

NEW/COR[®]

Bay City Division

Leadership in Manufacturing Technology

Process & Product Development Lab

Solutions



Process
Product
Concept

Process
Product
Development

Feasibility
&
Test

Process
Product
Definition

Prototype
For Customer
Testing



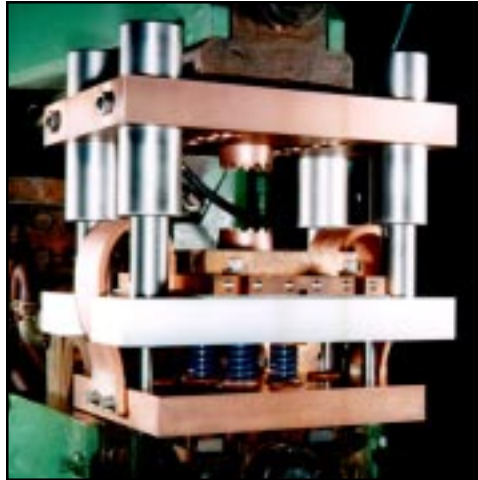
Process development.

To achieve and maintain a competitive edge in today's fast-changing, global marketplace, your processes must continually improve. The ability to make product or process changes quickly with confidence and minimal risk, even "on-the-fly" provides a significant advantage.

NEWCOR Bay City maintains a fully staffed Process & Product Development Lab to develop and verify that these process improvements are capable in the manufacturing environment and that product or material changes do result in manufacturability and quality improvements.



Complete metallurgical capability.



Production-ready tooling.

The lab is ready to serve customers in a variety of ways, ranging from weld development for new materials to contributing to a total Concurrent Engineering Project.

NEWCOR Process & Product Lab

- Resistance Welding-Seam, Spot, Projection, HY-PAK®
- Arc Welding
- Hot and Cold Planishing
- Resistance Heating Hot Upsetting & Cold Forming
- Metal Forming/Expand
- Tooling / Fixturing
- Prototype & Pilot Parts Assembly
- Testing & Metrology



Axle slug welding process development in the Lab.



Typical Applications

- Appliance Drums
- Motor & Compressor Shells
- Cans, Barrels & Nuclear Vessels
- Sheet Metal - Variety of Industries
- Toolboxes & Furniture
- Pre-painted Metals - No-Show Weld
- Transmission & Axle Components
- Steering Gear & Actuator Rods
- Jet Engine Components
- Variety of Material i.e. Powered Metal



HY-PAK® process for no-show welding



Pre-painted steel and closure panel hems

The benefits that Newcor's Process & Product Development Lab has provided to customers over the years have been significant.

By having the capability to test and verify process or product changes, the customers' risk is significantly reduced before making any major investment in new material or capital equipment, but once verified, the change can be made very quickly.

Whether the Lab participates in weld schedule development or as a Team member on the a Concurrent Product & Process Development Engineering Project, the objective is to provide a **capable process producing quality products.**



Quick turnaround prototyping of parts/processes.



Arc / Plasma longitudinal seam welder



CMM inspection capability



A **NEWCOR**[®] Company **OTHER NEWCOR DIVISIONS:**

NEWCOR COMPONENTS & ASSEMBLIES SEGMENT

Newcor Rubber and Plastics Group

- Plastronics Plus, Inc. - East Troy, WI
- Boramco, Inc. - Walkerton, IN

Precision Machined Products Group

- Blackhawk Engineering, Inc. - Cedar Falls, IA
- Deco Engineering, Inc. - Royal Oak, MI
- Machine Tool & Gear, Inc. - Corunna, MI
- Rochester Gear, Inc. - Clifford, MI

WELDING, ASSEMBLY, FORMING, HEAT TREATING, TESTING AND FULLY-INTEGRATED MANUFACTURING SYSTEMS

Some of Our Customers:

Active Tool	Dow Chemical	Lockheed-Martin	Sanden
Allegheny Ludlum	Eaton	Magnetek	Sundwig
American Axle	Emerson	Marca	Taihan Electric
Armco Steel	Fasco	Mas Seuthe GMBH	Trane
Borg Warner	Ford	Maytag	TRW
Budd	Frigidaire	Mitsubishi	U.S. Department of Energy
Bundy Tubing	Gabriel	Monroe	U.S. Military
Carrier	General Dynamics	Murray	U.S. Steel
Chengdu Steel	General Electric	National Steel	Wagner Electric
Chrysler	General Motors	Peugeot	Weifang Metals
Citroen	Grief Brothers	Posco Steel	Westinghouse
Continental Can	Guangzhou Electric	Praefke Brake	Whirlpool
Copeland	In-Sink-Erator	Republic Steel	Yantai Steel
Dana	Jones & Laughlin Steel	Rheem	Yoder
Delphi	Kelsey Hayes Wheel	Rotorex	Zhuhai Compressor

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