



Thales LAS France

# Copper plating expertise: a ready-to-use procedure!

Thales LAS France asked Cetim to design a cyanide-free copper plating procedure ready for use on 35NCD16 steel to simplify the tasks assigned to a sub-contractor.



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## OUR CUSTOMER

**Corporate name**  
Thales LAS France

**Turnover**  
17 billion euros  
(Thales group)

**Workforce**  
83,000 individuals  
(Thales group)

**Business activity**  
Thales is a world leader in high technology able to propose solutions, services and products to its customers in the fields of aeronautics, space, transport, digital security and identity, and defence. Thales LAS France is the French contributor to the group, including several entities in charge of Thales Missile Electronics and Optronics.

Thales LAS France frequently works with Mécachimique, a sub-contractor specialised in the very high precision chemical cutting and electrical plating of metal parts, and intends to entrust this sub-contractor with the copper plating of 35NCD16 steel plates. After a few unsuccessful tests, the industrial firm contacted Cetim experts on the advice of Mécachimique, in order to find a cyanide-free solution which could be integrated in the processes of the sub-contractor. "We have a well-defined Supply Chain policy and do not intend to add a new supplier exclusively for the purposes of these copper plating operations on 35NCD16 steel,"

clarified Christophe Patte, supplier compliance manager for Thales LAS France. "However, Mécachimique, our official sub-contractor for this type of operations, did not have a cyanide-based treatment line installed in its workshops. For this reason, we contacted Cetim experts in order to develop an effective special alkaline cyanide-free copper plating procedure for this type of material."

## A procedure prepared on the pilot line

The difference in chemical composition between a 35NCD16 steel and a 45NCD16 steel has no effect on the treatment procedure to be proposed, therefore Cetim experts, with the agreement of Thales LAS France, tested twelve 200 x 100 x 5.4 mm plates in 45NCD16 steel for 6 mm thick copper plating.

"After running tests at the Cetim site, I was able to view the installation used on the pilot line at the laboratory itself and raise any questions relevant to setting up such a treatment line on the premises of our sub-contractor," continued Christophe Patte. "We left the experience with all the parameters we need for the treatment (chemical composition of all baths, treatment time, etc.) from degreasing to final copper plating."

Adhesion tests based on thermal shocks, carried out on Mécachimique's site, confirmed the total success of the assignment.

## Cetim's asset

The laboratory has a multi-treatment pilot line able to handle copper plating, where treatment solutions for materials designed for the specific situations of customers are implemented. The laboratory includes 17 treatment tanks ranging from 130 to 200 litres and 300 litres for anodising.

