

Morisse-Nayrat

# The 5 axes machine gets to HSM

Morisse-Nayrat acquired a 5 axes numerical control machine-tool for producing automatically all kinds of pinions. It then involved itself in the "Usiperf" action in order to make the most of HSM technology.

**F**or answering specific requests from its customers and to produce simple as well as complex gears in small batches, Morisse-Nayrat, at Saint-Etienne du Rouvray, acquired a 5-axes machine-tool. Having sought in vain for a driving software, Joël Tougard, technical manager at Morisse-Nayrat, had carried out tests on machines at the Insa of Rouen with this school's software. And it worked!

"Every time a process is digitalized, the cutting tool gets simplified", explains Joël Tougard. "The machines are no more dedicated to a one type of gear and one shape". But the five axes machine

is used at the same speed as the others. "Indeed, we had bought a machining center with a 10.000 tr/min spindle to answer specific needs and we did not plan to use like a HSM machine", says Joël Tougard.

### Working faster with standard tools

At the same time, the Haute-Normandie region, the Insa of Rouen and Cetim set up the Usiperf collective action in order to improve the machining performances in subcontracting companies of the area of Rouen. A good opportunity for Morisse-Nayrat which subscribes immediately to this operation. During its intervention at



Cetim - Ch. Barret

the company, Éric Gallet of Cetim realizes quickly that all the machine's potential is not exploited. "On this machine, you may apply HSM methods and work faster with standard tools", says Éric Gallet. The company applies very soon this advice with Cetim expert's support. "Now, indeed, machining occurs two or three times faster using less cooling fluid, but above all the tool inserts are changed three or four times less often", adds Joël Tougard.

### A new market

To the company, this means also opening a potential market concerning more complex gears, bringing more added-value. This new plan was validated and the associated developments will be included in the next phase of the collective action.

### OUR CUSTOMER

**Corporate name**  
Morisse-Nayrat

**Workforce**  
48 people

**Activity**  
Technical trade (25%) and workshop (75%), within a strategy of service : repair of engines, grinding of cylinder heads, gears



### Cetim's asset

Cetim's intervention concerned the machine-tool, the software, the cutting tools and the human context. Goal: coordinating the whole and assembling

all bricks so they become only one system in a powerful and realistic production environment.