

Accelerating Innovation Layer by Layer

Company presentation



About Alloy Additive

■ We redefine both the current and future landscape of manufacturing through cutting-edge, patented, and award-winning metal additive manufacturing technologies. With our THD® (Tungsten High Deposition) and RHM® (Rapid Hybrid Manufacturing) systems, we empower industrial partners to reduce costs, shorten lead times, eliminate downtime, and accelerate their transition toward sustainable and agile production.

■ From energy to aerospace, we help our clients stay ahead of the curve with high-performance, cost-efficient, and environmentally conscious services and manufacturing of parts and components.



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Innovation Ecosystem

teknopark
istanbul

cube
incubation



- DEEPTech ECOSYSTEM IN TÜRKİYE
- ACCESS TO AEROSPACE AND DEFENCE SECTOR
- 500+ R&D FOCUSED COMPANIES

esa

BUSINESS
INCUBATION
CENTRE

North Rhine-
Westphalia



digitalHUB
Aachen e.V.



ESA-BIC (GERMANY)

ALLOY ADDITIVE GMBH

- SPACE FOCUSED R AND D INCUBATION
- SUPPORT THROUGH ESA NETWORK
- SUPPORT THROUGH DIGITAL HUB NETWORK

Partnerships/Support



اصنع في الإمارات
MAKE IT
IN THE EMIRATES

KOÇ ÜNİVERSİTESİ



TUM

VENTURE
LABS



TÜBİTAK



Manufacturing



DLR

smart
advanced manufacturing

Global Expansion

- + 1000 CUSTOMER DATABASE
- ATTENDED + 50 FAIRS AND CONFERENCES
- OIL AND GAS AND DEFENCE CONTACTS
IN SAUDI ARABIA
- EXPORT TO EUROPEAN COUNTRIES



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Current Industry Problems

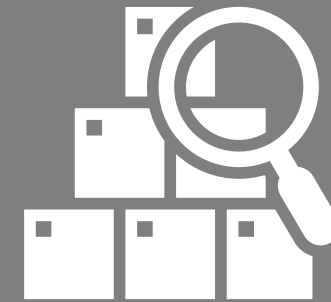
In large scale and structural part manufacturing



