

Founded in 2014, AML3D is a technology company that is focused on improving manufacturing supply chains by using a proprietary WAM® Process.

AML3D uses new technologies to pioneer and lead metal additive manufacturing globally, enabling our customers to become globally competitive.

We achieve this by combining our patented Wire Additive Manufacturing (WAM®) process with Industry 4.0 capability that is driven by the Industrial Internet of Things (IIoT).

**Toolcraft looks to partner with AML3D whenever there is scope for their process – when manufacturing parts larger than commonly available materials or when sourcing exotic metals is cost prohibitive.**

– Greg Stevens, Toolcraft Australia

**Wire Arc Additive Manufacturing, or WAAM, has the potential to enable a productivity step change in shipbuilding, able to 3D print marine grade metal structures at a scale well beyond other commercially available metal 3D printing technologies.**

– Andrew Malcolm, Austal

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Toolcraft partnered with AML3D to manufacture large scale aluminium components for project with Defence Science and Technology (DST).

# AEROSPACE

Manufacture certified, large scale  
and exotic metal parts with WAM®



## Capabilities

- Contract manufacturing services with Wire Additive Manufacturing (WAM®), integrating robotic welding and proprietary software WAMSoft® and AMLSoft™
- OEM of ARCEMY®, metal 3D printers for large scale (> 0.4m<sup>3</sup>) components
- Supporting sovereign capability with local part manufacture and material sourcing
- Restorative repair and maintenance of worn tooling and metal parts
- Robotic & welding automation expertise, engineering support services
- Meets high volume manufacturing requirements and reduces lead time, without tooling costs
- Print multiple parts into one to reduce weight and minimise assembly and machining time
- Metal alloys include Aluminium, Nickel Aluminium Bronze, high strength Steel, Carbon Steel, Stainless Steel, Invar, Titanium and Inconel

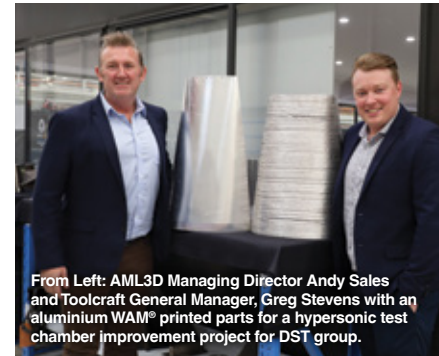
## Discriminators

- No tooling costs or cast moulding costs
- Developing high-strength alloys in partnership with Deakin University's Institute for Frontier Materials (IFM)
- Manufacturing metal products up to 2 x stronger<sup>1</sup> than designed working load
- Up to 30% stronger<sup>2</sup> than traditionally cast or forged steel parts
- Nickel Aluminum Bronze products present 2 x ductility<sup>3</sup> compared to wrought equivalents
- 50% more resistant<sup>4</sup> fatigue resistance
- Manufacture with a proven, certified<sup>5</sup> additive manufacturing process
- Manufacture up to 75% faster<sup>6</sup> than forging or casting without tooling investments
- Up to 95% material waste saving<sup>7</sup> when compared to billet machining
- As-deposited (welded) finish does not require post heat treatment
- Locally sourced wire feedstock and ARCEMY® print systems allow for on site manufacture, removing reliance on overseas supply chain

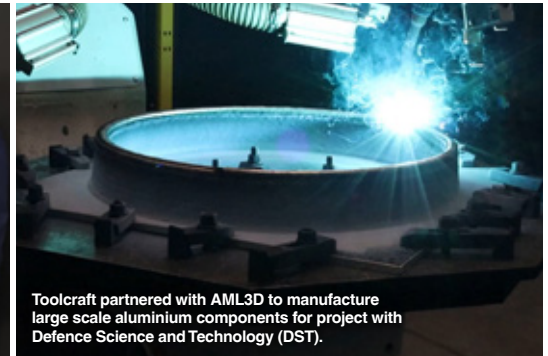
## Accreditations, Standards Used and Memberships



## Customers and Partners



From Left: AML3D Managing Director Andy Sales and Toolcraft General Manager, Greg Stevens with an aluminium WAM® printed parts for a hypersonic test chamber improvement project for DST group.



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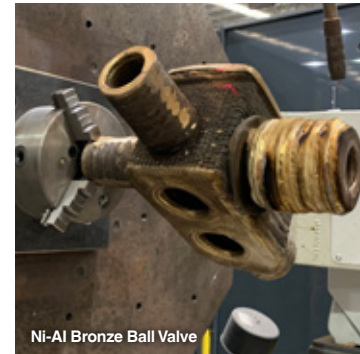
Austal Technology Project Manager, Jeffrey Poon, DNV Representative Jude Stanislaus, AML3D CEO Andy Sales with a sample DNV Verified Davit Lifting Device. Image: Austal Australia



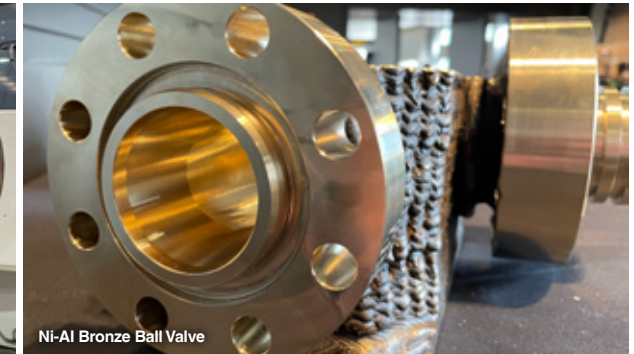
WAM® metal 3D printed Trumpet/Fluting



WAM® metal 3D printed Trumpet/Fluting



Ni-Al Bronze Ball Valve



Ni-Al Bronze Ball Valve



Panama Chock



Ni-Al Bronze Side Thruster Propeller Blade