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Gentherm Completes Sustainability Study with Fraunhofer Institute

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Study finds the mechanical structuring process utilized by Gentherm significantly reduces CO₂, compared to conventional chemical etching

NORTHVILLE, Mich., April 11, 2023 (GLOBE NEWSWIRE) -- Gentherm (NASDAQ: THRM), the global market leader of innovative thermal management and pneumatic comfort technologies for the automotive industry and a leader in medical patient temperature management systems, recently partnered with the Fraunhofer-Gesellschaft Institute for a sustainability study to demonstrate how the mechanical structuring process utilized by Gentherm for manufacturing flexible printed circuits (FPC) reduces CO₂ emissions and water consumption significantly when compared to conventional chemical etching manufacturing.

Key findings of the study revealed that the Mechanical Structuring Process reduced CO₂ emissions by up to 98 percent for copper circuits and 99 percent for aluminum circuits, and also reduced water consumption by up to 91 percent for copper circuits and 98 percent for aluminum circuits when compared to chemical etching. The impact of this means that if one million vehicles replaced circuits manufactured by chemical etching with the mechanical structuring process solution, it would save over 186,000 tons of greenhouse emissions which is equivalent to the total emissions of 40,000 gasoline-powered cars driven for a year.

The mechanical structuring process is an innovative solution for the manufacturing of FPCs utilizing an innovative milling approach. The current industry standard for FPC manufacturing, chemical etching, is an energy-intensive process that utilizes a variety of environmentally unfriendly chemicals.

"As we continue to develop innovative technology, the sustainability goals of our company and customers are a top priority," said Thomas Stocker, Gentherm's Senior Vice President and General Manager, Europe Automotive, Global Pneumatic Comfort and Battery Performance Solutions, and Managing Director of Europe. "By working closely with the Fraunhofer Institute, we were able to validate the positive environmental impact the mechanical structuring process has for the development of solutions for our customers that address the needs of electric vehicles."

The mechanical structuring process is currently being utilized by Gentherm to manufacture its Cell Connecting Board (CCB) products. This technology utilizes innovative foil-based CCBs that replace complex sensor cable harnesses with ultra-flat foil conductors that are thinner and lighter than previous models. This provides for several advantages including reduced manufacturing complexity, reduced packaging requirements, and a simplified design process.

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About Gentherm

Gentherm (NASDAQ: THRM) is the global market leader of innovative thermal management and pneumatic comfort technologies for the automotive industry and a leader in medical patient temperature management systems. Automotive products include variable temperature Climate Control Seats, heated automotive interior systems (including heated seats, steering wheels, armrests and other components), battery performance solutions, cable systems, lumbar and massage comfort solutions, valve system technologies, and other electronic devices. Medical products include patient temperature management systems. The Company is also developing a number of new technologies and products that will help enable improvements to existing products and to create new product applications for existing and new markets. Gentherm has more than 14,000 employees in facilities in the United States, Germany, China, Czech Republic, Hungary, Japan, Malta, Mexico, North Macedonia, South Korea, United Kingdom, Ukraine, and Vietnam. For more information, go to www.gentherm.com.

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Source: Gentherm Inc