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Microstructure and Properties of Electrodeposited Ni-Cr nanocomposite coatingsAbdelouahad CHALA¹, Saida MARMI², Shahnaz SIAD², Hayat MARMI²¹University Mohamed Khider, Biskra, Algeria ²LPCMA, University Mohamed Khider, Biskra, Algeria

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The objective of this work is the characterisation of the composite deposits Ni-Cr on copper substrate. These deposits are obtained from bath of electro-deposition of sulphated nickel.

Tests were carried out on nanocomposite coatings in order to characterize there structure, adherence quality and corrosion behavior in a solution of 3.5% NaCl. the techniques used are those of polarization and impedance. Morphology qnd structure are also followed by scanning electron microscopy, EDS microanalysis and X-ray diffraction.

The results have revealed a good adherence, a high corrosion resistance of the composite deposits and a homogeneous morphology.

They have, also, to determine the concentration of Cr added to the bath, which provided optimal protection against corrosion.

Keywords

coatings

corrosion

nanocomposite

electrodeposition

Ni-Cr