

Electrical coatings

Electrical coatings are found on electrical contacts, antennas, electrical components etc. They are typically electrochemically deposited.

They are used for electrical conductivity, appearance, corrosion protection, wear resistance.

The study of such coatings, of possible problems during the coatings as well as the study of diffusions for instances after aging can be done easily with Rf GD.

The samples may be small or have odd shapes : the 2mm anode as well as the small sample holder are beneficial in these cases. And of course the HDD capability is a must for small samples on which only one spot can be done.

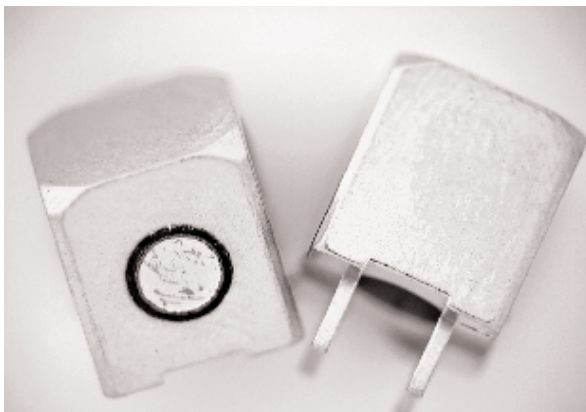


Figure 1 : View of a GD spot on a small sample

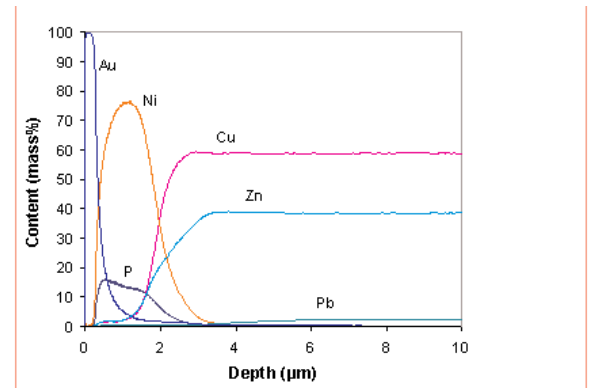


Figure 2: GD analysis of an Au coating on NiP on brass

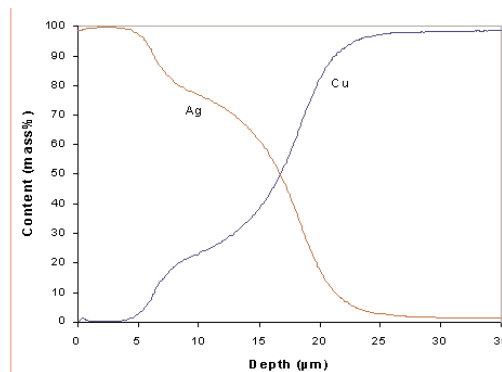


Figure 3 : GD analysis of an Ag coating on Cu after aging. The diffusion process can clearly be identified and followed by GD.

Key point : GD is suitable for the depth profile analysis of electric coatings. These applications were done at EMPA and presented at the International Conference on Surface and Surface treatments in Melbourne, 2000.