



# Power

Products & Services

# Comprehensive Solutions Partner



Why take chances with your critical processes and equipment? Since 1937, Magnetech has provided repair, reconditioning, and remanufacturing of electrical-mechanical equipment for customers throughout North and Central America. Our broad experience with all types and brands of electrical, mechanical and power system equipment will keep you up and running. To ensure safe and reliable services, choose a trusted partner. Choose Magnetech.

## Capabilities

- ▶ Generator & Motor Testing
- ▶ Transformer Testing
- ▶ Cable Testing
- ▶ Switchgear, Circuit Breaker & Disconnect Switch Testing
- ▶ Ground Grid Measurements
- ▶ Insulating Fluid Testing
- ▶ Protective Relay & Metering Tests
- ▶ Auxiliary & Control System Testing

## In-Shop Remanufacturing

- ▶ Retrofit, repair and reconditioning of circuit breakers and switchgear
- ▶ Motor control centers, starters and contactors
- ▶ MCC bucket retrofits and upgrades
- ▶ Match-in-line for legacy switchgear

## Field Service Offering

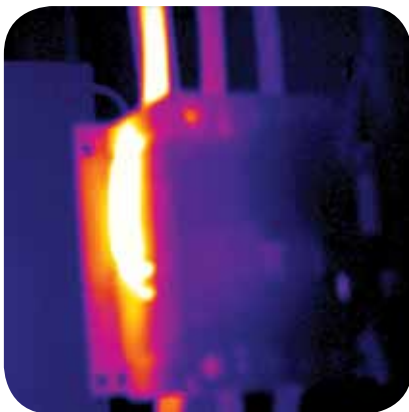
- ▶ Scheduled testing and maintenance services for electrical systems
- ▶ Installation, start-up and commissioning of new equipment
- ▶ Circuit breakers, switchgear and MCC's
- ▶ Generators and controls, auto switching
- ▶ Transformers, power cable and bus systems
- ▶ Protective relaying; testing and upgrades
- ▶ Field and site testing of motors, motor contactors and starters
- ▶ Thermographic scans and infrared surveys

# Maintenance & Testing

## Commissioning

Why take chances in not properly commissioning new equipment? Magnetech can confirm the equipment is installed correctly, meets applicable codes and passes all IEEE/UL tests to help minimize any unexpected events in the future. Our qualified technicians provide commissioning on any brand of equipment.

- ▶ Visual Inspection
- ▶ Electrical & mechanical testing
- ▶ Protective relay setup & testing



## Predictive Maintenance

Predictive maintenance solutions can provide an early warning of impending issues between regular maintenance intervals and help prevent downtime. Regular monitoring of equipment and trending the results, helps prevent unplanned events.

- ▶ Thermographic scans and infrared surveys
- ▶ Infrared windows
- ▶ Oil testing and analysis



## Preventative Maintenance and Testing

A comprehensive preventative maintenance program can reduce the risk of unplanned outages on your electrical system. The failure rate of electrical components is three times higher for systems where preventative maintenance is not performed, per statistics from the Institute of Electrical and Electronics Engineers. The two conditions below account for nearly half of all electrical failures\*, both can be corrected during regular preventative maintenance.

- ▶ Loose Connections – provide a high resistance path, leading to overheating
- ▶ Moisture – humidity and water ingress, leading to dielectric breakdown

\*Source: Hartford Steam Boiler Inspection and Insurance Company

To help mitigate these issues periodic cleaning, maintenance and testing is required. Magnetech's qualified field service technicians provide this preventative maintenance and testing service, as outlined in below:

- ▶ Visual Inspection
- ▶ Cleaning & Adjustment
- ▶ Electrical testing of equipment
- ▶ Relay and Trip Unit testing

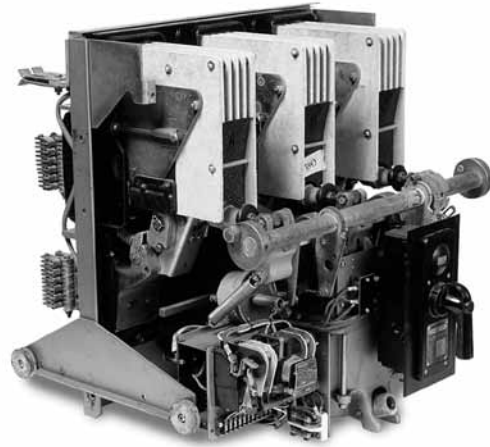


# Modernization Solutions

## Circuit Breaker Reconditioning

The useful life of aging circuit breakers can be extended and enhanced through Magnetech's reconditioning process. The process helps enhance coordination, improve reliability and extend the life of the circuit breaker. A cost effective solution to renew your circuit breakers without buying new equipment.

- ▶ Trained and experienced technicians
- ▶ Trip unit upgrades for enhanced selectivity
- ▶ Affordable solution for any maintenance budget
- ▶ Magnetech Factory warranty



## Match-in-Line Switchgear

When you need to expand an existing switchgear line-up by add one of more feeders, match-in-line is an economical and quick solution. Expand your switchgear by adding a remanufactured vertical section and circuit breaker that are compatible with your existing line-up.

- ▶ Affordable expansion to existing switchgear
- ▶ Reduce maintenance concerns by installing common equipment
- ▶ Available for all manufacturers switchgear



# Transformer Remanufacturing



## Transformer Remanufacturing

Magnetech is a transformer repair and remanufacturer service provider that has the advantage of being able to do comparative analysis and design on all manufacturers worldwide. With our years of experience, we are able to see what works and what does not. Our unique position allows us to perform reverse engineering to verify that the unit meets the stated nameplate data, and then offer design improvements.

- ▶ 100 KVA to 25,000 KVA (Base Rating), up to 69 KV
- ▶ Rectangular layer, Circular layer, Circular disc, Circular Helical and Shell Form design
- ▶ Substation Transformers
- ▶ Unit Substation, Padmount, Distribution Transformers
- ▶ Furnace Transformers
- ▶ Specialty Transformers (Rectifier, Network, Precipitator and Train)
- ▶ Mobile Substations



# Transformer Services

## Transformer Services

Magnetech's qualified service technicians can handle a turnkey transformer installation to the simplest oil testing protocol. With our years of experience working on all manufacturer's transformers, we are able to bring the best solution to any problem you may have.

### Field Service

- ▶ Field Refurbishment
- ▶ Gasket Replacement
- ▶ Coolers, Valves, Fans, Controls, Wiring, and Accessories Replacement
- ▶ Pump Rebuild and Replacement
- ▶ Bushing Replacement



### Electrical Testing

- ▶ Turns Ratio, Insulation Resistance, Winding Resistance
- ▶ Power Factor
- ▶ Full CT Testing

### Load Tap Changers

- ▶ Load Tap Changer (LTC) Inspection and Maintenance
- ▶ Load Tap Changer (LTC) Replacement and Upgrade

### Fluid Service

- ▶ Oil Reclamation, Oil Dehydration, Oil Degasification
- ▶ Vacuum Filling
- ▶ Vacuum Dry-Out

### Turnkey Services

- ▶ Transformer relocation
- ▶ Assembly, Installation and Commissioning

### Failure Investigation and Repair

- ▶ Lead Repair
- ▶ No Load Tap Changer (NLTC) Repair
- ▶ Re-Blocking

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