

Continuous Cast Belt Furnace



Harden and Temper, Carburizing, and Carbo-Nitriding

Materials Research

Mechanical Testing
(Tensile, Impact,
Hardness, etc.)

Metallographic
Analysis

Non-Destructive
Examination

Furnace Contamination Testing to AMS-H-6875

Failure Analysis/Fractography

Chemical Testing

ISO 17025 Accredited, Nadcap & ISO 9001 Certified

Extensive experience serving Heat Treaters using Modern's inclusive preparation and testing facilities.



Quality & Customer Service

QUALITY SYSTEMS

- Nadcap Accredited
- Digital Hardness Testers
- Weekly Calibration of Furnaces
- 2 Independent Methods of Checking Atmosphere
- Carbon probes/3 gas analyzer
- Uniformity per SAE/AMS 2750
- Military, Automotive and Aerospace Specifications
- SPC
- ISO 9001 & ISO/TS 16949 Certified

CUSTOMER SERVICES

- Trucking
- Accreditation for Nadcap, ISO 17025 & ISO 9001
- Chemical, Mechanical and Fastener Testing
- Staff Metallurgists
- Staff Process Engineers
- Prototyping / Research and Development
- Process Charts on Request
- Process Certification
- Field Sales Engineers
- Customer Service Representatives

Nitriding

Nitriding is performed on steels to provide a hard surface while maintaining a soft, ductile core. Since Nitriding is performed at low temperature, distortion is held to a minimum. Modern is the largest Nitriding facility in the area with 5 furnaces dedicated to Nitriding.

MODERN INDUSTRIES, INC.

Heat Treating Division

613 West 11th Street
Erie, Pennsylvania 16501
Phone 814.455.8061 x 261 (customer service)
Fax 814.454.3090

US Heat Treat

A Division of Modern Industries, Inc.
135 Green Road
Kersey, PA 15846
Phone 814.885.8514
Fax 814.885.8498

Email Customer Service:
MHTService@modernind.com

Visit our web site at www.modernind.com

Modern Heat Treating

MODERN INDUSTRIES, INC.

ERIE, PENNSYLVANIA

www.modernind.com

Complete Commercial Heat Treating Service



TS 16949 and
ISO 9001 Approved!

Markets

- Automotive/Trucking
- Tool & Die
- Aerospace
- Military
- Munitions
- Medical
- Mining
- Nuclear
- R & D Services
- TS 16949 & ISO 9001 Certified
- Nadcap Accredited

Facilities

BATCH PROCESSING

Hardening, Carbonitriding, Carburizing, Annealing, and Normalizing with Protective Atmosphere

CONTINUOUS BELT PROCESSING

With Polymer, Water, or Oil Quench Capability

VACUUM PROCESSING

Argon Gas, Nitrogen Gas, and Oil Quenching Capability
Vacuum to 1 micron

INDUCTION HARDENING

Induction Unit - 100 kw/15 to 30kHz
Induction Unit - 200 kw/10kHz

NITRIDING

Standard Nitriding
Ferritic Carbonitriding
Trinitriding & Polish

STRESS RELIEVING PROCESSES

ALUMINUM PROCESS (6 SEC. QUENCH)

