ASX Announcement

CONTACT DETAILS

41-43 Wittenberg Drive
Canning Vale, WA
AUSTRALIA 6155

enquiries@auroralabs3d.com
t. +61 (0)8 9434 1934
auroralabs3d.com

ASX CODE: A3D

ACN 601 164 505

A3D Completes Third Milestone: Exceptionally High Power Printing Capability Confirmed

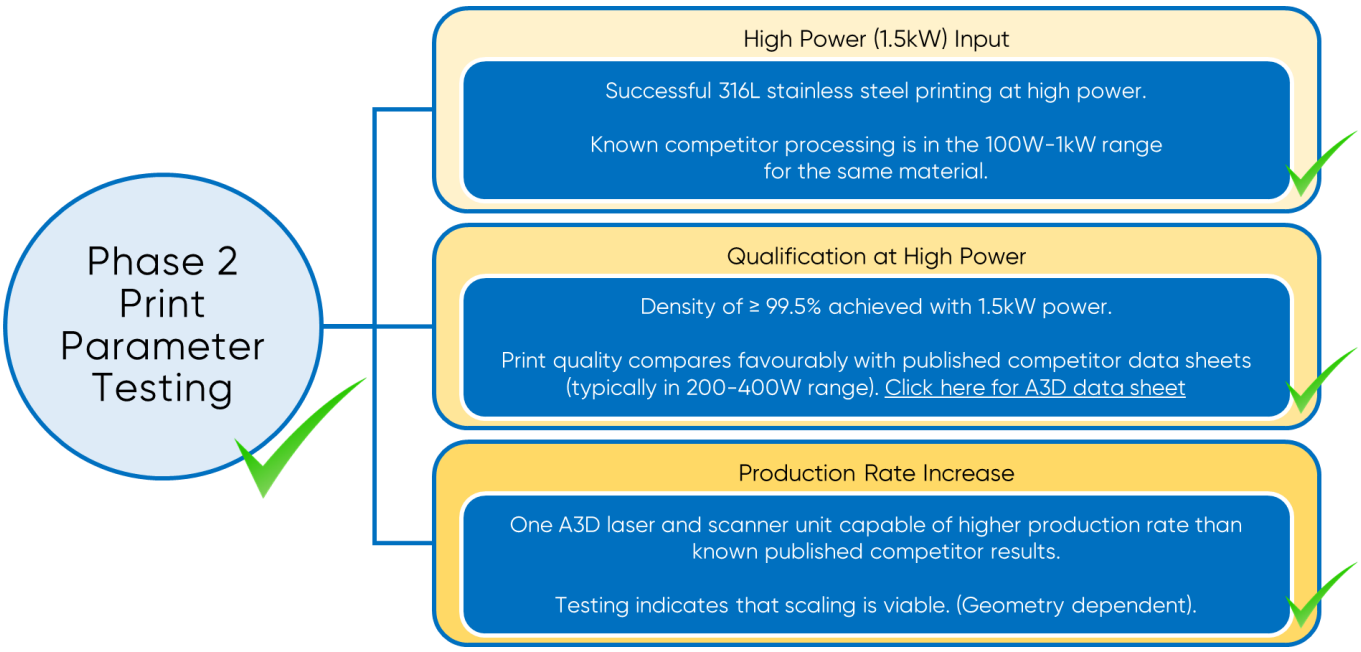
- 1.5kW laser printing exceeds known competitor laser power input by significant margins
- High quality achieved and standards met alongside increased print production rate
- Completion progresses pathway to final phase to reach future commercialisation

Aurora Labs Ltd, ("A3D" or "The Company") is pleased to announce successful completion of the third milestone in its Technology Development Pathway.

The A3D technical team have achieved the Phase 2 Print Parameter Testing milestone, the next developmental jump in the Company's "Lily Pad" approach, measuring the capability of the RMP-1 Beta prototype printing in 316L stainless steel at high power. The team have achieved reliable printing at 1.5kW laser power, while maintaining part integrity against industry quality standards.

