

"Signal Processing Studies of DC+AC Anodizing".

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Abstract

Signal processing analysis of DC+AC anodizing permits in-situ determination of oxide coating capacitance and resistance with high time-resolution. In these experiments, the capacitance and resistance are plotted versus time, and physical events in the growth process, such as initiation of pores, can be identified with peaks or inflections in the plot.

Results of these measurements are interpreted in terms of such coating properties as thickness at the time of pore initiation, pore density and thickness of the oxide layer beneath the pores.