



FACTS

Alcoa Howmet, located in Dover, New Jersey, is a world-class supplier of complex, investment-cast turbine airfoils and other components for the aircraft engine and industrial gas turbine industries. Considered an industry leader in the use of work cells and other advanced manufacturing techniques, it specializes in the casting of single-crystal, directionally solidified, equiax and fine-grain components. In addition, its "non-traditional casting" capability produces complex castings with all internal passages and holes to replace components normally fabricated from many parts.

These castings are used primarily in the combustor section of a gas turbine. Operating since 1949, the facility occupies 260,000 sq ft (23,400 sq m) of manufacturing space.

PRODUCTS

Single-Crystal/Directional Solidification

Commercial and military aircraft, rocket and industrial gas turbine

- Blades and vanes
 - Multi-vane segments
 - Duct segments, shrouds and combustor panels
 - Special processes: orientation control, Intricast™ thin wall, clean casting, reactive alloy
- Size range:
- SC up to 16 in (40.64 cm)
 - DS up to 18 in (45.72 cm)

Equiax

Commercial and military aircraft, rocket and industrial gas turbine

- Blades, vanes and multi-vane segments
- Integral wheels

- Bi-cast
 - Shrouds, duct segments, and cover plates
 - Special processes: MX® ultra-fine grain
- Size range: up to 21 in (53.34 cm)

Non-traditional

Aircraft and industrial gas turbine

- Fuel injectors
- Complex swirlers
- Compressor vane segments

Alloys Poured

- Nickel-, cobalt- and iron-based alloys
- Stainless steels
- Vacuum-, air-melt
- Many turbine manufacturers' proprietary alloys

CAPABILITIES

Manufacturing Processes

- Lost wax/investment (shell) casting
- Heat treatment
- Welding/brazing
- Etch
- Vacuum- and air-melt casting

Engineering and Inspection

- Concurrent engineering
- Rapid prototyping
- Process modeling
- Fluorescent penetrant inspection and X-ray
- Full layout department
- Laser scanning/coordinate measurement machine

CONTACT INFORMATION:

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CUSTOMERS

- Alstom Power
- Ansaldo Energia
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- General Electric Aircraft Engines
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- MHI
- MTU-Aeroengines
- Rolls-Royce
- Siemens
- Siemens Westinghouse Power Corporation
- Solar® Turbines: A Caterpillar Company
- BF Goodrich Turbomachinery Products
- United Technologies:
Pratt & Whitney, United States
- Woodward