

Furnaces for
Tube and Pipe

For over 30 years SECO/WARWICK has designed and built continuous furnaces and production lines for heat treatment of tubes for ferrous, stainless steel and alloy materials.

Process Applications

- Full annealing
- Bright annealing
- Solution annealing
- Stress relieving
- Hardening & tempering
- Spheroidize anneal
- Tube heating
- Hot piercing & extrusion
- Preheating of tubes for SRMs



Furnace and Production Line Configurations

■ Type of furnace design

- roller hearth furnace
- walking beam/hearth furnace
- mesh belt furnace
- special construction

■ Type of heating system

- electric (resistance heating) fired
- fuel (natural gas, LPG) fired

■ Adapted for operation with atmosphere

- air
- protective
- vacuum
- hydrogen
- argon



The SECO/WARWICK Advantage

- Custom engineered equipment to meet all of your unique requirements
- Expanite® technology for surface hardening of stainless steel
- Rolls that can operate at the temperatures of up to 1230°C (2250°F) without a cooling water system
- Cold testing is standard prior to shipment; hot testing is available upon request
- Availability at level of 97%
- Computerized Maintenance Management System (CMMS)
- Online Service
- Heating elements that are replaceable without interrupting the process
- Experience processing a wide variety of materials including carbon steel, stainless steel, Inconel, copper alloys, beryllium copper and titanium
- Furnaces up to 108 meters (354 feet) long
- Furnaces working under protective atmospheres (hydrogen, nitrogen, argon) standard vacuum and vacuum purge options

Control Systems

SECO/WARWICK offers a total control system featuring PC/PLC integration along with a graphic software package and over temperature control instrumentation. We provide not only the hardware and software, but system technology that produces highly reliable and repeatable technological process results.

To the Operator



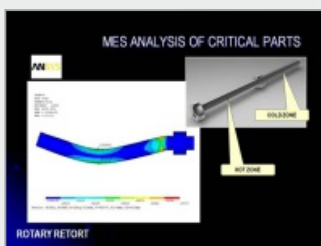
- Functionality and simple operation
- Full visualization of the furnace operation
- Comprehensive management in emergency
- Intuitive interface operable for an inexperienced operator
- Immediate detection of variations
- Custom setup of all data analysis charts and printouts
- Full integration with SCADA software – no need of extra
- Software; the operator needs only one interface
- Automatic creation of the predefined reports
- Process simulation software implemented in one system
- Fully automated operation – no human factor risk

For Operations Management



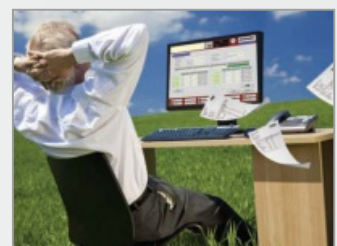
- Two level signaling of alerts - color coding allowing immediate recognition of risks and quick response to emergencies
- Full history of operation
- Operation time counters, advance announcements of the planned servicing
- Thermocouple durability monitor
- Utility usage monitoring
- Broad but easy manual mode of devices setup to help with repairs and maintenance
- System backups of entire setup enables archiving of the setups
- Failure Monitoring, Recognition & Diagnostic System

For the Head Engineer



- Advanced management system of manufacturing programmes
- Comprehensive information storage at one place
- Long term data accumulation
- Fast, read only, remote access to archived data
- Application browser provides read - only access to data
- Work time savings - automatic report creation
- Export to local files or to a web page.
- Process tested in the laboratory furnaces
- Simulation of the heat transfer using ANSYS MATHAD system
- Application of the FMEA technique
- Realization of the Strength Analysis – MES ANSYS

For Top Management



- Reduced cost of implementation
- Reliability and quick response increases margins
- Data safety - individual data access privileges for the users
- Worktime savings with manufacturing automation
- Availability of data for the plant output control
- Statistics of base availability indicators, analyses of idle time and availability
- Connectivity to ERP and plant floor systems
- Integration with the enterprise IT systems
- Integration with the CMMS (Computer Maintenance Management System)

Auxiliary equipment

For fully integrated production lines SECO/WARWICK can supply system components to suit process configuration and desired production operations and rates:

- Charge and discharge tables, fully automated
- Quench systems
- Protective atmosphere systems
- Cooling equipment
- Loaders

Moreover in addition to leased gases, SECO/WARWICK can provide atmosphere generators for endothermic (Endogas®), exothermic (Exogas®), dissociated ammonia (Ammogas®) and hydrogen.



SECO/WARWICK Group

POLAND
SECO/WARWICK S.A.
Sobieskiego 8
66-200 Świebodzin, Poland
tel. +48 68 3820 500
fax +48 68 3820 555
info@secowarwick.com.pl
www.secowarwick.com

POLAND
SECO/WARWICK Europe Sp. z o.o.
Świerczewskiego 76
66-200 Świebodzin, Poland
tel. +48 68 3819 800
fax +48 68 3819 805
europe@secowarwick.com.pl
www.secowarwick.com

USA
SECO/WARWICK Corp.
P.O. Box 908
Meadville, PA 16335-6908, USA
tel. +1 814 332 8400
fax +1 814 724 1407
info@secowarwick.com
www.secowarwick.com

USA
RETECH SYSTEMS LLC
100 Henry Station Rd.
Ukiah, CA 95482, USA
tel. +1 707 462 6522
fax +1 707 462 4103
leroy.bleland@retechsystemsllc.com
www.retechsystemsllc.com

GERMANY
SECO/WARWICK Service GmbH
An der Molkerei 15
D-47551 Bedburg-Hau, Germany
tel. +49 (2821) 713 100
fax +49 (2821) 713 10-29
service@secowarwick.com
www.secowarwick.com

CHINA
SECO/WARWICK RETECH
Thermal Equipment Manufacturing
(Tianjin) Co., Ltd.
7B Second Xeda Road
Tianjin, China 300385
tel. +86 22 238 28 300
fax +86 22 238 28 305
d.rabenda@secowarwick.com.pl
www.swretech.com.cn

INDIA
SECO WARWICK Allied Pvt. Ltd.
5th Floor, Amfotech It Park
Road No. 8, Wagle Estate
Thane (W) - 400 604, India
tel. +91 22 6730 1400
fax +91 22 6730 1488
swa-info@secowarwick.com
www.secowarwick.com

BRAZIL
SECO/WARWICK do Brasil Industria
de Fornos Ltda.
Parque Industrial II
Jundiá, SP - Brasil
CEP: 13213-170
tel. +55 (11) 3109-5900
fax +55 11 4525-1047
engefor@engefor.com.br
www.secowarwick.com

RUSSIA
SECO/WARWICK Rus
Pyzhevskiy pereulok, bld 5/1,
office № 400
119017 Moscow, Russia
tel. +7 499 788 9721
moscow@secowarwick.com.pl
www.secowarwick.com

BELARUS
SECO/WARWICK OOO Minsk Office
8 Mielnikajte str., office 26
220004 Mińsk, Belarus
tel./fax: + 375 17306 23 71
secom@infonet.by
www.secowarwick.com