**Prototyping
Delays**



**Raw Material
Sourcing**



**Spare Part Shortages
/ Large Inventory**



**Sustainability
Pressures**



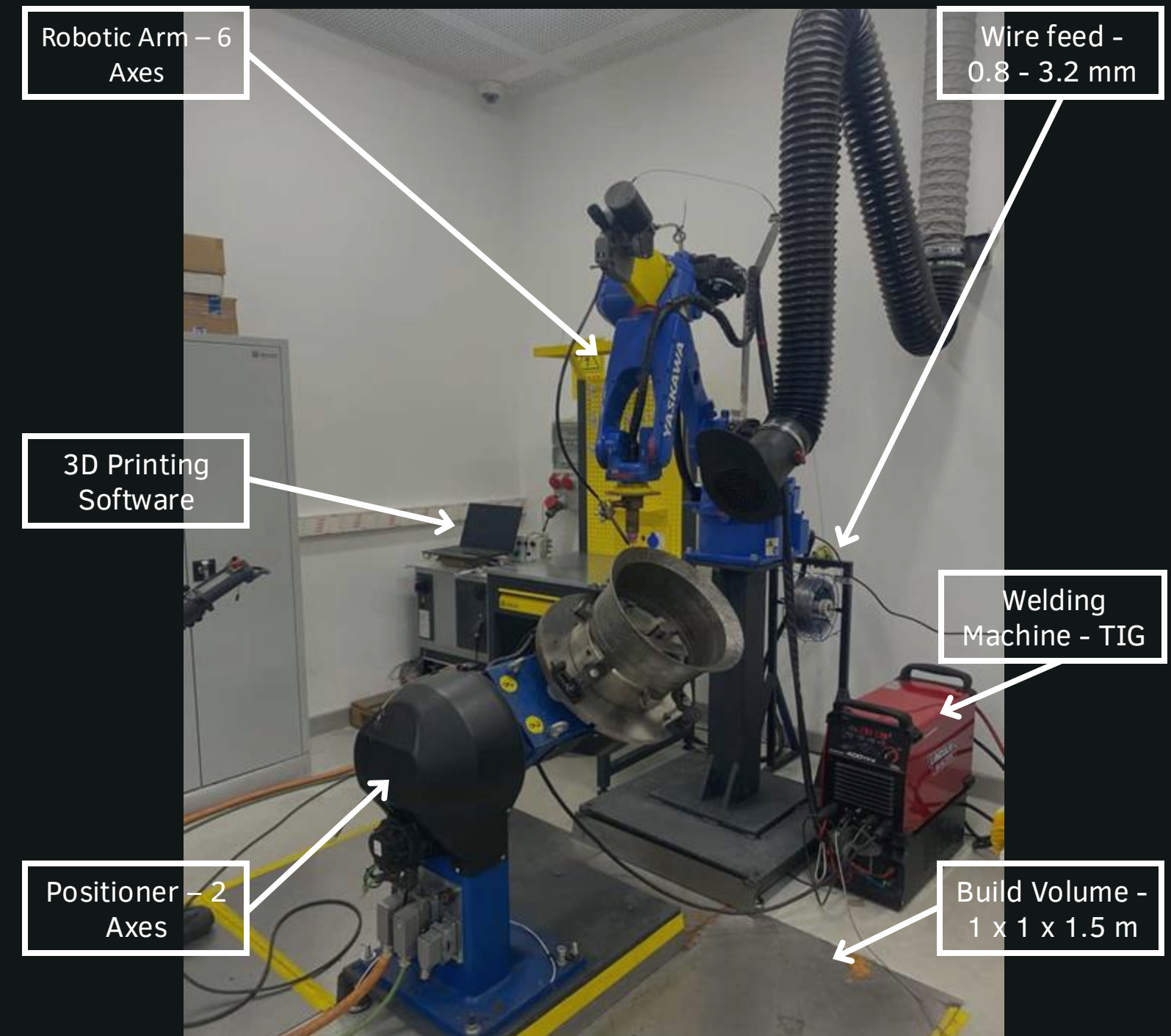
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Alloy Additive's Solution

- **Patented WAAM technology - THD[®] (Tungsten High Deposition)**

- Unique value propositions:

- 1) High titanium deposition rate: 8 kg/h
- 2) In-house developed 3D software
- 3) Expertise in own process parameters
- 4) Exotic and super alloys capability



Production Capabilities



Istanbul Facility
300 m²

THD[®] (Tungsten High Deposition)

Build Volume - 1 x 1 x 1.5 m

RHM[®] (Rapid Hybrid Manufacturing)

