

PROJECT

FC21S

Cost-effective aluminium die casting for automotive industry

Funding: European (Horizon 2020)

Duration: Dec 2015 - Mar 2016

Status: Complete

Total project cost: €71,429

EU contribution: €50,000



Call for proposal: H2020-SMEINST-1-2015

[CORDIS RCN : 199284](#)

Objectives:

"We are a consortium integrated by two Italian SMEs with long track and complementary expertise in the metal casting sector, and we propose to industrialise and put in the market the process #FC21S for casting high performance, clean and cost-effective aluminium structural pieces for cars.

Currently there is a need in automotive industry for cutting fuel consumption and thus, gas emissions. The preferred way nowadays is to do so by incorporating light car pieces, maintaining the current performance concerning security, in order to comply both with the EU legislation and consumer needs. Aluminium die casted pieces solve the problem that the automotive industry have, addressing consumers' needs and legislation requests.

#FC21S is an innovative aluminium die casting process in which a pioneer concentrated mould release agent is nebulised through micro-spraying specially designed, rendering pieces with better mechanical properties and enhanced impact resistance. The concentrated agent is used in an amount of 10 g per casted piece, instead of the 7 l per piece required with a regular mould release agent, what significantly reduces the heavily polluted waste streams, having as a consequence a cleaner and cheaper process. It is wax-free, what reduces the porosity in the aluminium casted piece, increasing its impact resistance. With this process we dramatically cut waste-streams and reduce the energy needed for the process, increasing productivity of the line.

The general objective of #FC21S is to set the manufacturing line of structural car pieces built in structural aluminium and die casted with a pioneer concentrated release agent in order to contribute to making better light-weight structural car pieces, for satisfying consumers and car manufacturing industry."

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

Fonderie Cervati S.r.l

Address:

VIA VALCAMONICA 21/S

25132 BRESCIA

Italy

EU Contribution: €50,000

Partner Organisations:

Vibe Di Vito Becchetti & C. S.r.l.

Address:

VIA VALLESABBIA 98
25065 S. APOLLONIO LUMEZZANE
Italy

EU Contribution: €0

Technologies:

Electric road vehicles
Aluminium front vehicle structure

Development phase: Implementation

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Road transport

Transport sectors: Passenger transport, Freight transport

Geo-spatial type: Other