Freemelt signs contract with Fusion for Energy to lead study in the field of tungsten tiles manufacturing

Freemelt has been entrusted to lead a feasibility study on behalf of Fusion for Energy (F4E), the EU organization responsible for Europe's contribution to ITER, together with other experiments in the field of fusion. The aim of the study is to qualify tungsten as material, and to conduct application tests for fusion energy applications. Its value is in the range of SEK 3 M and will run for 15 months, starting in the second quarter of 2025.

Freemelt in collaboration with Fraunhofer IGCV, part of Fraunhofer, Europe's leading research organization for industrial applications, will contribute to the new Technology Development Programme of F4E, launched earlier this year, aiming to generate new know-how through R&D actions in order to bridge knowledge gaps in fusion technologies. This initiative, rolled out by F4E, is in line with the EU's commitment to becoming more resilient, competitive, and a pioneer in science & technology.

As part of the project, Freemelt and Fraunhofer IGCV will develop methods to optimize the joining of tungsten, which protects against extreme temperatures with copper, efficiently transferring heat to the cooling system.

F4E is responsible for the EU's contribution to ITER, which roughly amounts to half of the project, with funds coming from the EU budget. One of the main tasks of F4E, is the consolidation of a supply chain for advanced materials, such as tungsten, used in ITER's chamber walls. The partnership with Freemelt is part of the effort to coordinate research, production, and quality assurance to meet ITER's extreme requirements for heat resistance, radiation tolerance, and lifespan.

"Being trusted to lead this project strengthens our position in the energy sector and further establishes us as a key player in ITER – the international fusion experiment, which will demand an unmatched supply of advanced materials over the coming decades," says Daniel Gidlund, CEO of Freemelt.

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About Us

Freemelt develops advanced 3D printers for metal components and aims to become the leading supplier in additive manufacturing (AM) using E-PBF technology, targeting SEK 1 billion in revenue by 2030. The solutions primarily support companies in the defense, energy, and medical technology sectors in Europe and the USA, enabling them to drive innovation and improve production efficiency. Founded in 2017, Freemelt has expanded its product portfolio to include three printer models, with two designed for industrial production and one (Freemelt ONE) targeting research institutes and universities. The modular industrial printers (eMELT) leverage E-PBF technology, delivering significantly higher efficiency compared to other machines on the market while maintaining flexibility in metal selection.
Freemelt generates revenue primarily through the sale of advanced 3D printers at fixed prices, complemented by support and maintenance services, which are expected to account for 25% of total revenue by 2030.
The company is now focused on further industrializing its product and service portfolio and driving commercialization in the European and North American markets. Read more at www.freemelt.com

Attachments

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