Integrated design and novel tooling and process optimisation of microwave processing of composites

Fact Sheet

Project Information

SIMUTOOL
Grant agreement ID: 680569

Funded under
H2020-EU.2.1.1.
H2020-EU.2.1.5.1.

Project website

Status
Closed project

Overall budget
€ 3 412 276

End date
31 July 2019

EU contribution
€ 3 412 276

Start date
1 September 2015

Coordinated by
TWI LIMITED
United Kingdom

Objective

SIMUTOOL will develop a simulation platform for the manufacturing of composites through microwave MW heating. The simulation will include the electromagnetic field coupled with heat transfer mechanisms that take place during the production process. It will also include the process control loop which will enable the optimum design of the manufacturing process.

One of the major outputs of the simulation platform will be the successful design of a ceramic matrix composite tool with a MW absorbing layer in order to maximise the energy saving potential of the MW heating process.

The project addresses the manufacturing issues of MW heating of composites which stem from the lack of understanding of the basic physics of the process (the most important item being how carbon fibers interact with the microwave field). The project will increase the Technology Readiness Level (TRL) of the MW heating of...
will increase the Technology Readiness Level (TRL) of the MW heating of composites process to 6-7.

Field of science

/engineering and technology/materials engineering/composites
/engineering and technology/materials engineering/composites/carbon fiber
/engineering and technology/materials engineering/fibers

Programme(s)

Topic(s)

Call for proposal

H2020-FoF-2015

Funding Scheme

RIA - Research and Innovation action

Coordinator

TWI LIMITED

Address
Granta Park Great Abington
CB21 6AL Cambridge
United Kingdom

Activity type
Research Organisations

EU contribution
€ 716 725

Website
Contact the organisation

Participants (7)

LOIRETECH INGENIERIE

France

EU contribution
€ 545 937

Address
9 Rue Du Moulin Casse Pole

Activity type
Private for-profit entities
Industriel Jules Verne
44340 Bouguenais
(excluding Higher or Secondary Education Establishments)

Contact the organisation

ECOLE CENTRALE DE NANTES
France
EU contribution
€ 343 500

Address
Rue De La Noe 1
44321 Nantes Cedex 3

Activity type
Higher or Secondary Education Establishments

Website
Contact the organisation

ENGINEERING TECHNOLOGY SOLUTIONS EE
Greece
EU contribution
€ 363 750

Address
Domokoy 15
153 44 Gerakas

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Contact the organisation

ESI GROUP
France
EU contribution
€ 435 125

Address
100-102 Avenue De Suffren
75015 Paris

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Website
Contact the organisation

OTTO-FRIEDRICH-UNIVERSITAET BAMBERG
Germany
EU contribution
€ 488 250
FAURECIA AUTOMOTIVE COMPOSITES
France
€ 285 563

Address
Avenue Des Champs Pierreux
23-27
92000 Nanterre

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation

AIRBUS
France
€ 233 426

Address
2 Rond Point Emile Dewoitine
31700 Blagnac

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Website
Contact the organisation

Last update: 16 July 2020
Record number: 198371

Permalink: https://cordis.europa.eu/project/id/680569/

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