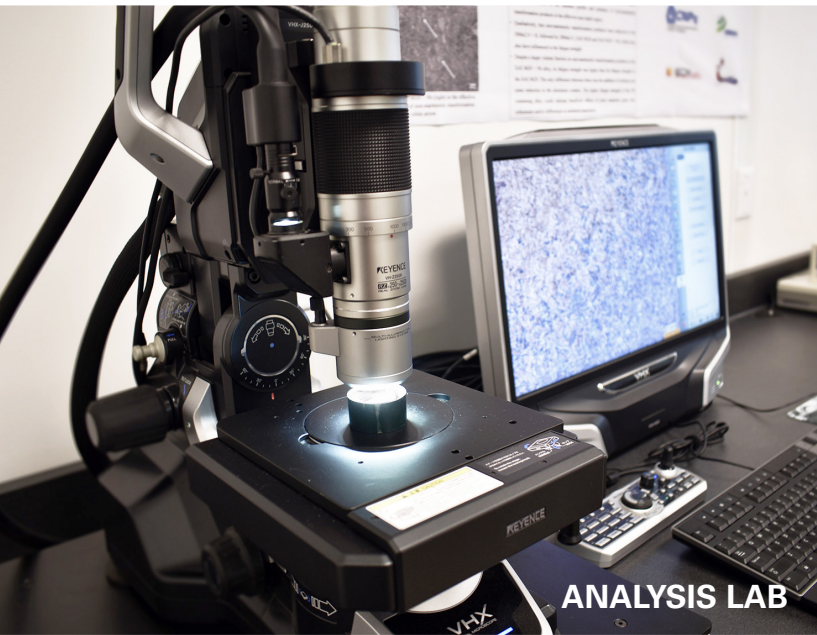
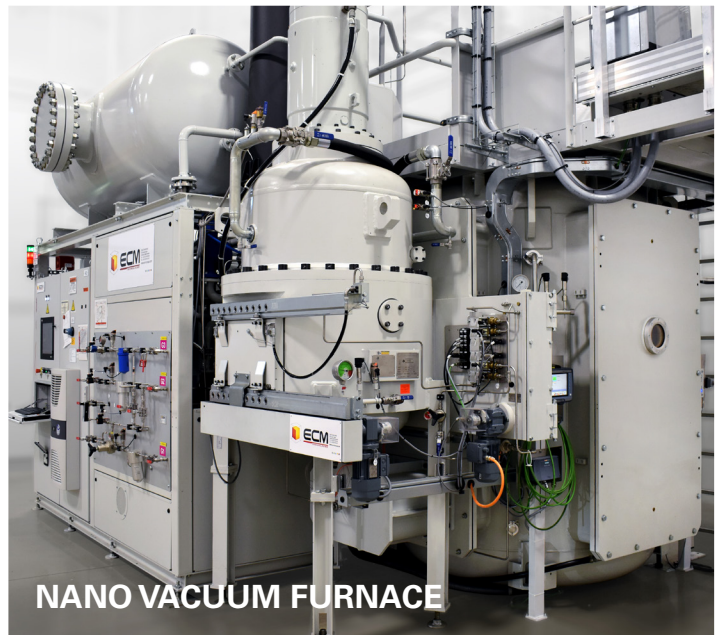


