porcherindustries®

NEXT GENERATION OF TEXTILES & COMPOSITES

SMART TEXTILES :
HEATING PILAM

pilam

GETTING READY FOR THE FUTURE !

Combining high performance materials and electronics, enables new interactive features with complex environments. Our materials are becoming smart!

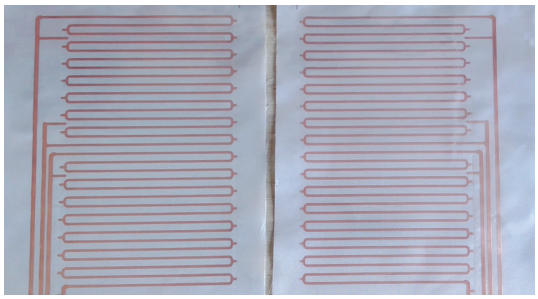
KEY BENEFITS

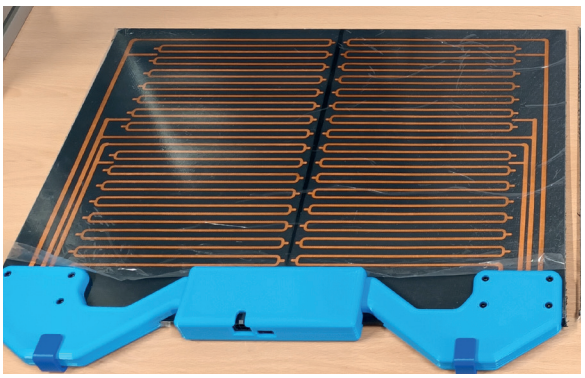
Lightness | Flexibity | Fineness | Precision | Durability

Temperature control / Heating textile and composites

Our smart textiles can be transformed into Pipreg® just as any fabric of our portfolio, and then inte-grated into our Pilam® laminates, to provide you smart composites!

In the exhibited POC, four copper electrodes were printed on a glass fabric which was then integrated into a thermoplastic composite. A thin glass fibre plie protects the electrode on surface, but the smart plie can be placed anywhere into the laminate.





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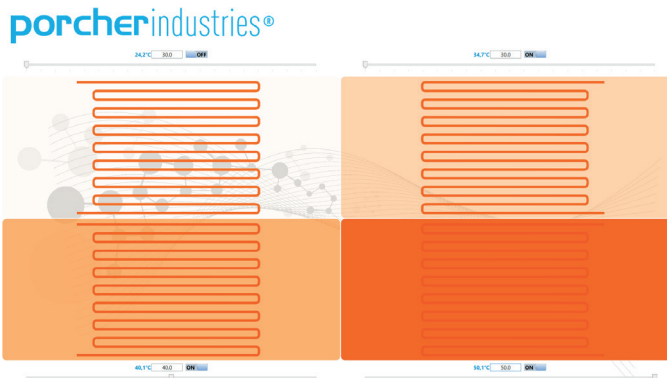
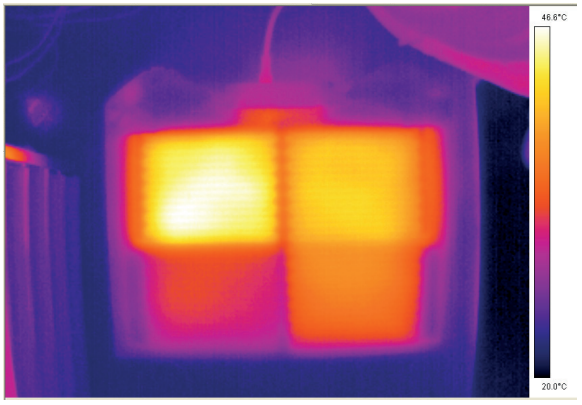
T°C sensors were also integrated into the laminate, allowing to measure and regulate in real time the T°C of each electrode. A wireless terminal allows for T°C setpoint and visualisation.





Eventually, it will be possible to use this system to manufacture wide heating composite laminates, which will guaranty a fully homogeneous T°C on their whole surface, independently of local T°C varia-tions. Possible applications include heating solutions for car or train panels, or even de-icing systems.

Our smart textile solution is compatible with a wide range of fabrics and resins. With this POC, we demonstrated that it is also fully customizable and can be integrated seamlessly in our standard Pi-preg® and Pilam® process.

The next stage of this POC will be to demonstrate that it is still possible to thermoform and change to some extent the shape our smart Pilam®, while maintaining its heating ability.

Do not hesitate to contact us to know more about our smart textiles and composites projects!

CONTACT

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