OVERVIEW

Norsk Titanium AS is the world’s pioneering supplier of aerospace-grade, additive manufactured, structural titanium components. The company is distinguished in the aviation industry by its patented Rapid Plasma Deposition™ (RPD™) process that transforms titanium wire into complex components using dual plasma torches in a super-clean argon environment. Norsk Titanium is a tier 1 supplier to Boeing and Spirit AeroSystems; we are committed to producing cost-reducing aerostructures and jet engine components for the world’s premier aerospace manufacturers. RPD™ is the world’s first FAA-approved, 3D-printed structural titanium delivering substantially less material waste, shorter lead times, and significant cost savings to aerospace, defense, and commercial customers.

NORSK TITANIUM
RAPID PLASMA DEPOSITION™ (RPD™)

Norsk Titanium RPD™ delivers high-quality aerospace-grade titanium parts at reduced cost, lead time, and environmental footprint. Norsk Titanium can serve as a raw materials provider or a full-service parts provider.

RAPID PLASMA DEPOSITION™ BENEFITS

GREATER CAPACITY | FASTER RATES | LESS MATERIAL WASTE

• Current equipment has the ability to produce large structural parts weighing in excess of 100 lbs; even larger parts will be eligible with new generation machines

• Production speeds 100x faster than powder-based additive manufacturing systems and 50x faster than forging at approximately 1/3 of the cost

• Less material waste since 40%–75% less titanium is needed, compared to incumbent forging and subtractive metal processes

• Technology applicable across industries, including aviation, space, transportation, oil and gas, and maritime

• MERKE IV™ RPD™ machine production of up to 20 metric tons of aerospace-grade titanium parts per year, per machine

Advantages
Setting Us Apart

Commitment to Quality Assurance
• Design of experiments to validate key process parameters (KPP)
• Probability of detection to verify inspection methods
• Machine-to-machine compatibility for global consistency—the same part can be made on any machine in the world
• Machine configuration management and machine specification

Qualifications and Certifications
• FAA Certified
• ISO 9001:2008 and AS9100D
• NORSOK M-650 Certified
• Boeing Qualified Producer List (QPL)
• Spirit AeroSystems Approved Supplier List (ASL)

*Depending on part size and geometry
ACHIEVEMENTS

• Aviation Week’s Annual Laureate Awards selected Norsk Titanium and Boeing as a 2018 Laureates Award winner for supplier innovation in commercial aircraft.

• Norsk Titanium’s New York facility is the world’s first industrial-scale additive manufacturing plant for aerospace parts.

• RPD™ technology enabled the world’s first FAA-approved structural additive manufacturing of titanium components.

• Norsk Titanium is the first qualified supplier for Boeing’s high deposition rate material specification.

• The Boeing 787 Dreamliner is the first commercial airplane to fly with certified additive-manufactured titanium parts in structural applications.

• MERKE IV™ machine’s RPD™ process manufactures 3D-printed parts that achieve the same structural properties as parts produced through forging.

• RPD™ technology also has the capability of print-then-forging and forge-then-print manufacturing methods.

• Norsk Titanium has been granted 30 patents and patents pending for its Rapid Plasma Deposition™ technology and MERKE IV™ machines.

LOCATIONS

Worldwide HQ
Norsk Titanium AS
Flyplassveien 20
3514 Hønefoss, Norway
Phone +47 97 42 22 00
post@norsktitanium.no

Industrial Scale Production
Plattsburgh Development & Qualification Center
Norsk Titanium US Inc.
44 Martina Circle
Plattsburgh, NY 12901 USA
Phone +1 518 324 4010
info@norsktitanium.com

Technology Partners

Commercial Partners

Investors

• Scatec
• Aljomiah Group
• New York Empire State Development
• Arconic
• Insight Equity
• Applied Materials Ventures
• Fortress Investment Group
• Rose Park Advisors

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