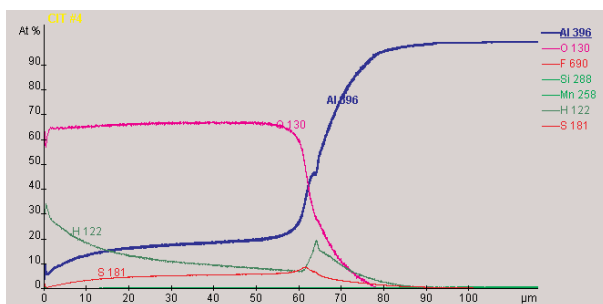


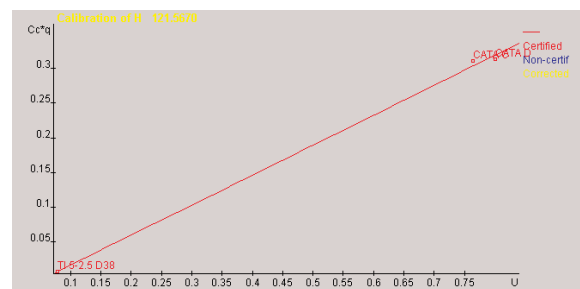
Thick anodic Aluminium

Anodization is used to improve the properties of Al. Various treatments are applied : a common one is the hard anodizing in sulfuric acid bath. The anodizing process creates thick layers of Al₂O₃ which improves the abrasion resistance of the parts.

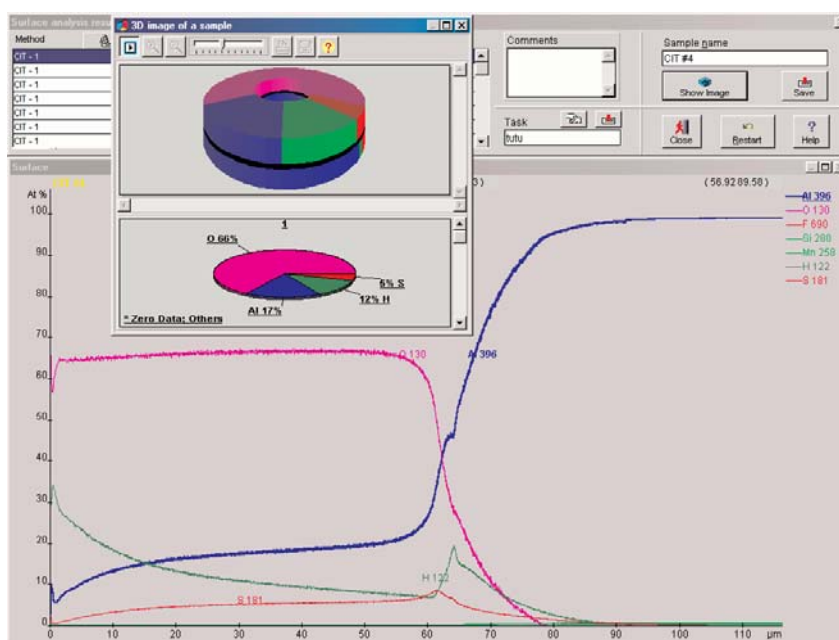
The method in use for the analysis has been calibrated in HDD mode using multimatrix bulk and layered samples (steels, aluminium, brass, ceramics). Not only Al and O were calibrated but also H, S Si, Mn etc. H was quantified using some cataphoresis layered samples. The multimatrix curves include the relative sputtering rate (q). Example of calibration curve is presented.



Quantitative analysis of anodized aluminium



The H signal being strong on the samples to analyze, the H correction was applied to the O calibration. This feature, built in the software, permits to compensate from artifacts observed in the qualitative profiles where the O signal was showing a surface peak not correlated with a change in the composition.



3-D view of the quantitative analysis