

# East Carolina Metal Treating, Inc.

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## FACILITIES LIST

### INTRODUCTION

East Carolina Metal Treating, a commercial heat treating company located in Raleigh, North Carolina, has been in business since 1976. We use modern equipment and controls to meet present and future requirements of high technology metal treating, and we are a certified supplier of automotive, aerospace, and nuclear manufacturers.

Our goal and commitment to our customers is to provide the highest quality, the fastest turnaround, and a competitive price. We specialize in custom processing of all jobs, large or small, and we have the capabilities to perform a wide variety of heat treating services.

We operate 24 hours a day and provide overnight turnaround of most orders. Our trucks pickup and deliver daily in many parts of eastern and central North Carolina.

### SERVICES

- ISO 9001:2008 certified
- Overnight turnaround
- Daily pickup and delivery in many areas
- Neutral atmosphere hardening of carbon and alloy steels
- Carburize and carbonitride case hardening of low carbon steels
- Vacuum bright hardening with high pressure gas quenching of tool steels and stainless steels
- Induction hardening, scanning up to 36"
- Gas nitriding
- Cryogenic treating
- Salt bath hardening with austempering and marquenching
- Normalizing, tempering, annealing, stress relieving, and age hardening
- Bright annealing and aging of steel, titanium, and copper alloys in vaccum or protective atmosphere
- Hydrogen annealing of magnet iron and other steels
- Copper brazing
- Black Oxide coating
- Blasting with glass beads and aluminum oxide
- Metallurgical laboratory



## COMPANY PROFILE

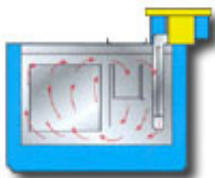
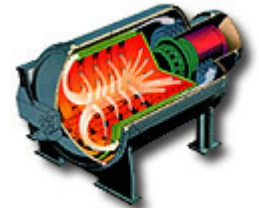
East Carolina Metal Treating, Inc. (ECMT), has been in business since 1976. The southeastern area of the U.S. has seen great industrial growth from industries such as automotive, nuclear, aerospace, tool and die, power tool, and agricultural. Since the inception of ECMT, this industrial growth has given rise to one of the most versatile and reliable regional heat treating companies in the country.

The hands-on management style at ECMT allows custom processing of all jobs from the smallest dies to large production orders. Customers requiring quality heat treating services include companies ranging in size from small local shops to international companies who have approved ECMT as their heat treating vendor. The commitment to personal service starts with a comprehensive training program for all employees. This assures that all personnel understand the importance of providing timely deliveries of quality products to their customers.



The 22,000 sq. ft. facility houses over 40 furnaces and pieces of equipment, ranging from cryogenic treating at 300° F. below zero to vacuum processing at up to 2400° F. We also offer metallurgical testing services for any research and development that may be needed to satisfy special or unique customer applications.

In order to assure reliability and capacity, ECMT maintains several furnaces of each type. The equipment list includes four integral furnaces, four vacuum furnaces, four induction machines (up to 100kw with 36" scanner), three gas nitriding furnaces, belt brazing, numerous tempering furnaces, and others. The three larger vacuum furnaces are capable of achieving the low vacuum levels required for titanium and stainless steels as well as the quench severity needed for high speed steels and other metals that cannot be processed in conventional furnaces.



We have an Ajax Electric salt bath line, consisting of an HCSE neutral salt bath furnace and an IQCF isothermal quench furnace for austempering and marquenching. The Ajax furnaces combine the proven advantages of salt bath technology with the latest advances in thermal processing, resulting in superior material properties. Quenching in salt provides excellent temperature uniformity, minimal distortion, protection from cracking, the ability to process a wide range of geometries, and increased toughness and ductility while achieving the same through hardness as oil quenching.

ECMT is ISO 9001:2008 certified, which gives our customers assurance that our quality management system and procedures adhere to the highest standards and that we are committed to continuous improvement. All calibrations are traceable to NIST, and heat treating is performed per AMS-H-6875A, military, aerospace, automotive, and other specifications.

Plant safety and environmental compliance are a top priority. ECMT has been a recipient of several safety awards and the City of Raleigh Industrial Pretreatment Excellence Award. The January, 2004, issue of *Industrial Heating*, a monthly trade journal for the thermal processing industry, featured an ECMT company profile.



ECMT has positioned itself to take advantage of the area's future industrial growth with attention to detail, personal service, and a facility that incorporates technologically advanced thermal processing equipment for quality work.

