calls?

RECEIVING:

What paperwork is generated when the equipment enters the building (provide example)?

- Are digital photos taken to clearly indicate the condition of the equipment when it is received? Yes No
- Are all accessories such as couplings, sheaves, t-boxes, fans and fan covers noted and recorded? Yes No
- Is all paperwork logged into a database for historical trending and monitored through a "work in process"? Yes No
- How long are records kept? _____

DISASSEMBLY:

- | | YES | NO |
|--|--------------------------|--------------------------|
| Are disassembly mechanics trained to read micrometers? | <input type="checkbox"/> | <input type="checkbox"/> |
| Are they trained to use a megohmmeter (meggar)? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do they steam clean equipment parts to inspect for cracks prior to submitting a condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| Are disassembly mechanics trained to read dial indicators? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have an inspection sheet for all fits to be mic'd? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the disassembly department have a ABMA chart to determine fit tolerances? | <input type="checkbox"/> | <input type="checkbox"/> |
| Are all parts punch marked or scribed to ensure proper re-assembly? | <input type="checkbox"/> | <input type="checkbox"/> |
| Do you have a sandblast unit? | <input type="checkbox"/> | <input type="checkbox"/> |

Notes: _____

MACHINE SHOP:

How many journeymen machinists are on staff? _____

Do you outsource any machine work? Yes No _____

What method is used to restore shaft fits? _____

What method is used to restore end bracket housings? _____

What is your largest press for removing shafts? _____

What is the maximum diameter your lathe can swing? _____

Can you re-insulate bearing fits? _____

What is the maximum weight of your balance stand? _____

How many balance technicians do you have on staff? _____

To what standard can you balance to? NEMA Gov Spec API ISO _____

What is the maximum run out acceptable for TIR? _____

How is a rotor checked for cracked or open bars? _____

Are you capable of turning and undercutting commutators? Yes No _____

Do you bevel slots? Yes No _____

Describe other machining capabilities: _____

WINDING :

Do you have any engineering services for rewind / re-design? _____

Do you have a controlled burn off process? Yes No Water Suppression? _____

Are you capable of core loss testing? Yes No Loop method OR Commercial tester

What is the maximum coil length you can shape for random wound coils? _____

Do you wind form wound coils in house? Yes No

If not, who do you purchase from? _____ Are they ISO certified? Yes No

Are you capable of varnish treating and curing in a controlled bake oven? Yes No

Are you capable of VPI (Vacuum Pressure Impregnation)? Yes No

Do you wind armatures in house? Yes No

Do you wind fields and interpoles in house? Yes No

Do you wind fields and interpoles in house? Yes No

How many different round wires sizes are present in inventory? _____

How many of these are "Inverter Duty"? _____

How many different rectangular wire sizes are in inventory? _____

What temperature classes of insulation are stocked and issued? _____

Do you use phase paper between each coil grouping? Yes No

Do you use shrink cord to tie down end turns on both sides of motor? Yes No

Do you pre-heat windings prior to varnish treatment? Yes No To what temperature? _____ °

How many winders are on staff for AC Stators? _____

How many winders are on staff for AC Wound Rotors? _____

How many winders are on staff for DC Fields / Interpoles? _____

How many winders are on staff for DC Armatures? _____

What are new windings surge tested at? _____

What other tests are performed for new windings? _____

Notes: _____

ASSEMBLY :

Are assembly mechanics trained to read micrometers? Yes No

Are assembly mechanics trained to read dial indicators? Yes No

Provide a copy of the final assembly sheet.

Does the assembly department have access to an ABMA chart? Yes No

Is there adequate stock of bearings and seals? Yes No _____

What brand of bearings are in stock? _____

Why has the shop chosen that brand? _____

What method is used to mount bearings? _____

If bearing heaters are used, to what temperature are the bearings heated to? _____

For sleeve bearing what method is used to ensure proper clearance? _____

What lubrication grease is used in the bearings? _____

Is there and adequate inventory? Yes No

Is Rotor / Stator and Armature / Fields alignment checked? _____

Is Air Gap measured? Yes No _____

Is Endplay checked? Yes No _____

What method is used to check proper polarity and neutral on DC motors?

AC Induction Method, Reverse Rotation, Induction Kick Method

Are leads clearly marked? Yes No

Are bearing temperatures monitored when motor is running? Yes How long? _____

Is No Load testing done on all motors? Yes No Maximum Voltage? _____

Is Load test available? Yes No Up to: _____

Notes: _____

TEST DATA :

Please provide examples of the following test data:

- Full Electrical Test Data with workscope
- Vibration Spectral Data
- Balance Report
- Shipper / Packing Slip
- Other _____
- Other _____

Are all documents archived at your facility? Yes No

Does repair facility affix a permanent tag with tracking identification numbers? Yes No