Zero-defect manufacturing of composite parts in the aerospace industry

Fact Sheet

Project Information

ZAero
Grant agreement ID: 721362

Funded under
H2020-EU.2.1.5.1.

Project website

Overall budget
€ 4 124 143,75

EU contribution
€ 3 548 206,01

PROFACTOR GMBH
Austria

Start date
1 October 2016
End date
30 September 2019

Objective

In the aerospace industry very high quality standards have to be met. For the manufacturing of carbon fibre parts this is currently solved through extended end-of-line inspection in combination with re-work processes to deal with defective parts. Also, in-situ visual inspection is used for quality control, which is currently causing huge productivity losses (30%-50%) during lay-up and has become a real bottleneck in carbon fibre parts manufacturing.

The project will provide a solution by developing inline quality control methods for the key process steps: automatic lay-up (dry fibre placement and automatic dry material placement) and curing. At the system level decision support systems will be developed that assist human decision-making when assessing defects and when planning the part flow through the production line. These will be supported by simulation tools for part verification and logistical planning.
The future manufacturing of the A320neo wing covers will be provide the background for the developments. Each such wing cover consists of two parts, that each cost several hundred thousand Euros in manufacturing. Assuming the planned production rates of 60 planes per month from 2025, savings of 150 MEUR in production costs can be obtained per year.

The consortium consists of all key players that will play a future role in the manufacturing of such large carbon fibre parts. Airbus with its research centers Airbus Group Innovations and FIDAMC will play a leading role in the consortium as far as the multi-stage manufacturing process is concerned. Machine builders (MTorres, Danobat) and research centers will develop the inline quality control, while Dassault Systémes will provide simulation support.

Field of science

/social sciences/economics and business/economics/production economics/productivity

Programme(s)

Topic(s)

Call for proposal

H2020-FOF-2016

Funding Scheme

IA - Innovation action

Coordinator

PROFACTOR GMBH

Address

Im Stadtgut A2
4407 Steyr Gleink
Austria

Activity type

Other

EU contribution

€ 927 413,75

Website

Contact the organisation
<table>
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<tr>
<th>Organisation</th>
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<tr>
<td>AIRBUS DEFENCE AND SPACE GMBH</td>
<td>€ 365,498.88</td>
<td>Willy-messerschmitt-strasse 1 82024 Taufkirchen</td>
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<td>DASSAULT SYSTEMES</td>
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<td>Rue Marcel Dassault 10 78140 Velizy Villacoublay</td>
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<td>M TORRES DISEÑOS INDUSTRIALES SA</td>
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<td>DANOBAT</td>
<td>Spain</td>
<td>€ 215 250</td>
<td>Polígono Industrial Arriaga 21 20870 Elgoibar</td>
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<td>FUNDACION PARA LA INVESTIGACION, DESARROLLO Y APLICACION DE MATERIALES COMPUESTOS</td>
<td>Spain</td>
<td>€ 665 687,50</td>
<td>Avda Rita Levi Montalcini (Tecnogetafe) 29 28906 Getafe</td>
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**Record number:** 205543  

**Permalink:** [https://cordis.europa.eu/project/id/721362](https://cordis.europa.eu/project/id/721362)  
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