## CONTACT NAMES

Jeff Forsyth.....	Customer Service Manager (shipping, expediting, scheduling)
Misty Gentry .....	Office Manager (accounting)
Debbie Hamalainen .....	Quality Manager
Steve Mooney .....	Maintenance Manager
James Ramm .....	Vice President (pricing, technical information)
Rocky Strickland.....	President

## EMPLOYEES

Management .....	3
Quality .....	1
Production .....	19
Shipping & Receiving.....	5
Maintenance .....	3
Total .....	<u>31</u>

## PLANT SIZE (sq. ft.)

Office .....	2,500
Production .....	<u>20,000</u>
Total .....	22,500

## METALLURGICAL LAB AND TEST EQUIPMENT

Struers Discotom-5 automatic cut-off machine

Struers CitoPress-1 mounting press

Struers LaboPol-2 grinding, lapping and polishing machine with LaboForce-3 specimen mover

Leica DM ILM metallurgical microscope with digital imaging

Zwick microhardness tester  
Model 3212, Vickers and Knoop 10g - 10kg

Wilson Rockwell hardness testers  
Model 4JL, standard scales  
Model 4JS, superficial scales  
Model 504R, standard scales  
Model 504T, standard and superficial scales

King portable brinell testers

## EQUIPMENT LIST

Number	Type	Manufacturer and Model	Working Area	Maximum Temp. F.
101	Integral Quench	Lindberg 243618-GVRT-1	24" w x 18" h x 36" lg 650 lb capacity	1700
102	Integral Quench	Lindberg 243618-GVRT-1	24" w x 18" h x 36" lg 650 lb capacity	1700
103	Integral Quench	Lindberg 243618-GVRT-1	24" w x 18" h x 36" lg 650 lb capacity	1700
104	Integral Quench	Lindberg 3-CT-243618-AQC	24" w x 18" h x 36" lg 650 lb. capacity	1700
105	Tempering	Lindberg	10" od x 14" deep	1250
106	Tempering	Lindberg 121618-EH	12" w x 18" h x 16" lg	1250
107	Tempering	Lindberg 11-EC-152418-12	15" w x 18" h x 24" lg	1250
108	Tempering	Lindberg 152418-E12	15" w x 18" h x 24" lg	1250
109	Tempering	Lindberg 243624-E12	24" w x 24" h x 36" lg	1250
110	Tempering	Lindberg 183618-EH	18" w x 18" h x 36" lg	1250
111	Spray Washer	Beavermatic 46-20GISW	24" w x 18" h x 36" lg 1000 lb. capacity	160
112	Tempering	Lindberg 307224-EH	30" w x 24" h x 72" lg	1250
114	Tempering	Lindberg 427236-EH	42" w x 36" h x 72" lg	1250
115	Tempering	Lindberg 243618-EH	24" w x 18" h x 36" lg	1250
116	Tempering	Lindberg 243630-E12S	24" w x 30" h x 36" lg	1250
201	Vacuum	Abar HR2626	24" w x 18" h x 36" lg 1000 lb capacity	2400
203	Gas Nitrider	Leeds & Northrup 9570-UB-26-10	22" od x 26" deep	1250
204	Retort furnace		15" od x 28" deep	1650
205	Tempering	Bellvue	24" w x 12" h x 24" lg	600
206	Tempering	Lindberg 242418-EHT	24" w x 18" h x 24"lg	1250
207	Tempering	Lindberg 154818-E12	15" w x 18" h x 48" lg	1250
208	Vacuum	Abar Ipsen Turbo Treater H3636	24" w x 24" h x 40" lg 1500 lb capacity	2400
212	Belt Brazing	Hayes	13" w x 4" h	2050
213	Vapor Degreaser	Branson BSD-1620	33" w x 20" lg x 14.5" deep	180
216	Tempering	Lindberg 13-243624-ECF	24" w x 24" h x 36" lg	1250
217	Vacuum	Abar Ipsen Turbo Treater H3636	24" w x 24" h x 40" lg 1500 lb capacity	2400
218	Freezer		30" w x 36" h x 48" lg	-300
219	Tempering	Lindberg 1216-EH	12"od x 16" deep	1250

**EQUIPMENT LIST, continued**

<b>Number</b>	<b>Type</b>	<b>Manufacturer and Model</b>	<b>Working Area</b>	<b>Maximum Temp. F.</b>
220	Gas Nitrider	Leeds & Northrup 9570-UB-26-10-S	22" od x 26" deep	1250
221	Gas Nitrider	Leeds & Northrup	22" od x 26" deep	1250
222	Nitrogen Tempering	Leeds & Northrup 9564-UB-16-2-S	12" od x 16" deep	1350
224	Tempering	Lindberg 306030-E12	30" w x 30" h x 60" lg	1250
225	Vacuum	Ipsen Turbo Treater H3636	24" w x 24" h x 40" lg 1500 lb. capacity	2400
301	Black Oxide fixture or barrel	Kel-Mac	30" x 36" x 30" deep	285
302	Salt Bath austemper, marquench	Ajax Electric    HCSE IQCF	18" x 18" x 39" deep 24" x 36" x 39" deep	1650 750
304	Blast Cabinet	Blast It All 4426-7	24" w x 42" lg x 18" h	
305	Blast Cabinet	Blast-It-All 4426-7	24" w x 42" lg x 18" h	
306	Tumble Blaster	Zero BNP-164-1/600R-DF	2 cu. ft.	
307	Tumble Blaster	Zero DCM-161	1 cu. ft.	
401	Induction	Tocco power supply Quantik Verta Scan	100 kw, 10khz 36" scanner	
402	Induction	Tocco power supply Quantik Scan Plus	50 kw, 450khz 24" scanner	
403	Induction	Cycledyne B-150	15 kw	
404	Induction	Lepel T-15-3-KC-TL	15 kw	