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OUTOKUMPU AND FRAUNHOFER INSTITUTE WORK TOGETHER ON LIGHTWEIGHT SOLUTIONS FOR ELECTRIC VEHICLES

Outokumpu material experts are working on future-oriented stainless steel solutions in cooperation with scientists from Fraunhofer Institute for Laser Technology ILT, in Germany. The latest innovation is a new battery pack that is specifically designed for electric vehicles. The battery pack combines several lightweight engineering technologies as well as new types of cooling and structural strategies. The Forta H1000 austenitic, ultra-high-strength stainless steel from Outokumpu enables the implementation of structural lightweight engineering initiatives, while providing a high level of safety.

Says **Stefan Lindner**, Senior Technical Manager for Automotive segment at Outokumpu: “A high capacity for energy absorption and increased stiffness with thinner wall thicknesses are crucial characteristics for the development of future lightweight designs in automotive engineering. The Forta H-series fulfills these requirements.”

Because the batteries for electric vehicles are mainly installed in the underfloor area, their casings have very high requirements in terms of hardness and crash safety. At the same time, the structures have to be as lightweight and compact as possible, which is where conventional materials such as aluminum and carbon steels reach their limits.

“With Forta H1000, we were able to engineer a safer casing despite its leaner structure and thus save a considerable amount of weight. Using 1.2 mm thick sheets instead of 1.5 mm wall thickness allows a weight reduction of about 20 percent,” comments Dipl.-Ing. **Paul Heinen**, Head of the FSEM II Project at the Aachen-based Fraunhofer Institute for Laser Technology ILT.

For more information:

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Outokumpu Group

Outokumpu is a global leader in stainless steel. We create advanced materials that are efficient, long lasting and recyclable – thus building a world that lasts forever. Stainless steel, invented a century ago, is an ideal material to create lasting solutions in demanding applications from cutlery to bridges, energy and medical equipment: it is 100% recyclable, corrosion-resistant, maintenance-free, durable and hygienic. Outokumpu employs 11,000 professionals in more than 30 countries, with headquarters in Espoo, Finland and shares listed in Nasdaq Helsinki.

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