Advanced technologies for bomb-proof cargo containers and blast containment units for the retrofitting of passenger airplanes

Fact Sheet

Project Information

FLY-BAG2
Grant agreement ID: 314560
Project website

Status
Closed project

Start date
1 August 2012
End date
30 September 2015

Funded under
FP7-TRANSPORT

Overall budget
€ 5 683 085,70
EU contribution
€ 4 408 895

Coordinated by
RINA CONSULTING SPA
Italy

Objective

The threat of attacks to passenger airplanes with explosives hidden in luggage loaded in the cargo holds or taken onboard is dramatically evident from terrorist events in the last years.
FLY-BAG2 aim is to develop innovative solutions based on novel lightweight materials and structural concepts for the mitigation of the effects of an onboard blast and improve aircraft survivability.

Direct strengthening of the airplane structure is not a viable solution since it would clearly result in thicker skins and a weight penalty; moreover, the related costs could not be justified in the majority of the commercial routes. Instead, the proposed blast mitigation and retrofitting solutions will be developed to be easily implemented on existing aircrafts.
The project builds upon the former FLY-BAG FP7 project which developed and
demonstrated a blast-resistant textile-based luggage container for narrow-body passenger airplanes. The aim is now to exploit the knowledge gathered in the previous project to develop new devices for both cabin (addressing the Least Risk Bomb Location requirements) and cargo environments and to enlarge the experimental validation of the new concepts including full scale tests on retired aircrafts. Research aspects to be addressed include the correlation between explosive charge and location with baggage filling percent in the ULD, the effect of pressurisation, or the effects to the aircraft structures and the passengers.

The partnership is composed by the core partners from the former FLY-BAG project enlarged by new organisations bringing relevant expertise on modelling and design of aeronautic structures. The consortium is also characterised by a significant geographical spread with 7 different European countries represented and by the involvement of 6 industrial SMEs, as a confirmation of the industrial character of the project, aiming at pragmatic solutions and industrial exploitation of the project results.

Field of science
/ engineering and technology/mechanical engineering/vehicle engineering/aerospace engineering/aircraft

Programme(s)

Topic(s)

Call for proposal

FP7-AAT-2012-RTD-1

Funding Scheme

CP-FP - Small or medium-scale focused research project

Coordinator

RINA CONSULTING SPA

Address
Via Cecchi 6
16129 Genova
Italy

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

EU contribution
€ 876 700
Participants (12)

SAECHSISCHES TEXTILFORSCHUNGSINSTITUT E. V.
Germany
EU contribution € 282 800
Address Annabergerstrasse 240 09125 Chemnitz
Activity type Research Organisations
Administrative Contact Laura Giovanelli (Ms.)

BLASTECH
United Kingdom
EU contribution € 621 600
Address Portobello 217 The Innovation Centre S1 4DP Sheffield
Activity type Private for-profit entities (excluding Higher or Secondary Education Establishments)
Administrative Contact Ross McMaster (Dr.)

CENTRO DI RICERCHE EUROPEO DI TECNOLOGIE DESIGN E MATERIALI
Italy
EU contribution € 441 000
Address Strada Statale 7 Appia Km 706+030 Snc 72100 Cittadella Della Ricerca Brindisi
Activity type Research Organisations
Meridiana Maintenance S.p.A.

Italian
EU contribution

€ 235 800

Address
Centro Direzionale Aeroporto
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07026 Olbia

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

Contact the organisation

Administrative Contact
Consuelo Sicuro (Ms.)

CARMEL CARGO NETWORK BV

Netherlands
EU contribution

€ 255 150

Address
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3261LH Oud Beijerland

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

Website

Administrative Contact
Alex Carmel (Mr.)

APC COMPOSIT AB

Sweden
EU contribution

€ 266 800

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Karlsviksvagen 81
97594 Lulea

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

Greece
EU contribution
€ 260 800

Address
University Campus Rio Patras
265 04 Rio Patras

Activity type
Higher or Secondary Education Establishments

Website
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Administrative Contact
Anton Lindgren (Mr.)

DoKaSch GmbH Air Cargo Equipment + Repair

Germany
EU contribution
€ 214 250

Address
Industriegebiet Feincheswiese 3
56424 Staudt

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

Website
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Administrative Contact
Peter Kaminski (Mr.)

ZIPLAST SRL

Italy
EU contribution
€ 155 560

Address
Via Pelizza Da Volpedo 52 54
20085 Locate Di Triulzi

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

Website
Contact the organisation

Administrative Contact
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<th>Organisation</th>
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<th>Administrative Contact</th>
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<tr>
<td>AERNNOVA ENGINEERING SOLUTIONS SA</td>
<td>Spain</td>
<td>€ 326 260</td>
<td>Parque Tecnologico De Alava, C/ Leonardo Da Vinci 13 01510 Minano Alava</td>
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<td>Uwe Weigmann (Dr.)</td>
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