

# PROFILE



**AML3D is the original equipment manufacturer of ARCEMY®**

ARCEMY® is an industrial metal 3D printer that uses our patented Wire-arc Additive Manufacturing technology to produce large-scale and exotic material parts for several industries.



**AML3D®**

# ARCEMY®

BY AML3D



## What is AML3D's Value Proposition?

In short, our systems provide a faster, cheaper, more efficient, and more sustainable approach to metal fabrication. AML3D's ARCEMY® System provides a near-net manufacturing alternative, disrupting traditional manufacturing methods (billet machining, casting and forging) while solving complex supply chain challenges due to material availability, long lead times, and current geopolitical uncertainty. ARCEMY® offers Defence (Land, Sea and Air) a true sovereign manufacturing capability. Our WAM® process also supports low carbon manufacturing and the growing demand to hit net-zero ESG targets.

## How it Works

ARCEMY® combines welding science, robotics automation, materials engineering and proprietary software to form our patented WAM® process. The complete system produces parts efficiently by depositing molten wire layer by layer, in a controlled manner and produces near-shape parts.

## Key Data

WAM® offers a proven and certified additive manufacturing<sup>4</sup> process that:

1. Can test up to 2 times higher<sup>1</sup> than designed working load;
2. Produces material properties up to 30% stronger<sup>2</sup> than seen in traditionally cast or forged parts;
3. Up to 50% more resistant<sup>3</sup> to metal fatigue;
4. Can be manufactured up to 75% faster than forging or casting without tooling investments<sup>5</sup>;
5. Has the potential to produce up to 95% in material waste savings<sup>5</sup>;
6. TRL Readiness Level 8.

## What are AML3D's Core Offerings?

1. **ARCEMY® Education** is an entry-level Wire-arc Additive Manufacturing system explicitly designed for R&D and university student curriculum purposes. It features a smaller footprint and the requirement to benefit from future data, research, and research papers and development of new-to-world materials.
2. **ARCEMY® Small Edition** features the smallest footprint of the commercial ARCEMY® range. This entry-level WAM® solution is perfect for improving the manufacturing process for metal parts up to 750 kg in weight the Small Edition provides a 2.0 m reach and a minimum print area of 500 mm x 500 mm.
3. **ARCEMY® Enterprise Edition** introduces a 2.5 m reach robot combined with a 750 kg positioner. Designed for increased productivity and the production of larger parts, ARCEMY® Enterprise Edition is perfect for the facility that has medium to high manufacturing volumes but is a little tight on floor space.
4. **ARCEMY® X Edition** for manufacturing industrial parts that are extra in size and extra in nature.. With the largest footprint of the fleet, ARCEMY® X features an impressive 3.2 m reach and a minimum safe print area of 500 mm by 500 mm, providing a larger working range for industrial parts.

## Parts Examples

- Panama Chocks (A & B type)
- Control Pitch
- Propeller Blade
- Nose Cones
- Side Thrusters
- Propellers
- Hatch Doors
- Horn Cleat
- Bollards
- Hinges
- Swept Ts
- SOW Davit Arms
- Frames
- Pressure Vessels
- >15" Valves
- Nozzles
- >15" Flanges
- Titanium brackets

## Defence Work

AML3D desires to equip all industry, including Defence with cutting-edge and emerging manufacturing technology to improve supply chain resilience and self-reliance.

- [\\$4.5M ARCEMY® Order from the Largest Shipbuilder in the USA: HII NNS](#)
- [Order Received for \\$1.2M Portable ARCEMY® System Order from AUSTAL USA](#)
- [US Navy Issues AML3D with Letter of Intent](#)
- [AML3D's Largest Custom ARCEMY® Online at AUSTAL USA](#)
- [AML3D expands into UK Defence market](#)

- [AML3D supports AUKUS supply chain with Virginia-Class Components](#)
- [MLA expands AML3D's Delivery to US Navy](#)
- [ARCEMY® Upgrade for Australian Defence Supplier](#)
- [ARCEMY® Sale to US Navy Supplier](#)
- [US Navy Supplier LWS Leases Two ARCEMY® Systems](#)
- [New US Defense Contract Builds Alloy Capacity](#)
- [Aerospace Contract Expands AML3D's presence in Australian Defence sector](#)
- [AML3D Expands Australian Defence Capabilities](#)
- [AML3D to Manufacture Prototype for BAE's Frigate Program](#)

- [AML3D Wins Largest ARCEMY® System Contract to Austal USA](#)
- [AML3D Wins \\$2.5M Contract](#)
- [US Navy Component Supplier Orders ARCEMY®](#)
- [AML3D Expands US Navy Submarine Parts Manufacturing](#)
- [New US Defense Contract Expands AML3D Alloy Testing Program](#)
- [AML3D Receives Order for Submarine Parts](#)
- [US Defence Extends Testing Contract with AML3D](#)
- [ARCEMY® Ordered for the US Navy's CoE](#)
- [AML3D expands presence in US Defence Industry](#)
- [AML3D to Prototype Parts for BAE](#)

1 - Learn more: <https://bit.ly/3EIEaiK> 2 - Learn more: <https://bit.ly/3jiOAVn> 3 - AML3D internal study. 4 - Certified through Lloyd's Register, DNV, with ISO9001:2015 QMS, AWS D.20.1 5 - Learn more: <https://bit.ly/3Gyhqw0> 6 - Learn more: <https://bit.ly/3YOPCgZ>

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