SYNERGY CENTER

ECM USA DEVELOPMENT LAB FOR METALLURGICAL & DISTORTION ANALYSIS



ANALYSIS LAB



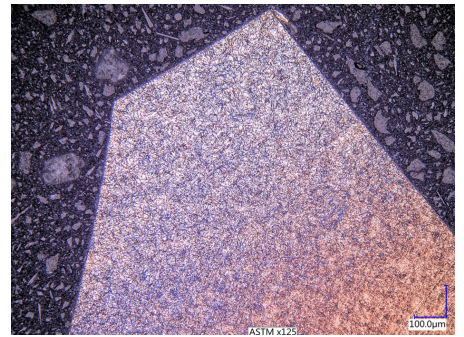
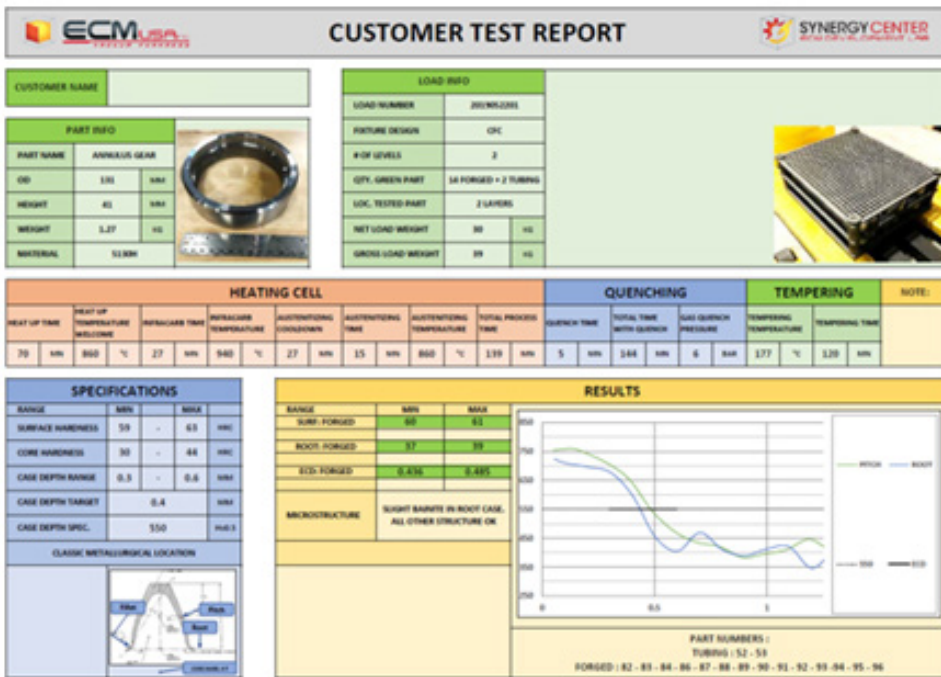
NANO VACUUM FURNACE

OVERVIEW

The ECM USA Synergy Center located in our North American headquarters in Pleasant Prairie, Wisconsin, showcases ECM equipment and provides pre-production testing. This fully functional test lab houses capabilities to perform many thermal processes across many markets.

In this facility, customers are welcome to visit and work with ECM USA experts on their future test projects to confirm and evaluate thermal processes using actual production equipment. This effort is supported with years of ECM thermal process knowledge along with customer's know how to produce a pre-production process. After this process is concluded, production equipment specifications can be assembled into full equipment proposal and budgets can be prepared.





PROCESSES

- Low Pressure Vacuum Carburizing (with gas or oil quenching)
- Low Pressure Carbonitriding (gas or oil quenching)
- RapidThermal Processing/Annealing (RTP)
- Vacuum Tempering
- Vacuum Annealing
- Vacuum Brazing
- Vacuum Hardening
- 3D Additive Stress Relieving
- Vacuum processes using: Argon, Nitrogen, Helium, etc

SERVICES

- Distortion control using CMM and 3D before and after thermal treatment
- Full Metallurgical evaluation of all test pieces
- Digital Microscope up to 5000 X
- Microhardness evaluation and contouring evaluation
- Full production load Fixture design
- 3D Solidworks fixture design based on real-time thermal data

3D GAS QUENCHING EVALUATION

3D simulation of parts within gas quenching during processing with AVL FIRE

PARTNERS

Verichack Lab Equipment Dry Coolers
 TOYOTANSO CFC fixtures Phoenix
 Cronite Fixturing AVL
 Washtec Washers



ABOUT ECM USA The US subsidiary of ECM Technologies of Grenoble, France, ECM USA is the leading manufacturer of vacuum furnaces and heat treat automated solutions for the automotive, aerospace, industries, and more. ECM's complete heat treat systems work on one PLC based system, which includes: preheating, automation, heat treating (low pressure carburizing, carbonitriding, neutral hardening with oil or gas quenching) and tempering equipment.