

BIO-INSPIRED HEAT EXCHANGER FOR 3D PRINTING

3D CALOR PROJECT

The 3D Calor project consists in identifying the main technological barriers related to the production of heat exchangers by additive manufacturing and in evaluating the potential performance of the integration of innovative architectures based on biomimetics principles.

TECHNICAL AND ECONOMIC IMPACTS

Emergence of a new family of heat exchangers
Access to new markets for FIVES CRYO

PARTNERS

IRT JULES VERNE, ADD UP, FIVES CRYO, CNRS (LTEN)

BUDGET

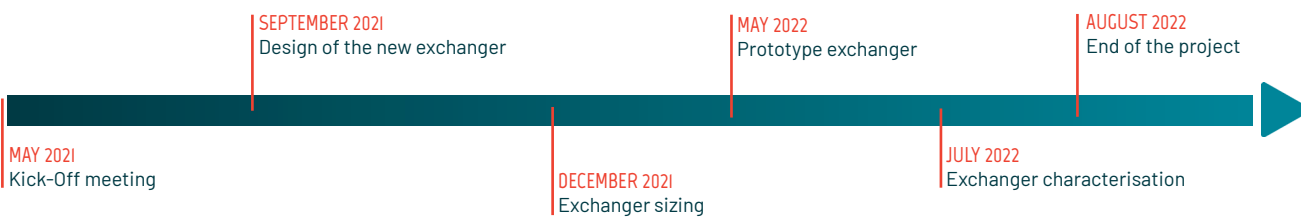
530 K€

KEYWORDS

Additive manufacturing, heat exchanger (thermal), texturing, biomimetics, multi-physics optimisation

RESEARCH THEMES AND EXPERTISES

Integrated product/process design
Additive manufacturing processes



INDUSTRIAL CONTEXT

The heat exchanger market includes a wide variety of products for different applications. Most heat exchangers are based on standard architectures and design methods.

Currently no 3D printed heat exchangers are actually available in the manufacturers' catalogues.

INNOVATIVE FEATURES

- Concept of the exchanger based on biomimetics
- Production of the exchanger by additive manufacturing

INDUSTRIAL APPLICATIONS

The project will contribute to the emergence of a new family of heat exchangers with innovative architectures exploiting the potential of additive manufacturing.

FIVES CRYO's experts are very experienced in the calculation and modelling of these exchangers, and the project can enable them to acquire new skills and thus become a reference in 3D design.

This new family of exchangers will allow FIVES CRYO to access new markets.

JULES VERNE INSTITUTE

Chemin du Chaffault
44 340 Bouguenais

Commercial contact
business@irt-jules-verne.fr

Press contact
communication@irt-jules-verne.fr

WWW.IRT-JULES-VERNE.FR

Join us on :



LE FUTUR
DE VOS USINES