

Freemelt is granted a patent in Japan for cathode technology

– the heart of the company's technology.

Nasdaq First North-listed Freemelt – a high-tech commercial company whose pioneering solution creates new conditions for rapid growth in 3D-printing – has been granted a patent in Japan for important solutions in the products' electron gun. The patent concerns the cathode, the heart of the company's technology, and is the first patent in the "Electron Gun Cathode Technology" patent family. The patent process for North America, China and Europe is ongoing.

The patent concerns the electron gun, which is the subsystem in Freemelt's products that emits the electrons and shapes them into a high-energy beam. The electrons are emitted from the heated cathode and are accelerated to half the speed of light to be directed to melt metal powder layer by layer and thereby form components in Freemelt's system. This means that this patent protects the core of Freemelt's unique design of the electron beam technology.

"Japan has the potential to become an important market in 3D-printing, based on electron beam technology. It is a successful industrial nation in terms of innovation and technology transformation supported by advanced solutions, including electrification of the automotive industry, which is an important market for us," says Daniel Gidlund, Freemelt's CEO, and continues:

"Furthermore, it is a confirmation of the strong innovation ability from our team, something that has impressed on me since I took the role as CEO in the company."

The patent-protected design enables the important ability to retain heat in the part of the cathode that ejects electrons, through advanced thermal insulation. This allows Freemelt to use laser heating of the cathode, which supports high power and a sharp electron beam in a robust and cost-effective industrial design that brings great benefit to users, being a unique solution in 3D-printing from Freemelt.

"We have developed a solution completely focused on high productivity with high and accurate quality. One of the most important things that sets us apart from our competitors is our unique electron gun where we have full control over the manufacturing and design of our proprietary, and now patented, cathode technology, says Ulric Ljungblad, co-founder and Chief innovation Officer at Freemelt."

Parallel patent applications for this invention are also pending in Europe, North America and China. The patent number in Japan is 2021-576773 and extends to 2040.

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About Us

Freemelt is a high-tech company whose ground-breaking solution creates new opportunities for rapid growth in 3D printing, also known as additive manufacturing. The company's protected technology enables cost-effective printing to a consistent and high quality. By choosing an open-source solution, the conditions are created for strong growth and expansion towards manufacturing markets.

Freemelt was founded in 2017, is listed on Nasdaq First North Growth Markets, has 34 employees, head office in Gothenburg and a manufacturing unit in Linköping. Read more at **www.freemelt.com**.

Attachments

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