SPEE3D

WORLD'S FASTEST METAL PRINTERS

WHAT DOES SPEE3D DO?

SPEE3D are an Advanced Manufacturing technology developer.

Our Cold Spray based additive equipment empowers you to solve your own supply chain issues, right at the point of need.

SUPERSONIC DEPOSITION – HOW IT WORKS

SPEE3D

1

MATERIALS (POWDERS)

- Aluminium
- Copper
- 316 Stainless

2

ROBOTIC ARM

Metal powder is deposited onto a substrate maneuvered by a **six-axis robotic arm.**

The sheer kinetic energy of the particles hitting each other causes the powders to bind together

3

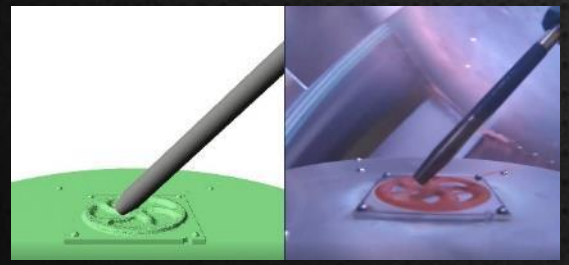
ROCKET NOZZLE

Metal powders are accelerated to **supersonic speeds**

4

TWINSPEE3D SOFTWARE

Sophisticated algorithms used to generate **robotic tool path**



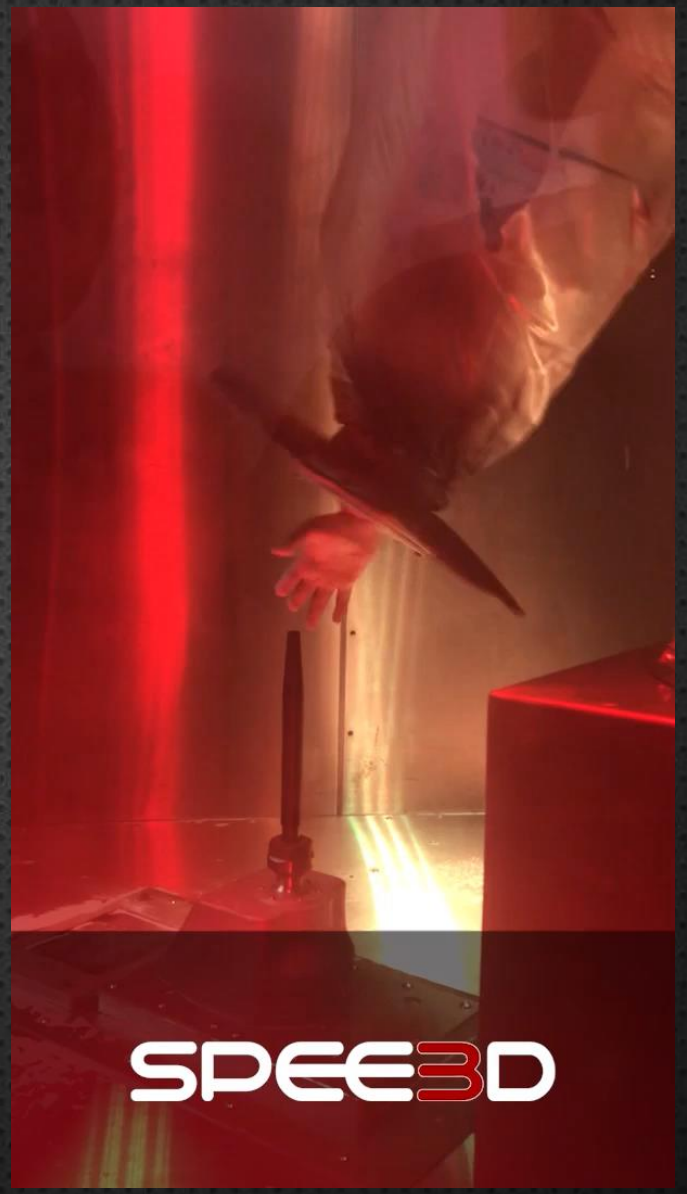
HOW IT WORKS

Patented Cold Spray technology

Manufacture parts at 6kg/h (13lb/h)

Video can be seen on youtube here :

https://www.youtube.com/watch?v=esDD790tj_Q



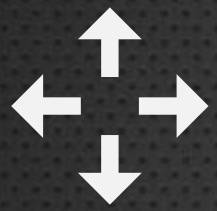
WHAT OUR TECHNOLOGY CAN DO

SPEE3D

METAL PARTS ON DEMAND. FAST.

