Short Communication

Effects of the Phosphorus Content in Ni-P substrate on Properties of Immersion Gold Coatings Obtained from Choline Chloride Solution

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The effects of the phosphorus contents in electroless Ni-P substrates on the morphology, structure and corrosion resistance of gold coatings deposited on Ni-P surfaces, which were applied via a HAuCl₄-ChCl gold plating solution by galvanic displacement deposition, were investigated. Compared with low contents, high P content was not only more suitable to achieve bright golden Au surfaces, but also enabled the Ni-P coating to achieve high corrosion resistance during the immersion gold deposition process in the acidic gold plating solution and for further protection of the Cu sheet.

Keywords: Choline chloride; corrosion; electroless plating; phosphorus content

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