# Corrosion behaviour of ultrasound assisted electroless nickel-boron coatings.

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The effect of ultrasound assistance during plating on the corrosion properties of Nickel-Boron (NiB) coatings was investigated. Ultrasonic or mechanical agitation were used to produce NiB coatings. Nickel deposition reduced by sodium borohydride was performed in three different configurations: one with a classical mechanical agitation at 300 rpm and the other two employing ultrasound at a frequency of either 20 or 35 kHz. The coatings microstructures were characterized by a Scanning Electron Microscope (SEM) before and after potentiodynamic polarization. Bio-logic SP-50 equipment was used in this study to obtain potentiodynamic polarization curves in 0.1M NaCl solution. The main advantage observed with ultrasonic agitation was a significant increase of the plating rate. In addition, significant differences in pitting potential are observable on the polarization curves and beneficial effects of ultrasound assistance are observed.