PROVEN

- Patented Cold Spray technology
- 10+ years experience
- World-leading trials with ADF

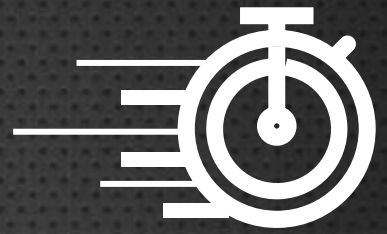


DEPLOYABLE

- Easy to transport
- Rugged and tough equipment

STRONG PARTS

- Unlike any other AM process
- Make large, full-density parts up to 40kg



ULTRA HIGH SPEE3D

- 1000 times faster than traditional 3D printing
- Have parts in minutes or hours, not weeks or months

SAVE TIME & MONEY

- Reduce downtime
- Get critical parts on demand and resume operation more quickly

PROVIDING SUPPLY CHAIN RESILIENCE

A proven way to rapidly resolve supply chain shortages and improve sustainment in the field

SPEE3D's rugged, tough technology provides parts in hours to the front line

ADF have demonstrated that this new technology can be successfully trained and deployed by existing metal workers in Defence

THE AM ADVANTAGE – Where are the real applications?

SPEE3D

LOGISTICS

- Capable and innovative deployable technology to fabricate parts in the field
- Reduce downtime, improve readiness – get parts in hours, not weeks or months

CUSTOMISATION

- Eliminate ongoing maintenance or safety issues

ELIMINATE OBSOLESCENCE

- Parts engineered for 3D-printing are never obsolete or out of production

STRENGTHEN SOVEREIGN MANUFACTURING CAPABILITY

- Rely less upon slow, complex global supply chains and make the parts you need, on-demand, on site





DEFENCE MANUFACTURING IN NORTHERN AUSTRALIA

SPEE3D

2-year intensive AM field trials with the Australian Army

Results: Proven the technology works in the types of environments Army works in and can produce normal supply chain parts in the field

