

Title (en)
COATINGS CONTAINING NICKEL-TUNGSTEN PLATING LAYERS AND METHODS FOR THE PRODUCTION THEREOF

Title (de)
BESCHICHTUNGEN MIT NICKEL-WOLFRAM-PLATTIERSCHICHTEN UND VERFAHREN ZU DEREN HERSTELLUNG

Title (fr)
REVÊTEMENTS CONTENANT DES COUCHES DE PLACAGE DE NICKEL-TUNGSTÈNE ET LEURS PROCÉDÉS DE PRODUCTION

Publication
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Application
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Priority
US 201815993932 A 20180531

Abstract (en)
Coatings containing nickel-tungsten (NiW) plating layers are provided, as are methods for forming coatings and NiW plating layers over metallic components. In embodiments, the method includes preparing a plating bath containing a tungsten (W) ion source; inserting at least one consumable nickel (Ni) electrode and at least a portion of the metallic component into the plating bath; and, afterwards, electrodepositing a NiW plating layer over the component surface by energizing the at least one consumable Ni electrode as an anode and the metallic component as a cathode to attract Ni ions and W ions to the component surface. An amount of anode corrosion accelerant in the plating bath is controlled to balance Ni dissolution at the anode to Ni deposition at cathode, as considered in conjunction with any additional Ni ion sources within the plating bath, to achieve a desired composition of the electrodeposited NiW layer.

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Citation (search report)
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