New Safety Standards for Additive Manufacturing in the Japanese Railway Sector

Japanese Nannen-sei certification for ULTEM™ 9085 produced with Roboze Additive Manufacturing solutions for Railway applications

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Roboze, a company specializing in additive manufacturing of superpolymers and composite materials, announces that its ARGO 500 HYPERSPEED and ARGO 1000 HYPERMELT platforms have obtained Japan's Nannen-sei certification for ULTEM™ 9085, in full compliance with the requirements set forth by the Ministerial Ordinance *Technical Standards for Railways* issued by the MLIT (Article 83).
The qualification tests were carried out at the Japan Railway Rolling Stock Machinery Association (JRMA), with the technical support of SOLIZE PARTNERS Corporation, Roboze's key technology partner in Japan.

The Nannen-sei certification represents a crucial milestone for railway safety in Japan, as it defines the mandatory level for the use of polymer materials inside railway vehicles, including panels, covers, air ducts and other non-structural components. Testing confirmed that ULTEM™ 9085, printed through both Roboze platforms, fully meets the flame-response requirements set by Japanese regulations, showing remarkable consistency in performance across the two processes: filament extrusion with ARGO 500 HYPERSPEED and pellet extrusion with ARGO 1000 HYPERMELT. This uniformity reflects the technological maturity of Roboze solutions and their ability to ensure quality and repeatability even in highly regulated sectors such as the Japanese railway market.

"We are proud to have supported Roboze in the qualification process according to the Nannen-sei standard," said Junpei Kise, AM service general manager at SOLIZE PARTNERS Corporation. *"The Japanese railway sector demands precision, quality and maximum reliability: characteristics we clearly identified in Roboze technology. This certification is an important step toward broader adoption of additive manufacturing in our market."*

With the Nannen-sei validation, Japanese railway manufacturers can now integrate Roboze additive manufacturing into their production workflows with an enhanced level of safety, reliability and operational continuity. The ability to produce certified components using this technology enables a more responsive and localized on-demand production approach, significantly reducing procurement times and logistics costs. At the same time, the availability of lightweight, robust and high-performance parts contributes to improving overall vehicle efficiency and optimizing component lifecycle management, with tangible benefits for both scheduled and unscheduled maintenance.

"Achieving Nannen-sei certification in Japan is another important step toward Roboze's mission of bringing additive manufacturing into the most regulated and high-performance industries," said Davide Schiena, EMEA Mobility, Aerospace & Defence Business Development

Manager at Roboze. *“Japan is an extremely rigorous market in terms of safety and reliability. Securing this validation demonstrates the value of our systems and opens new opportunities for international collaboration.”*

The integration of ARGO technologies thus enables faster component development and a more agile production approach, fully aligned with the quality and reliability standards that define the Japanese railway sector, one of the most demanding in the world.

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ABOUT ROBOZE

Roboze develops additive manufacturing solutions based on superpolymers and composite materials, replacing metals and reducing production time and cost. Through RAM – Roboze Advanced Manufacturing, its global network of decentralized Smart Factories, the company enables scalable and on-demand production of high-performance components for aerospace, energy, mobility, and other strategic sectors.
Learn more at www.roboze.com.

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