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Singapore launches new standard SS 708 to help local manufacturers deepen capabilities in additive manufacturing for aerospace

SS 708 to help Singapore manufacturers better meet global aerospace requirements, strengthen Singapore's position as leading aerospace hub in APAC

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1. The Singapore Manufacturing Federation – Standards Development Organisation (SMF-SDO) and Enterprise Singapore (EnterpriseSG), through the Singapore Standards Council (SSC), launched the **Singapore Standard (SS) 708 Additive manufacturing for aerospace – Filament layer manufacturing process specifications** at inter airport Southeast Asia 2025[1] today. This is the first Singapore Standard developed in the area of additive manufacturing for aerospace and is part of the larger industry efforts to strengthen Singapore's position as a leading aerospace Maintenance, Repair and Overhaul (MRO) hub in Asia Pacific (APAC).

2. SS 708 provides a comprehensive framework for Filament Layer Manufacturing (FLM)[2], to enable the consistent and reliable production of aerospace-grade components like lightweight structural parts and specialised maintenance tooling. It features guidelines on quality controls for the production of aviation components, as well as critical requirements for hardware validation, material specifications, and operational workflows.

[1]inter airport Southeast Asia is the premier trade exhibition and conference for airport innovation and technology in Asia. It is taking place from 25 to 27 March 2025 at the Marina Bay Sands.
[2] Filament Layer Manufacturing (FLM) is a form of additive manufacturing that involves layer-by-layer deposition of polymer materials.

3. Local additive manufacturing service producers can tap on SS 708 to develop and strengthen capabilities in printing FLM parts and streamline associated manufacturing processes to reduce overall MRO turnaround time. This provides a way to broaden Singapore's supplier base for FLM printing services and facilitate more aerospace MRO companies to implement additive manufacturing in their processes, thereby reinforcing its position as the MRO hub for Asia Pacific.

4. Besides opportunities in Singapore, local companies that adopt SS 708 can also easily adapt to international requirements and serve global clients, given that the standard complements existing standards from ASTM (American Society for Testing and Materials) and ISO (International Organization for Standardization).

5. SS 708 was developed by the **Working Group (WG) on Additive Manufacturing for Aerospace**. It is overseen by the Manufacturing Standards Committee, with support from the Civil Aviation Authority of Singapore (CAAS), the National Additive Manufacturing Innovation Cluster (NAMIC), the Association of Aerospace Industries (Singapore) (AAIS), and ST Engineering (Quotes from the respective agencies can be found in **Annex A**.)

6. **Ms. Choy Sauw Kook, Director-General (Quality & Excellence), Enterprise Singapore** said, "Trust and safety are of utmost importance in the aerospace sector, and local manufacturers must demonstrate their ability to reliably and efficiently produce aerospace-grade components. SS 708 serves as a strategic tool to help these companies enhance their capabilities in additive manufacturing, thereby building trust within the industry. We will continue to work closely with our industry and standards partners, to strengthen our standards infrastructure and advance our ambitions as a leading aerospace MRO hub."

7. **Mr. Dennis Mark, CEO, Singapore Manufacturing Federation,** said, "SS 708 is a testament to Singapore's commitment to advancing manufacturing excellence and innovation in the aerospace sector. By providing a robust framework for Filament Layer Manufacturing, this standard empowers local manufacturers to deliver aerospace-grade

components efficiently while meeting stringent global requirements. It reinforces Singapore's position as a competitive aerospace hub in the Asia Pacific region. At SMF, we are proud to support this milestone initiative, which not only strengthens industry capabilities but also paves the way for greater collaboration and growth within the aerospace ecosystem."

8. Building on this initiative, Singapore plans to deepen its standards infrastructure for other additive manufacturing technologies such as vat photopolymerization, powder bed fusion, and material jetting, and establish Singapore's reputation as a full-spectrum aerospace innovation hub. Industry partners will also bolster support for local companies to upskill in relevant areas; for instance, NAMIC will partner with academic institutions to introduce training programmes and grant support for companies to adopt new additive manufacturing standards, while AAIS will offer specialised training programmes on additive manufacturing applications in aerospace.

9. SS 708 can be purchased from the Singapore Standards e-shop. (https://www.singaporestandardseshop.sg/).

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About Singapore Manufacturing Federation

Established since 1932, the SMF represents the interest of the manufacturing community in Singapore, driving its competitiveness and sustainable growth through serving industry-specific needs. Supported by 10 industry groups and its Associated Services, the SMF enhances the competitiveness of the industry by encouraging capacity development and capability building, innovation and productivity. The SMF provides opportunities for companies to collaborate, network, and to grow and expand both locally and internationally. Current membership stands at about 5,000 members comprising SMEs, MNCs and Affiliate members. For more information, please visit www.smfederation.org.sg.

About Enterprise Singapore

Enterprise Singapore is the government agency championing enterprise development and work with committed companies to build capabilities, innovate and go global. We also support the growth of Singapore as a hub for global trading and startups. As the national standards and accreditation body, we continue to build trust in Singapore's products and services through quality and standards

Visit www.enterprisesg.gov.sg for more information.

About Singapore Standards Council

The Singapore Standards Council (SSC) facilitates the development, promotion and review of Standards and Technical References in Singapore. This work is done through partnerships with the industry, academia and government organisations, under the national standardisation programme overseen by Enterprise Singapore.

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Annex A

Quotes from members of the Working Group
(in alphabetical order)

Mr. Sia Kheng Yok, Chief Executive of AAIS said, “The Singapore aerospace sector strives to be at the forefront of innovation, leading in the adoption of advanced technologies. This new additive manufacturing standard, developed through close collaboration between industry and the national standards body, marks a significant milestone. We hope it catalyses greater commercial adoption of AM in aviation and aerospace and contributes to shaping global industry practices.”

Mr. Han Kok Juan, Director-General of CAAS said, “CAAS, as a regulator for the manufacturing of aircraft parts, is happy to help co-develop the first aviation-specific Filament Layer Manufacturing standard to support the aerospace industry’s adoption of additive manufacturing technologies. The collaborative approach is a good example of the regulator-industry partnership we have in Singapore which allows the regulator to uphold high safety standards while alleviating the challenges that industry faces in meeting stringent airworthiness standards and reducing compliance time and costs.”

Dr. Ho Chaw Sing, Chief Executive Officer, NAMIC Singapore said "NAMIC has been on the forefront partnering leading industry players such as ST Engineering in translational research and industry-relevant standards for enterprises to provide quality additive manufacturing services and products. With the launch of SS708, it will enable businesses with innovative business models supported by additive manufacturing to bolster Singapore’s positioning as the leading APAC Aerospace MRO hub."

Dr. Zheng Guoying, Vice President/ Head, Advanced Manufacturing Design Centre, ST Engineering said, “The launch of the new standard marks a significant milestone in advancing additive manufacturing for aerospace applications. This will not only strengthen industry confidence in the technology but also foster greater collaboration among manufacturers,

regulators and operators, promoting greater efficiency, sustainability, and performance in aircraft operations."