

MEDIA RELEASE

3D Metalforge launches the first metal-focused 3D Additive Manufacturing Centre in Singapore

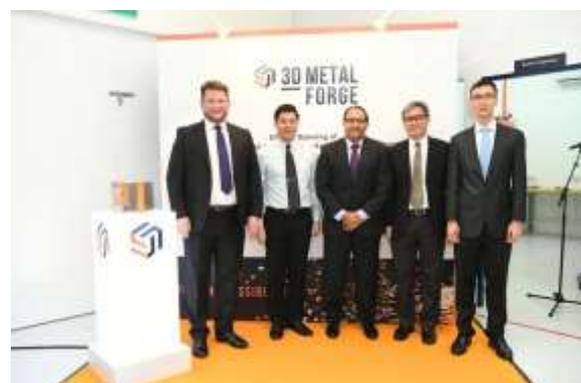
- *The Additive Manufacturing Centre will provide an end-to-end suite of in-house metal printing solutions dedicated to commercial and industrial use*
- *The company aims to offer cost-effective solutions for large format 3D metal printing for key industries, particularly in the marine, oil & gas, engineering and manufacturing sectors*
- *Individual project collaboration agreements were signed with A*STAR's Singapore Institute of Manufacturing Technology (SIMTech); as well as the National Additive Manufacturing Innovation Cluster (NAMIC) and Singapore University of Technology and Design's (SUTD) Digital Manufacturing and Design Centre (DManD) to jointly develop and commercialise 3D metal printing technologies for large format metal printed parts in Singapore*

17 May 2017, Singapore – 3D Metalforge Pte Ltd (“3D Metalforge”), a homegrown company specialising in metal printing, today unveiled its first end-to-end 3D Metal Additive Manufacturing Centre (AMC) in Singapore. Jointly opened by Mr S. Iswaran, Minister for Trade and Industry (Industry), the AMC will provide a complete suite of in-house metal printing solutions and services ranging from design and engineering, to printing, post-production and finishing.

“Singapore’s strategic location, pro-business environment, high-technology infrastructure and its intense focus on the additive manufacturing sector to support our economic transformation to Industry 4.0 makes it a logical choice for us to set up our AMC here,” said Matthew Waterhouse, Chief Executive Officer of 3D Metalforge. “Today’s launch underscores 3D Metalforge’s commitment as a homegrown company to deliver end-to-end 3D metal printing solutions to our customers.”



Our Guest-of-Honour, Singapore’s Minister for Trade & Industry (Industry) Mr S Iswaran giving his opening speech on the launch of 3D Metalforge AMC, which provides end-to-end metal printing solutions



From L-R: Mr Matthew Waterhouse, CEO of 3D Metalforge, Dr John Yong, SIMTech’s Director of Industry Development Office, Minister Iswaran, Dr Ho Chaw Sing, Managing Director of NAMIC and Dr Lim Keng Hui, Director of SUTD Digital Manufacturing & Design Centre



Enabling innovative disruptions to Key Industries

The AMC will deliver 3D metal printing solutions to Singapore's key growth sectors, including the oil and gas, marine, precision engineering and construction industries. Staffed with a predominantly local team of designers and engineers, the AMC will have a range of printers from highly-detailed to large scale, cost effective printers that will help customers capture the benefits of 3D printing. Some key advantages include the ability to re-design parts to reduce material usage whilst improving performance, reducing the costs of producing customised parts and extending the lifespan of equipment by printing obsolete parts.

Additionally, the AMC supports small batch productions which translates to immediate cost savings on production, shipping and warehousing for customers. This is a major advantage as more companies are moving towards the 'high-mix, low-volume' production model in this region.

Delivering Singapore's first large format Laser Aided Additive Manufacturing (LAAM) technology for 3D printing

The launch event also witnessed the signing of a project collaboration agreement with SIMTech to commercially develop Singapore's first large format LAAM technology for 3D printing for industrial applications. This collaboration is supported and co-funded by NAMIC.

The LAAM technology currently has one of the largest print beds available for metal printing, up to 3-4 times larger than the largest powder bed printers currently available on the market. It will also come with a super-fast deposition rate of up to 1 kg per hour, which is almost 10 times faster than existing powder bed printers. LAAM utilises a high-energy laser beam and advanced powder blowing technology to deposit and sinter metal powder into large mid complex parts.

"We are delighted to partner with SIMTech to advance the 3D metal printing capabilities in Singapore," added Mr Waterhouse. "The LAAM technology will be a gamechanger for the industry. This means that we will be able to produce high quality, large format, cost effective metal parts with first class mechanical properties that not only meets, but exceeds the quality standards for traditionally manufactured parts at our AMC. This will allow key industries such as aerospace, precision engineering, oil and gas, marine and offshore, and automotive to capitalise on the benefits of additive manufacturing."

SIMTech has developed the background intellectual property (IP) of the LAAM technology whilst the new equipment will be housed in 3D Metalforge's state-of-the-art AMC. Additionally, a SIMTech researcher will be seconded to the project team to facilitate the smooth implementation of the technology.

Driving fast and cost-effective 3D metal printing with the Hybrid Wired Arc Additive Manufacturing (H-WAAM) technology

In addition to the partnership with SIMTech, the launch also saw the signing of a separate project collaboration agreement with NAMIC and SUTD's Digital Manufacturing and Design Centre (DManD) on the development and commercialisation of the H-WAAM technology.



The H-WAAM technology utilises cutting-edge robotics, plasma and machining technology to deliver a faster and more cost-effective 3D metal printing solution. Customers can expect to significantly increase the maximum size of 3D printed metal parts to over 1.5 metres, and improve the printing speed by over 10 times.

Additionally, the H-WAAM uses feed material that is up to five times cheaper than traditional metal powders, translating to more cost savings for customers. With the integrated hybrid machining technology, the H-WAAM will also produce higher quality metal parts by machining between deposition layers to enhance the quality of the printing and produce a nearer net-shape part.

The H-WAAM technology is targeted at key industries such as marine, oil and gas, and manufacturing industries, and it fulfils the industry gap for commercial 3D printing solutions for larger, simpler metal parts.

3D Metalforge is the sister company of 3D Matters, one of Singapore's earliest commercial 3D printing additive manufacturing companies. The company leads the additive manufacturing industry in the field of commercial metal printing with its team of 3D designers, engineers, technical and solution specialists that help to bring the benefits of additive manufacturing to local industry. 3D Metalforge's core competencies include providing optimised solutions for 3D metal printed parts to deliver enhanced performance and cost reduction – especially for detailed and complex parts across various industries.

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About 3D Metalforge

Headquartered in Singapore, 3D Metalforge operates one of Asia's first and leading Additive Manufacturing Centres (AMC) dedicated to designing, engineering and printing metal end use parts. With a highly experienced and talented in-house team comprising 3D designers, engineers as well as technical and solution specialists, our globally-leading range of cutting-edge metal printers provides an extensive selection of print sizes, materials, price points and print detail. Our mission is to provide industry standard, cost-effective additive manufacturing solutions that support our clients from initial idea conceptualisation, to engineering and design, and finally high-quality finished 3D printed parts.

For more information, please visit <http://3dmetalforge.com/>

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