



Łukasiewicz
Institute
of Aviation



The technology was awarded
with Gold Medal at INTARG 2022 XV
International Invention
and Innovation Show

**COMPOSITE
TECHNOLOGIES**
FOR ENERGY STORAGE SYSTEMS
IN ELECTRIC VEHICLES

CHARACTERISTICS

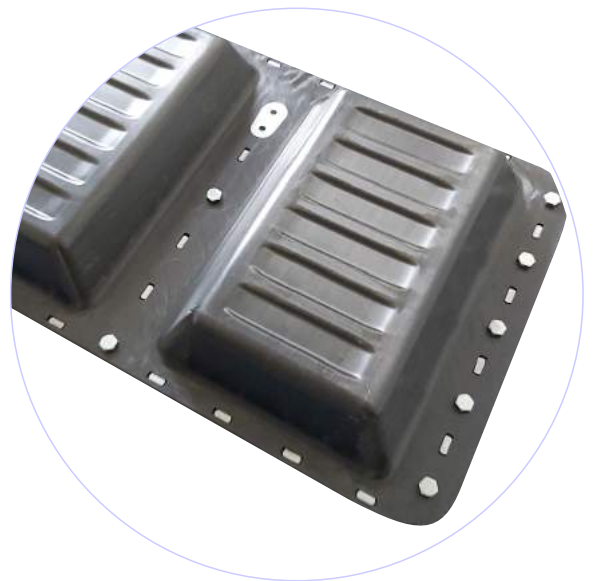
Łukasiewicz – Institute of Aviation has developed a hybrid technology for the production of thermoplastic composite structures for protection of electrical systems in transport. The process uses AFP (Automatic Fiber Placement) technology and pressing technology, which enabled the production of composite, thermoplastic lightweight electric cell covers with increased thermal resistance.



The use of thermoplastic composites allows for mechanical recycling and further use in the construction of other protective structures. As part of subsequent R&D works, Łukasiewicz – Institute of Aviation conducts research on thermoplastic composites recycles for battery protection applications.

MAIN ADVANTAGES

- Increasing the load capacity of the vehicle by reducing the weight of the electric battery cover
- Use of composite materials with increased thermal resistance
- Load-bearing structure with flame barrier functionality thanks to the use of a thermoplastic matrix



The Łukasiewicz Research Network – Institute of Aviation

offers a wide range of specialized research, engineering services and products. We provide comprehensive solutions, ranging from dedicated analyzes, simulations, engineering design, through the selection, testing and certification of materials and structures, to rapid prototyping and additive manufacturing.

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