



ALL ALLOY
CLASSES

DEVELOPMENT
VOLUMES

CASTINGS, RODS,
WIRE AND POWDER

DOMESTIC
PRODUCER

Fueling Innovation with Custom Alloys Tailored to Your Needs



ADVANCED METALLICS PRODUCTION
& PROCESSING CENTER



INTRODUCING LIFT'S NEW STATE-OF-THE-ART

Advanced Metallic Production and Processing Center

Capabilities Include:

- Open-Air & Inert Melting & Casting
- Plasma Arc Atomization
- Mechanical Milling
- Plasma Arc Spherodization
- Sieving
- Swaging & Wire Draw
- Extrusion
- Sand Casting

Feedstock Type:

- Castings
- Milling & Blending
- Powder
- Wire
- Extrusions

Material Availability¹:

- All Alloy Classes
- Specializing In Custom Alloy Development
- High Entropy Alloys (HEA) & Refractories

Value-Added Services:

- ICME-Led Material Development
- Prototype Part/Component Manufacture
- CNC, Milling & Grinding Services
- NDT - CT Scanning
- Particle Size Analysis
- Chemical Analysis
- Blending Services

Located at LIFT's Detroit facility, the new center is delivering the highest quality metal powder and wire feedstocks at a development scale to support the diverse breadth of additive manufacturing processes on the market today.

Specifically tailored to your needs and carefully curated by our expert team of material scientists with support from our comprehensive materials laboratory, we work closely with customers to produce custom and bespoke alloys from all alloy classes and to deliver the highest quality materials aligned with each customer's unique specifications.

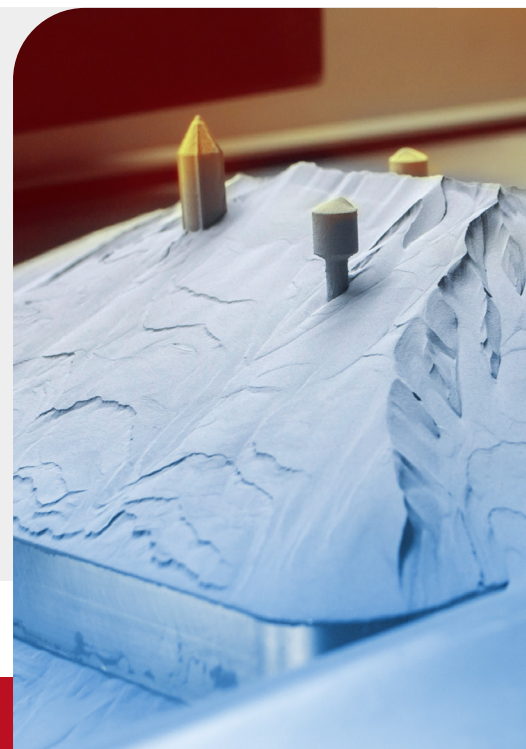
The result is a material that processes and performs exactly as you intend.

As the National Advanced Materials Manufacturing Innovation Institute, LIFT is uniquely positioned to service the needs of the American Defense Industrial Base, focused on small batch volumes at every stage of the development cycle from material development to material production to part manufacture & inspection to accelerate delivery while maintaining quality.

LIFT offers:

- Low to medium material production volumes
- Accelerated material delivery & availability
- Competitive pricing
- Toll processing
- Contract manufacturing
- Domestic production
- Operated through a non-profit, public-private partnership

¹ Reactive (Al, Ti, Zr, Mg, etc.), light elements (Al, Mg, Li, etc.), ferrous & other (Ni, Fe, Cr, Mo, etc.)



Customer Profiles & Synergies



System Manufacturers

Common and custom alloys, process monitoring & improvement, reference for material inquiries, demonstration of technology in LIFT High Bay in Detroit



Material Producers

Small batch alloys, toll processing, reference for contract manufacturing inquiries, full materials lab, material licensee



Material Developers

Small batch custom alloys, ICME - led material development, prototype part manufacturing, process monitoring & improvement, full materials lab, technology transfer, material licensee



Application Developers

ICME - led material development, material supplier, toll processing, prototype part manufacturing, process monitoring & improvement, full materials lab



Part Manufacture

Material supplier, toll processing, contract manufacturing, prototype part manufacturing, full materials lab



Academia

Small batch custom alloys, prototype part manufacturing, Process monitoring & improvement, AI/ML partner, full materials lab, technology transfer, material licensee, industry connector



Start Up

Small batch custom alloys, ICME - led material development, toll processing, prototype part manufacturing, process monitoring & improvement, full materials lab, Industry connector

LIFT is operated by the American Lightweight Materials Manufacturing Innovation Institute (ALMMII), a 501(c)3 nonprofit public-private partnership between the Department of Defense, industry and academia, whose mission is to Drive American Advanced Manufacturing Into the Future Through Technology and Talent Development.



The National Manufacturing Innovation Institute

Who We Are

LIFT, operated by the American Lightweight Materials Manufacturing Innovation Institute (ALMMII), is a public-private partnership between the U.S. Department of Defense, industry and academia.

Founded in 2014, LIFT serves as a technology accelerator, working at the intersection of materials science, manufacturing processes, systems engineering and talent development to enhance our national economy and national security.

Our Mission

Drive American Advanced Manufacturing Into the
Future Through Technology & Talent Development

Driving Smart Manufacturing Acceleration, Adoption and Implementation

From robotics to artificial intelligence to machine learning to the digital twin, the next global industrial and economic powerhouse will be the region that masters advanced manufacturing first.

We are driving rapid implementation of new materials, new manufacturing processes, and new manufacturing systems across the nation in support of the warfighter and the U.S. manufacturing base.



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