Build Volume - 3 x 3 x 2 m



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Industrial Expertise



3D Printing



CNC machining



Heat Treatment



NDT Testing



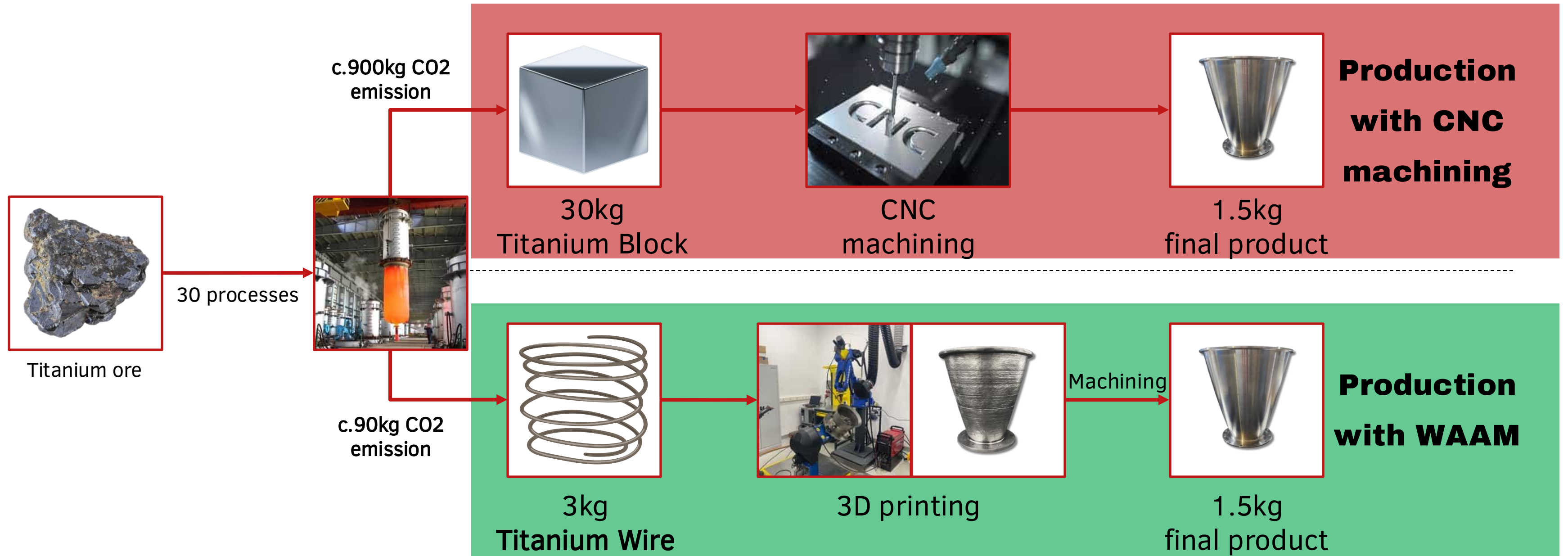
3D Scanning

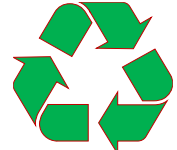
End to end solution starting from your design to final qualified product.



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Sustainability Impact



■ **c.10x reduction of CO2 emissions** 

■ **c.19x reduction of wasted material**



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Materials

■ TITANIUM

Ti-6Al-4V, Ti1100, Ti6242

■ Niobium

C103

■ NICKEL

Inconel 625, Inconel 718, Haynes 282

■ STEEL

SS 316L, SS 422, Duplex SS,
Invar 36, Invar42, Invar32-5
SS 15-5 PH, SS 17-4 PH, SS 13-8 Mo

Industries

OIL AND GAS



MARINE



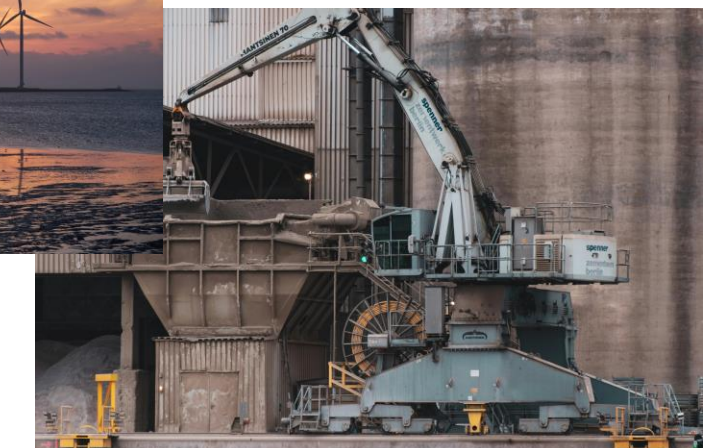
AEROSPACE



ENERGY



DEFENSE



HEAVY MACHINERY



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Space flights

30+ parts produced for 6 missions including OTV.