DEPLOYED IN THE FIELD

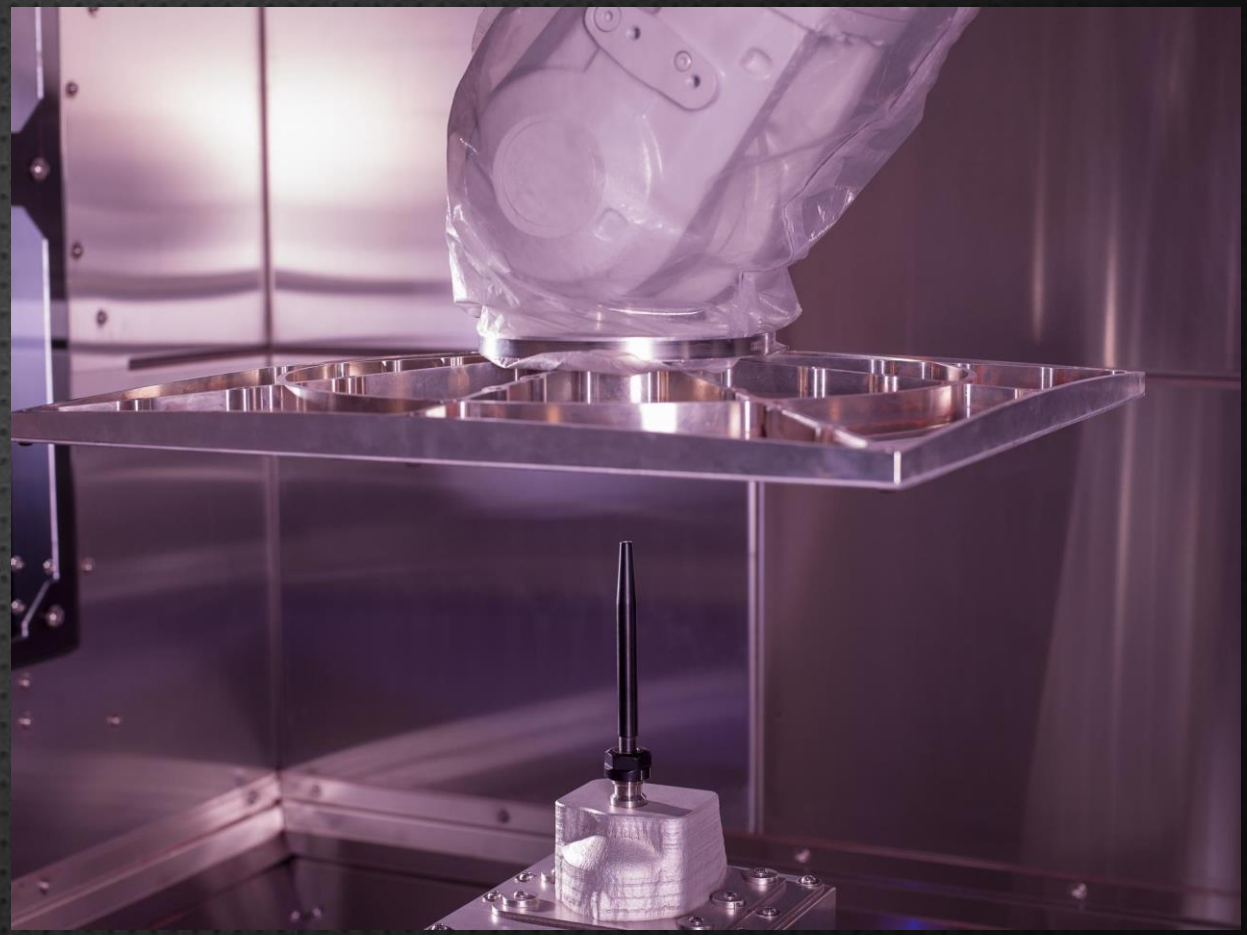
SPEE3D

NEW CSAM NOZZLE ANNOUNCEMENT – Teaser!

We have developed a NEW cold spray deposition system.

Our new “ultra high energy nozzle” allows a much wider range of engineering alloys and materials to be sprayed.
i.e. Ti, Ta, Nb, hard phase wear materials

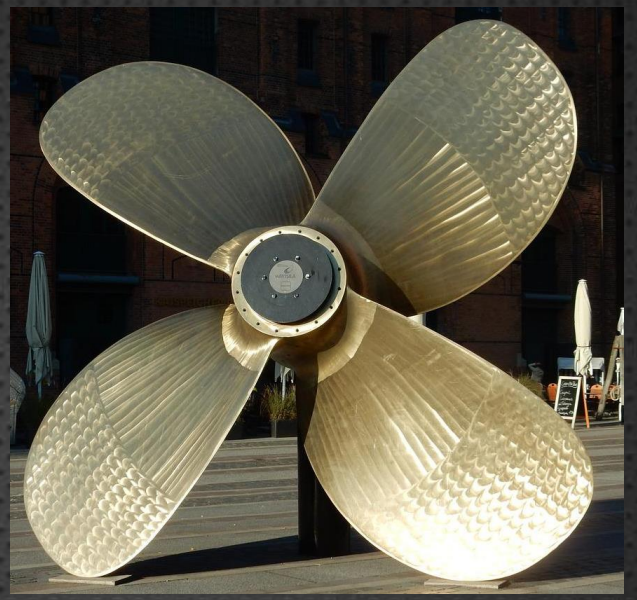
Materials data to be announced at CSAT!



LSAAT - Introduction

SPEE3D

- 2022 is the inaugural Large Scale Additive Action Team launch!
- How to AM large parts? Thousands of pounds, 150 foot?
- Usually low volume – but still need to be of high quality
- Usually made with long lead times
- Amidst global supply chain disruption…
- AM does not currently offer many viable solutions. Why not?



