

3-D SERVICE
REPAIR • SERVICE • SUPPLY
A Subsidiary of Magnetech Industrial Services, Inc.

Engineering Consulting Services



When it's time to upgrade your electrical control, motor or drive system—

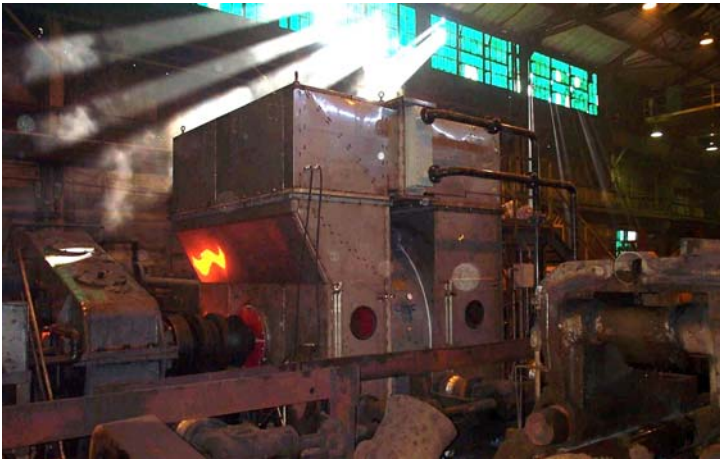
Call **800-837-1614** for 3-D Service.

Industries Served

- Steel
- Utilities
- Paper
- Chemical
- Extrusion
- Injection and Blow Molding
- Metal Manufacturers
- Mining
- Plastics
- Printing
- Processing Lines
- Metal Forming
- Rubber

Application Engineering In Action

Our mission is to provide value-added engineering support for your applications. Our engineers and field technicians can test and evaluate your maintenance and repair needs before beginning a project as well as provide consulting and design services.



This steel mill motor was force-ventilated using outside air brought in through a filtered, guarded system. Low megohmmeter readings were an ongoing problem on the motor. 3-D Service engineers redesigned the ventilation system to a closed-loop, air-to-water heat exchanger system.



Engineering Upgrade and Redesign Services

3-D Service engineers can upgrade or redesign your equipment for better performance, energy management, and heat dissipation.

- AC and DC Motors and Drives
- Generators
- Turbines
- Dynamometers (AC, DC, and eddy current)
- Seal Redesign
- Rotor / Armature Coil Upgrade
- Commutator Redesign
- Switchgear
- Circuit Breakers
- Substations
- Transformers
- Isolated Phase Bus
- Compressors
- Cranes

As an authorized ABB service center and a flagship GE service center, our engineers have access to drawings and engineering support for ABB and GE parts and equipment.



GE Industrial Systems

In addition to upgrade and redesigns, our services include:

- Motor Modifications
- Project Management
- Commutation Evaluation
- Root cause failure analysis
- Finite element analysis
- Shaft stress analysis
- Torsional loading analysis
- Modal analysis
- Duty cycle analysis
- Energy efficiency studies
- Performance verification testing & analysis
- Equipment surveys & needs assessment
- Cost/benefit analysis of proposed modifications
- UL Re-rating
- CAD Engineering/Documentation Services
- Load shedding
- Automatic transfer schemes
- Harmonic filter design and specification
- Bus design & on-site fabrication



Epoxy coated bus

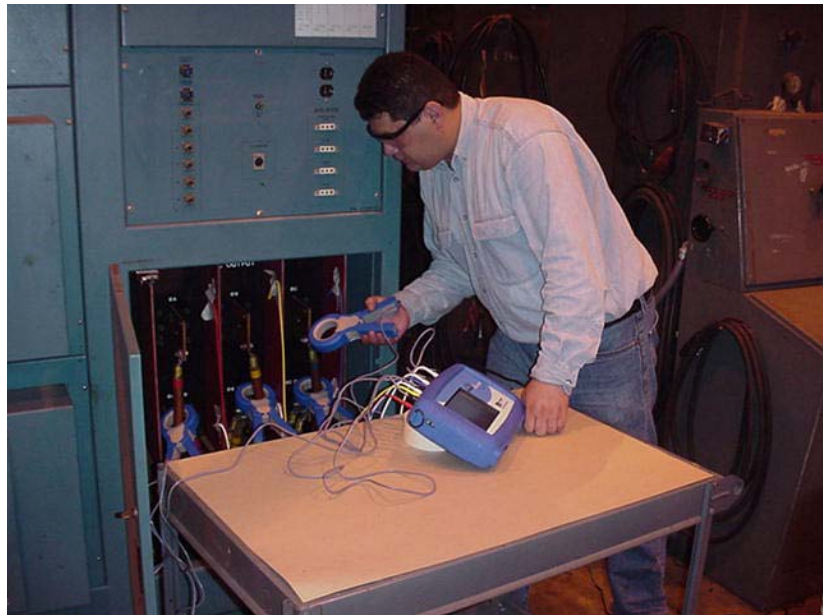
Power System Analysis

Power quality is a major concern for today's businesses. Most problems occur because of inadequately protected electronic equipment that sends electrical noise through the system; improper wiring or grounding; or imbalanced loads.

To protect electrical systems and equipment many companies use surge protection devices, lightning arresters, and UPS equipment. But, in most cases, these measures are not enough to ensure the highest possible power quality.

3-D Service combines extensive knowledge and experience with the most modern tools to provide a systematic and thorough analysis of your power system, including:

- Data collection using power quality analyzers
- On-site review of applied wiring and grounding
- Power monitoring to capture events triggered by power, harmonic and transient thresholds



Additionally, a 3-D Service power quality analysis provides:

- Power quality surveys and diagnostics to improve your power quality and equipment reliability
- Match equipment requirements and susceptibilities to incoming supply
- Low, medium and high frequency transient capture using digitized high-speed sampling
- Load distortion and imbalance analysis to IEEE standards to extend equipment life
- Identifies systems that are weak compared to the amount of power required by the load through flicker analysis
- Identification of harmonic pollution including inter-harmonics and sub-harmonics
- Coverage of both static and dynamic power system elements
- Compliance with power quality standards





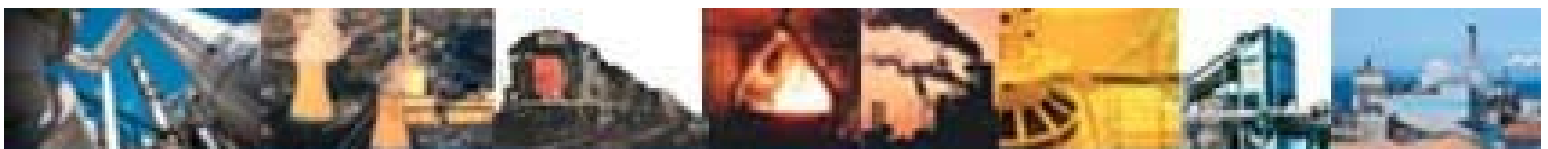
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Form 120E

ISO 9001:2000 Certified



Adding a New Dimension to Industrial Service and Repair