Completed Missions & Products:

1. Sounding rocket ➡ Nozzle
2. Sounding rocket, 2. stage ➡ Extension

Ongoing Missions:

1. Orbit Transfer Vehicle ➡ Aft Dome, Extension

Upcoming Missions & Products:

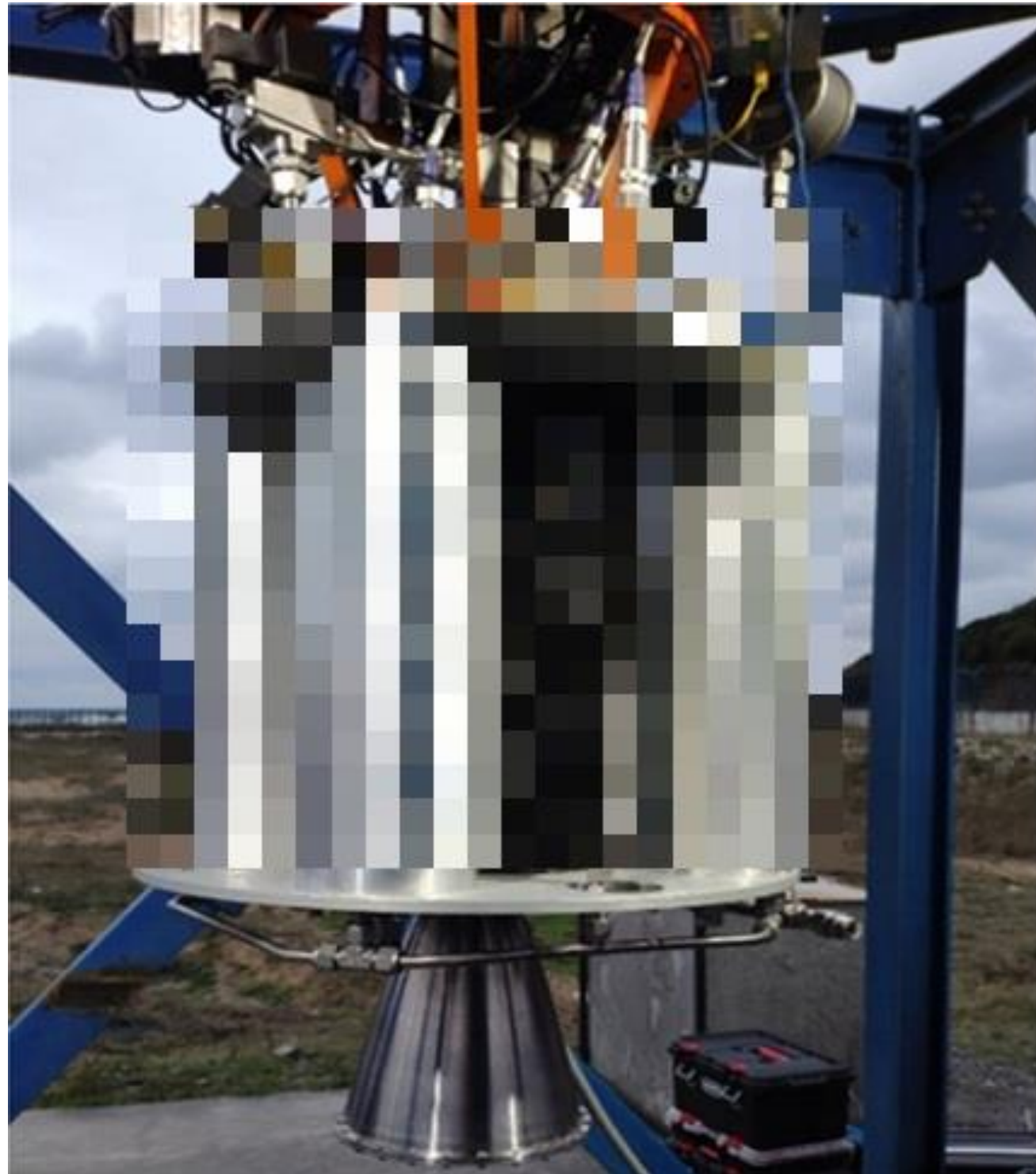
1. OTV ➡ Aft Dome, Extension (2026-2028)
2. Lunar hard landing ➡ Extension (2027)