Quick Quench Aluminum Processing
Aging Furnaces

TEMPERING

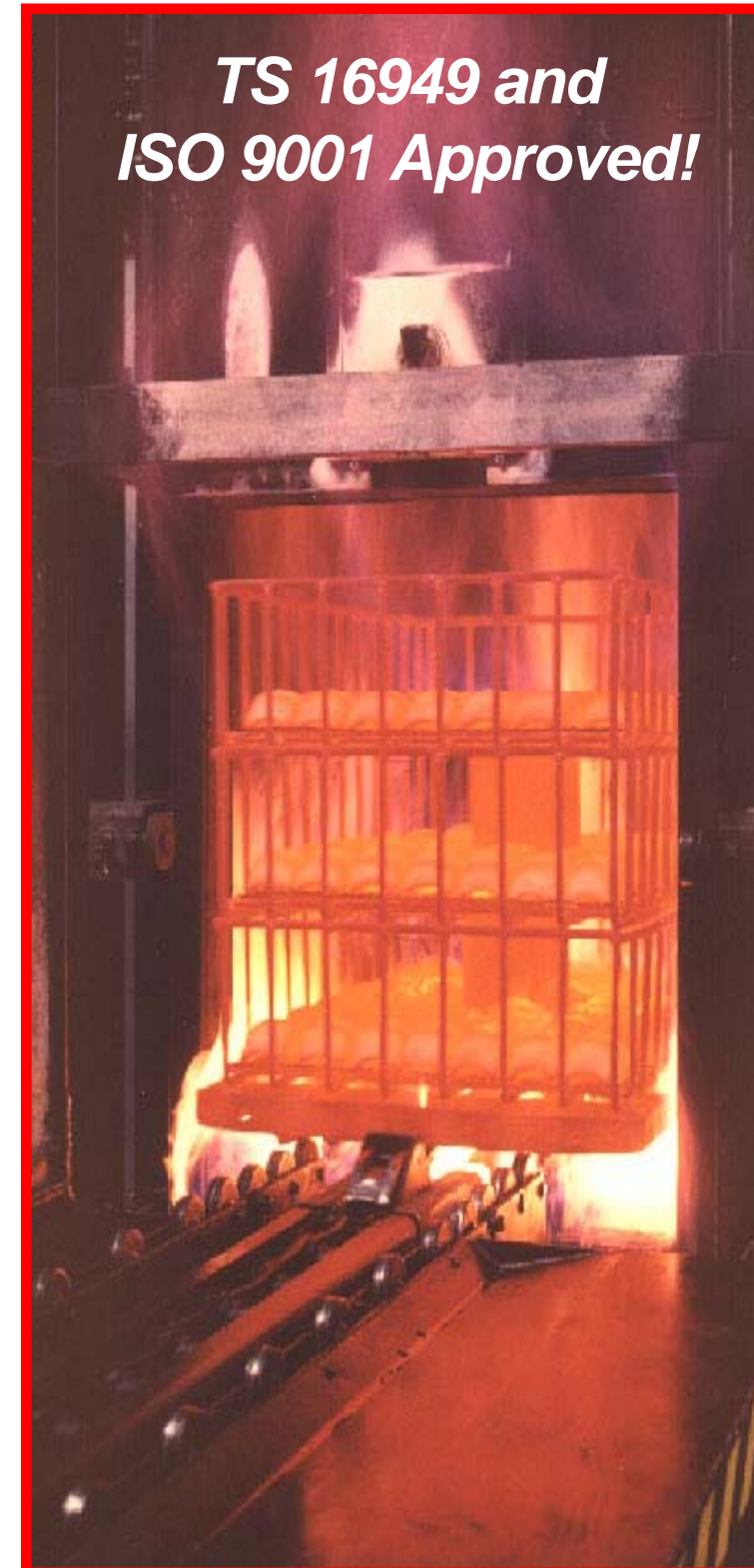
Full compliment of over 30 tempering furnaces

SUPPORT SYSTEMS

Computerized Furnace Controlling System
Furnace Management Network Systems for the Continuous control and tracking of key heat treating parameters
Three-way gas analysis of CO₂, CO, and CH₄ in addition to O₂ probes

MATERIALS TESTING LABORATORY

Chemical Analysis, Mechanical Properties, Micro hardness, Scanning Electron Microscope, Metallography, Impact Testing, NDT and More





MODERN INDUSTRIES, INC.

613 West 11th Street · Erie, Pennsylvania 16501

Heat Treating Processes

- Hardening & Tempering
- Carburizing
- Carbonitriding
- Ferritic Nitrocarburizing
- Trinitriding
- Short Cycle Nitriding
- Nitriding
- Vacuum Processing
- Induction Hardening
- Aluminum Heat Treatment
- Normalizing
- Stress relieving
- Deep Freezing
- Carbon Restoration
- Sand Blasting/Tumbling
- Vacuum Brazing
- CNC Straightening
- Cryogenics to -300°F
- Annealing

Vacuum Processing, Tool & Die, Specialty Steels



Vacuum Processing reduces size change and eliminates many of the problems often associated with other methods of processing.

- Tool Steels
- Hot Work Steels
- Stainless Steel
- High Speed Steel
- Inconel
- Specialty Brazing
- Aerospace
- Nuclear Work
- Bright Annealing

Super 30 Line, Super 36 Line, & Super 42 Line



Batch Furnaces are equipped with oil or water quench, protective atmospheres, computerized controls and monitoring of all processing parameters.

Special Features

- (4) Staff Metallurgists
- Truck Fleet for Prompt Delivery
- Tumbling & Deburring
- Special Cleaning
- Nadcap Accredited
- TS 16949 & ISO 9001 Certified
- Computer Process Controls
- Full Time Customer Service
- Large Capacity Batch Equipment

Process Controls



Computerized control, monitoring, adjustments and traceability of furnace atmosphere, temperature, cycle time, quench variables and other process elements.

Induction Hardening



Induction Unit Dual-Scanner - 100 kw/30khz and 200kw/3-10khz