Development of stamping and overmoulding process for complex parts

COMPOSTAMP project

The purpose of the project is to develop and evaluate the stamping and overmoulding industrial performances for an application to a representative part, with oneshot and netshape process, to obtain a rate of 60 parts per hour.

IRT JULES VERNE

Technical and economic impacts

- 1 part per minute
- 20% lead time saving (Aero)
- 25% of weight saving (Auto)

Keywords

Stamping//overmoulding
Thermoplastic//composite
High rate

1st Auto stamping overmoulding tests
january 2016

Parts characterization
january 2017

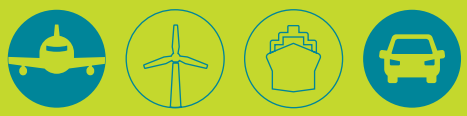
january 2015
Project launch

september 2016
1st Aero stamping overmoulding tests

janvier 2018
End of the project

INDUSTRIAL CONTEXT

The composite is an opportunity of weight saving for automotive and aeronautic parts. However, the manufacture process must be able to produce at rate expected by each industry (Aeronautic and Automotive). In order to respond to high volume and high rate, the stamping and overmoulding process (netshape and oneshot) is a promising technology at short time.



INNOVATIVE FEATURES

- Realization of stamping and overmoulding process, in the same tooling, allows the manufacture of netshape and complex parts for integration of functions.
- Definition of main limits of process, in terms of possible geometries, quality control and performance of realized parts.

INDUSTRIAL APPLICATIONS

The main objective is the proof of industrial feasability for thermoplastic composite high rate and to prove the industrial process interest.

Partners

- IRT JULES VERNE
- CEMCAT
- COMPOSE
- DEDIENNE
- RENAULT
- PEUGEOT CITROEN AUTOMOBILE
- AIRBUS
- CETIM
- DAHER
- FAURECIA

Budget

- 4 106 k€

Equipment

- Static IR oven
- Robot

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