LSAAT – Well known, in fiction, to be required for space.

SPEE3D

My brave statement – "the nation or nations that successfully colonise space will only succeed by relying on practical Advanced Manufacturing."

LSAAT – Well known, in fiction, to be required for space.

Arkane Studios – Prey (2017) – "The Fabricator"

My brave statement – "the nation or nations that successfully colonise space will only succeed by relying on practical Advanced Manufacturing."

LSAAT – Well known, in fiction, to be required for space.

SPEE3D

System Era Softworks – Astroneer (2016)

My brave statement – “the nation or nations that successfully colonise space will only succeed by relying on practical Advanced Manufacturing.”

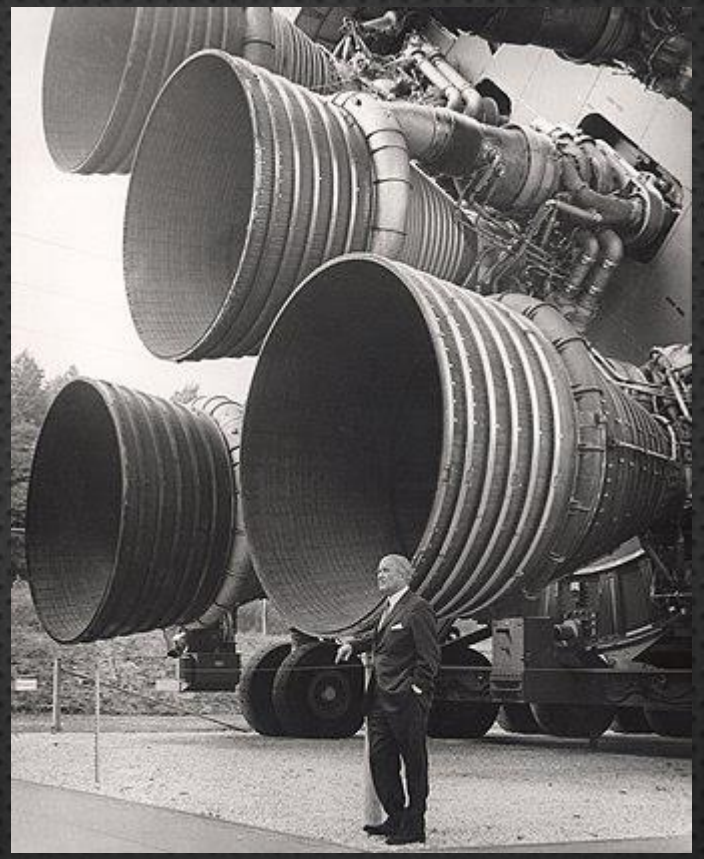
LSAAT – Well known, in fiction, to be required for space.

Unknown Worlds – Subnautica (2018) – ""Mobile Vehicle Bay"

My brave statement – "the nation or nations that successfully colonise space will only succeed by relying on practical Advanced Manufacturing."

LSAAT - SPACE

- We’re not only proving we need large scale AM to thrive in space
- Large scale AM gets us there.
- 2022 Launch vehicles are the epitome of big, low volume, high complexity production.
- Small scale L-PBF is already constraining how we are able to solve these problems in the modern era.
- Announcement at CSAT!



1950s era Saturn V F-1 Engines – Wernher Von Braun for scale (image courtesy Wikipedia)

Modern era Rocketlab Rutherford engine – 3D printed (image courtesy 3Dprint.com)

SPEE3D

Want to master your supply chain? Contact us:

www.spee3d.com

SPEE3D

WE MAKE MANUFACTURING EASIER

LandForces SME INNOVATION AWARD WINNER

BOSCH Venture Forum Awards 2015

WINNER Austrade Emerging Exporter Award SPEE3D NTEIA

WINNER Manufacturers Council Manufacturing Award SPEE3D NTEIA

tct AWARDS 2018 HARDWARE NON-POLYMER SYSTEMS WINNER

tct AWARDS 2018 RISING STAR HIGHLY COMMENDED

Endeavour Awards

TECH23.2016 CELEBRATING AUSTRALIAN INNOVATION

MIL AM 2022