A3D has now completed three of its four technology development milestones, with Phase One Print Parameter Testing[i] and the Fume Extraction Upgrade[ii] paving the way for the latest progress with high power printing.

Phase Two Print Parameter Testing success is defined by 3 targets: Successful printing at high power (1.5kW) input, qualification at high power, and a resulting production rate increase.



High Power Input:

A3D is utilising a unique combination of hardware and software including the upgraded fume extraction system, variable laser focus and scan strategies to achieve effective printing at 1.5kW. This power exceeds traditional typical powder bed fusion laser powers of 200-400W and next generation printer laser power levels of up to 1kW. The result opens the gateway to improved performance and cost reduction for complex parts.

1.5kW parameter 316L stainless steel impeller (right):

Click for print video and heat map

Qualification at High Power:

316L stainless steel 1.5kW parameters have been qualified by testing of solution annealed tensile specimens, meeting the requirements of the relevant standard[iii]. The results are presented in *Figure 1* alongside outcomes for as-printed specimens, which are reported in the Material Data Sheet as per industry convention. Further investigation is being undertaken by A3D into the most appropriate heat treatment profiles for parts printed at 1.5kW, and once the work is complete, results will be published.

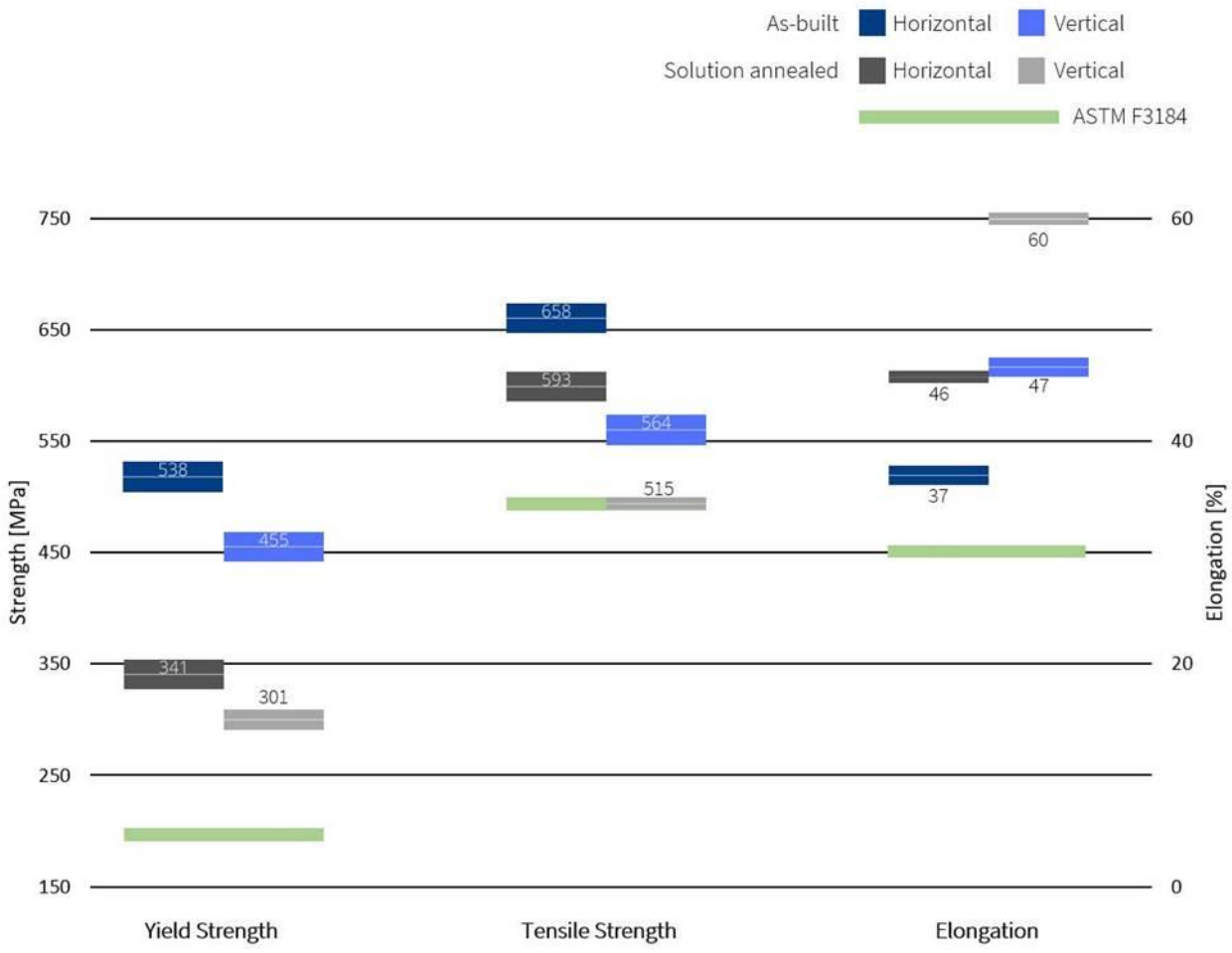


Figure 1: 316L Stainless Steel Tensile Properties at 1.5kW – NATA certified test results vs ASTM standard requirements

Production Rate Increase:

The Company's research indicates that its high quality 316L stainless steel 1.5kW parameters in the RMP-1 Beta prototype 4-laser system will be faster than other commercial 4-laser powder bed fusion printers. The majority of powder bed printers currently in operation in commercial production houses operate in the range of 1.5 to 7.5 times less power and speed (geometry, material & machine configuration dependent) than the RMP-1 has demonstrated under recent parameter testing. While the RMP-1 printer remains at a pre-commercial stage, the team are highly encouraged that the RMP-1 technology suite will offer distinct commercial advantages to the market upon reaching commercial ready stage.

CEO Peter Snowsill said;

"A significant production rate increase without detriment to quality translates directly to cost savings for our customers. A3D's technology has matured to a point where we can identify suitable customer parts for the techniques we are employing, and the benefits are being defined.

