

Airbus Industrie

# Fully leak **tight** complex moulds

Airbus is optimising the leak tightness of its moulds intended to manufacture large-sized parts – in particular for the future A380 - with contribution from the mechanical industry.

**A**irbus must manufacture several composite mechanical parts in moulds that it designs itself in the scope of developing the wide-bodied A380. These moulds must be fully leak tight in order to obtain optimal quality components.

## More efficient leak tightness of complex moulds

Even though it has solidly established leak tightness criteria, the European aircraft manufacturer desired, on the one hand, a more in-depth study of its current system in force (means and procedure), and on the other hand improve

the leak tightness criteria of accessory components related to the moulds: reservoirs, O-rings, Tees, unions, etc. *"Manufacturing these closed moulds is somewhat of a new activity for us"* explained Philippe Blot, Composite method and development manager at Airbus. *"We therefore called on Cetim to combine our aeronautical culture with a mechanical culture"*.

## Exceptional study for exceptional parts

As the parts to be moulded are very big, the tests could only occur on site. It is not a new or difficult feat to move a test and



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measuring instrument. On the contrary, a specific approach is required to bring measuring points for the leak tightness of parts outside a large-sized oven. Cetim therefore carried out small sized prototyping and feasibility tests (for unions, reservoirs, etc.) in order to get its bearings. Next, due to its command of extrapolation it was able to perform relevant tests. Thus, the leak tightness of the moulds was optimised during two development phases: during preparation-assembly and during injection. This study developed with Airbus is a first for Cetim and allows the aircraft manufacturer to take advantage of the mechanical experience in terms of leak tightness. This type of cooperation can be adapted to industries with similar requirements such as naval

## OUR CUSTOMER

**Corporate name:**  
Airbus Industrie

**Activity:**  
Construction of airframes

**Sales turnover:**  
EUR 2.6 million

**Context:**  
Airbus Industrie employs 44,000 people worldwide

## Cetim's asset



A mechanical experience in leak tightness technologies – A study of the means and procedures used – geographical proximity is "a clear advantage", according to Philippe Blot.

construction and especially automobile subcontracting which uses the injection of moulded parts on a more frequent basis.