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Extension - Ti6Al4V

Delta V – Aerospace



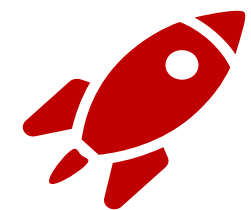
Height: 215 mm



60% Lower
Cost



7 Days
Instead of 7
Weeks

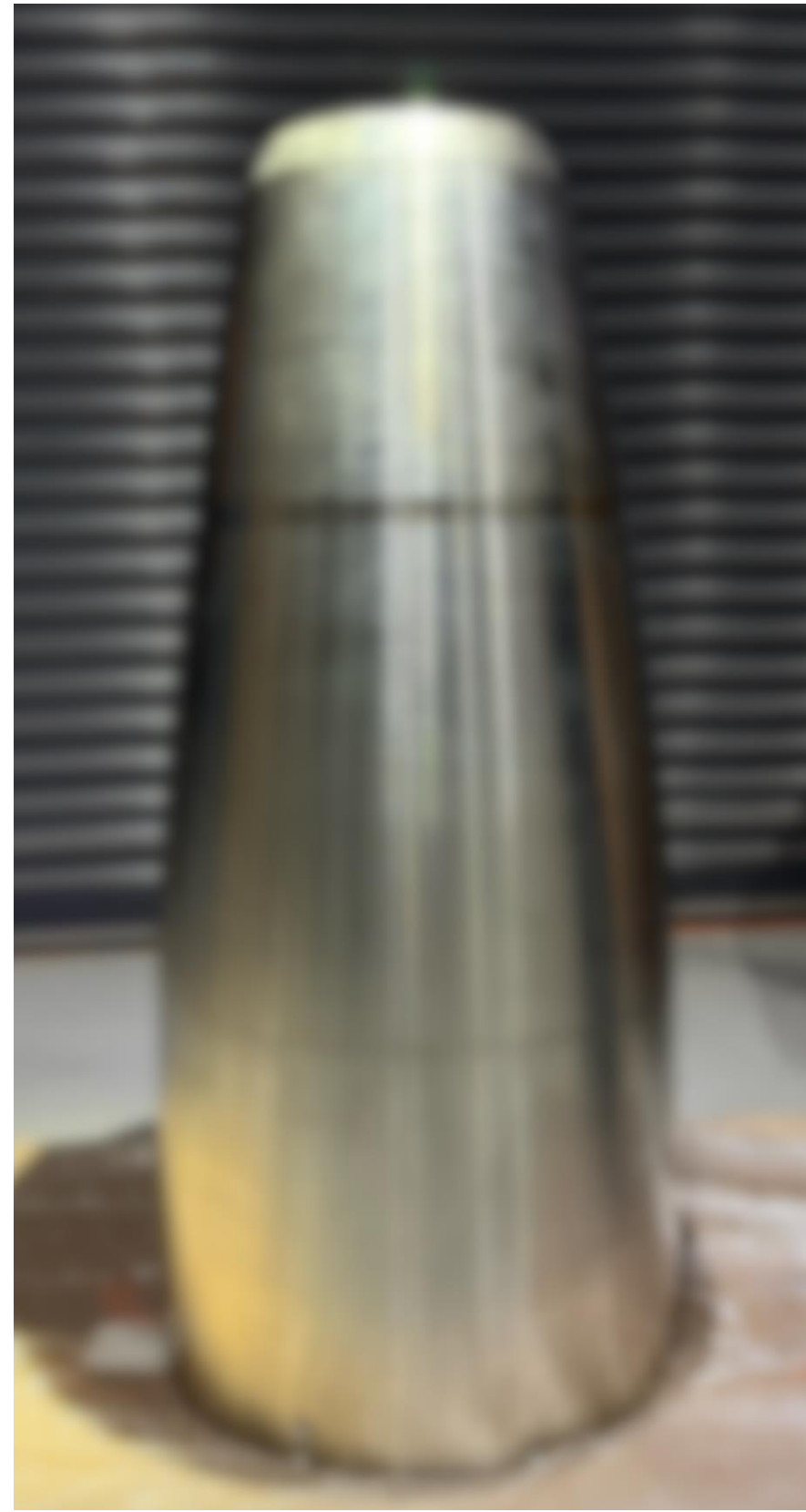


Space Flight
Proven



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Large Nozzle - SS316



This part is manufactured with a hybrid manufacturing approach that optimizes cost and performance.

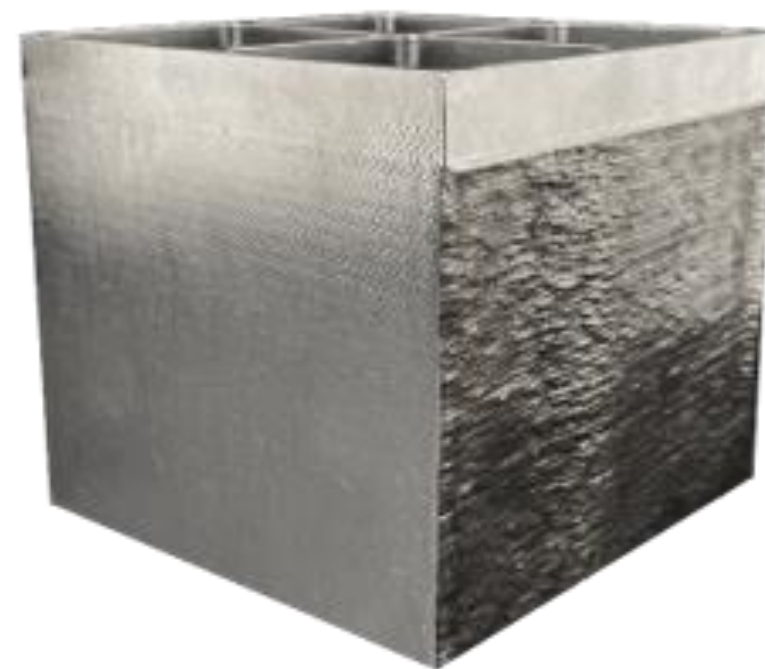
PART DIMENSIONS:

Diameter: 550 mm

Length: 1250 mm

Printing weight: 300 kg

Grid fin - Inconel 718



Intersecting
Geometry



Super Alloy 3D
Printing



Hours Instead
of Months



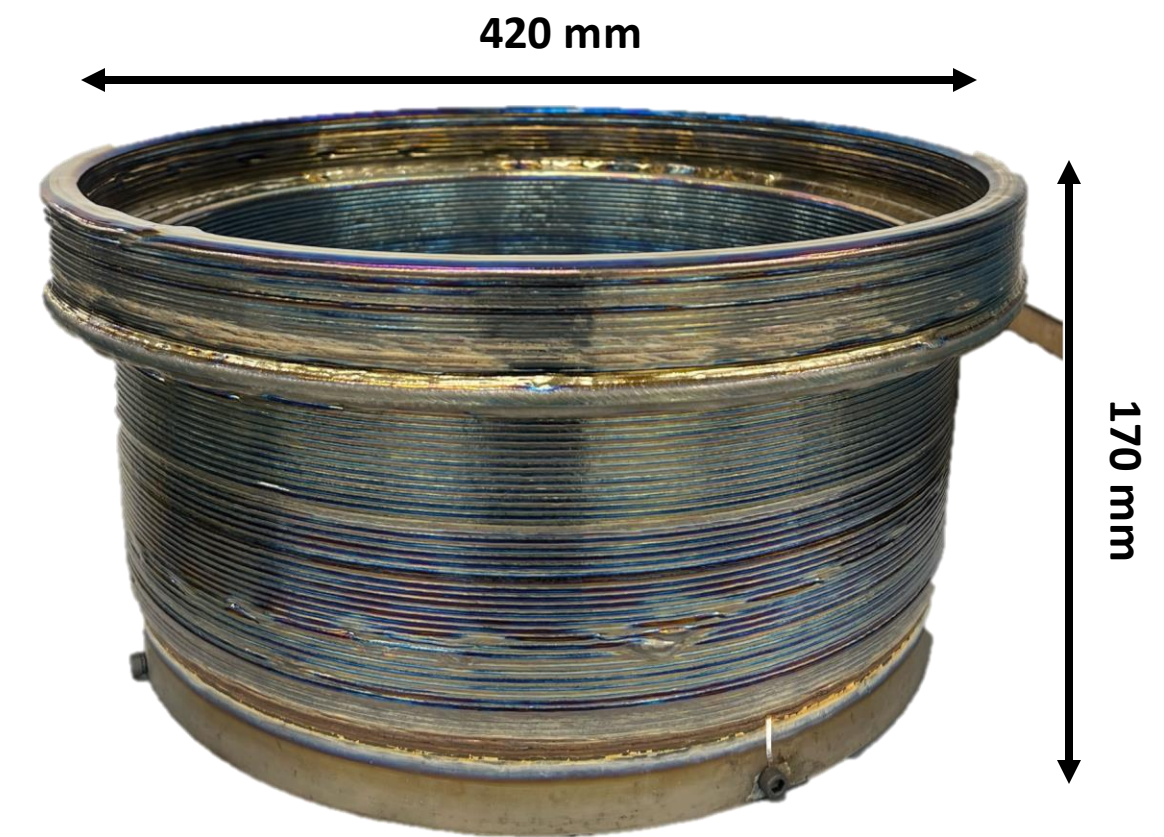
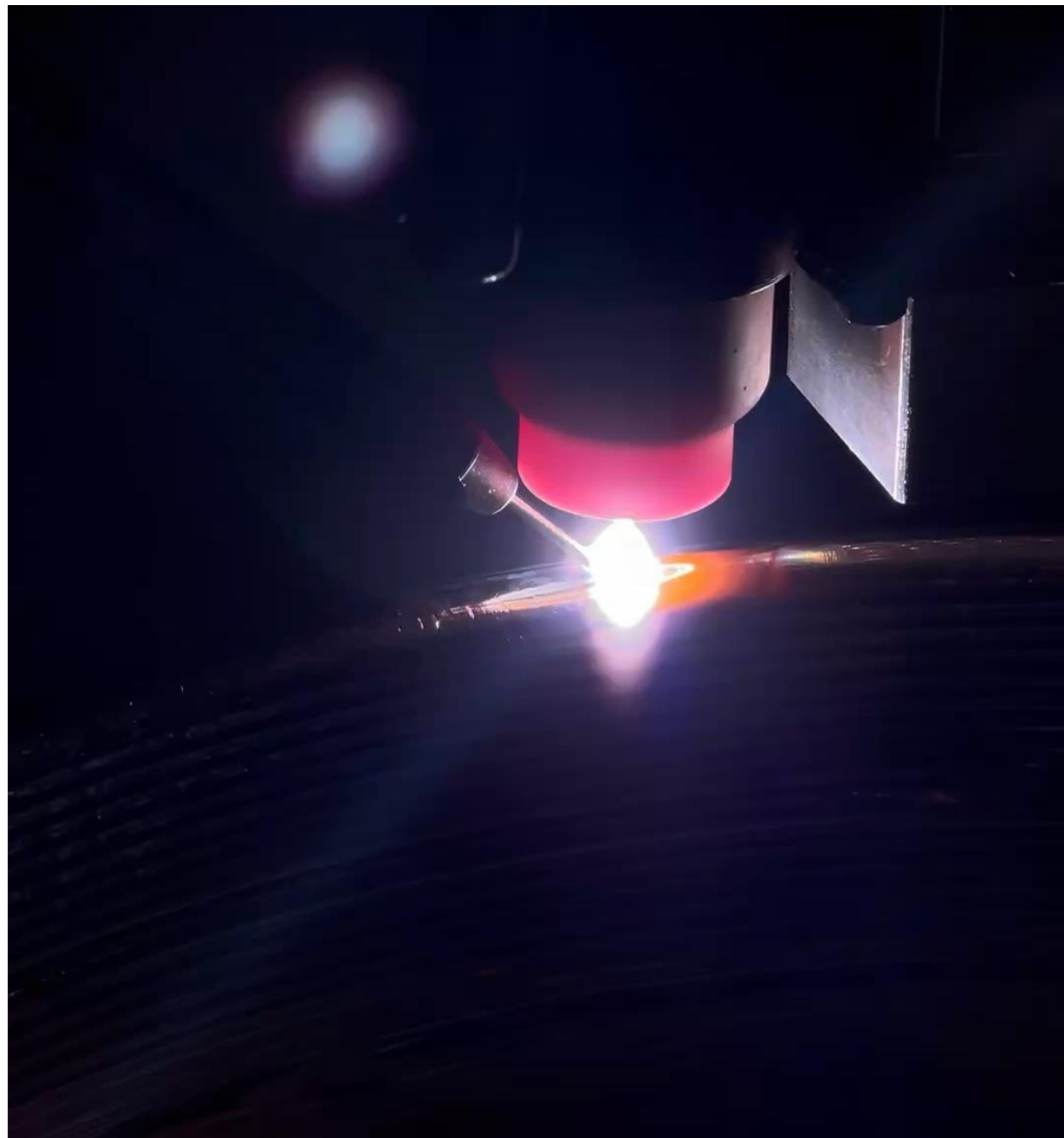
Metal Waste
Reduction