We are printing and testing in 316L stainless steel for its wide range of applications in key industries where durability in harsh environments is appealing. It is widely employed in mining, marine and oil & gas, which are the industries on our doorstep here in WA. Local capability is essential in the current climate, and our goal is to create solutions that service the needs of the region.

High power, high quality and high build rate printing is a path to being competitive in heavy engineering, and we are engaging with those companies to understand their needs so that we can steer our testing towards solving specific industry problems."

A3D's Technology Development Pathway now progresses into its final phase to commercialisation. This will include printing parts for customers to demonstrate the targeted differentiated offering of the suite of technologies under development. Build rate and cost of production benchmarking will be undertaken with independent, third-party validation as the Company progresses towards Milestone 4.

Ends

Approved for release by the Company's Board of Directors.
For further information, please contact: Peter Snowsill, CEO
+61 (0)8 9434 1934 or by email enquiries@auroralabs3D.com

ABOUT AURORA LABS

Aurora Labs Limited (A3D), is an Australian industrial technology and innovation company that specialises in the development of 3D metal printing technology and its associated intellectual property.

A3D fosters a robust discovery culture in its highly skilled team of specialists and is enthusiastic about the future of Additive Manufacturing in the wider industrial technology community.

Aurora Labs is listed on the Australian Securities Exchange (ASX:A3D)

FORWARD LOOKING STATEMENTS

This announcement contains forward-looking statements which incorporate an element of uncertainty or risk, such as 'intends', 'may', 'could', 'believes', 'estimates', 'targets' or 'expects'. These statements are based on an evaluation of current economic and operating conditions, as well as assumptions regarding future events.

These events are, as at the date of this announcement, expected to take place, but there cannot be any guarantee that such events will occur as anticipated or at all given that many of the events are outside Aurora's control.

Accordingly, Aurora and the directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur.

For further information, please contact: enquiries@auroralabs3D.com

[i] Refer ASX announcement 20 oct 2020 "A3D Delivers Phase 1 Milestone"
[ii] Refer ASX announcement 5 Feb 2021 "A3D Delivers fume Extraction Milestone"
[iii] ASTM F3184