

SAGEM DEFENSE SECURITE

SPRING
TECHNOLOGIES
Machining as Designed

Cylinders and actuators for aerospace and defense

Success Story



NCSIMUL
TOOL





Information	
Industry :	Aerospace & Defense
Solution :	NCSIMUL Tool



Company Overview

SAGEM Défense Sécurité, a high-technology company that is part of SAFRAN Group (created by the merger of SAGEM and SNECMA), is the world leader in solutions and services for the optronics, avionics, the electronics sectors and critical software for the civilian and defense markets.

Its site at Mantes La Ville, north-west of Paris, primarily produces cylinders and actuators for the aerospace and military markets (TRIM cylinders, servolinear or rotary).

Challenges

The machining programs used at SAGEM DS are created by a team of six NC programmers using the Missler TopCAM CAD/CAM software before being sent to the workshop.

SAGEM DS lacked an easy-to-use database for its cutting tools. In practice this situation created inconsistency between the databases used in the Process Planning department and in the workshop, while loose-sheet documents went astray or become oil-stained in the workshop.

Finally, the need to manually load the measurement gauges led to non-quality and machine downtime. It was to solve these problems that the teams at SAGEM DS teamed up with the experts at SPRING Technologies to draw up a set of specifications defining :

- For Process Planning, the essential needs were to create NC machining programs (programming with Missler Top CAM and interface with the NCSIMUL Tool cutting tools database) and

optimise the use of cutting tools (modification of assemblies for the needs of the workshop, replacement of tools that had become obsolete, stable statistics-based magazine management, optimisation of cutting conditions based on tool use history).

- In the workshop, the problem was to produce a complete map of the available tools in real time and reduce tool turnaround and gauge selection on the measurement benches. Finally, any process anomalies such as unfeasible or non-optimised setups were to be reported back to Process Planning.

Benefits

By concentrating all the company's cutter-related information in a common database, NCSIMUL Tool enabled SAGEM DS to create the desired interaction between Process Planning and the workshop: communication on changes in assemblies is now much tightly controlled, developments in the workshop are now fed back to Process Planning and reflected in the database.

This means that tools are better managed (duplication has been eliminated) with a significant reduction in turnaround, and the added advantage of extended working life for tools.

NCSIMUL Tool has also enabled an improvement in process safety and quality, for example by eliminating manual errors in gauge loading and increasing machine efficiency by around 4% (programs, gauges and quick pot changes).

« Having a single, easy-to-use software solution like NCSIMUL Tool to manage our cutting tools has enabled us to create seamless interaction between Process Planning and the workshop. We can now operate more thoroughly and with higher productivity. »

Stéphane CAPELO

Process Engineer, SAGEM DS Process Planning Department