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Radome flange - Ti6Al4V

Turkish company – Space



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Space Propulsion 2026

WINNER OF THE SPACEFOUNDERS AWARD AND SPACE PROPULSION STARTUP COMPETITION



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Team

- Our team is built on a strong foundation of expertise in mechanical engineering, materials science, and advanced manufacturing, with the top academic and professional backgrounds from **Turkey, the USA and Germany.**
- With hands-on experience in organizations like **NASA, DeltaV and HRL Laboratories** our R&D leadership brings world-class knowledge in **Wire Arc Additive Manufacturing (WAAM)** and industrial-grade innovation.

- Backed by a 10 skilled engineering and business development team, and guided by executive advisors with decades of leadership in the oil, gas and energy sectors, we are fully equipped to deliver **reliable, high-performance solutions tailored to our clients' needs.**

Mehmet E. Çetinkaya

Founder



MS Mechanical Eng. Koc University
BS Materials Science Eng., Middle East Tech. Uni.
3 Years Koç Uni. R.A. and NASA Project
5 Years DeltaV Space Lead R&D Eng.

Randall Schubert

R&D Manager



MS Materials Science Eng. Uni. of California, Irvine
BS Mechanical Eng., BS Materials Science Eng.,
7 Years HRL Laboratories R&D Eng.

Gani Melik Önder

Lead R&D Eng.



MS Defense Technologies, Istanbul Technical Uni.
BS Manufacturing Eng., Istanbul Technical Uni.
4 Years Alloy Additive R&D Eng.

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