

Title (en)

Process for forming composite galvanic coatings of hard chromium with a disperse phase, and wear-resistant coating formed thereby

Title (de)

Verfahren zur Herstellung galvanischer Dispersionsüberzüge von Hartchrom sowie auf diese Weise hergestellte verschleissfeste Überzüge

Title (fr)

Procédé pour former un dépôt électrochimique composite de chrome dur et revêtement résistant à l'usure ainsi obtenu

Publication

EP 0668375 B1 19990113 (EN)

Application

EP 95102258 A 19950217

Priority

IT TO940101 A 19940218

Abstract (en)

[origin: EP0668375A1] A process applicable to components subjected to chafing, such as internal combustion engine piston rings and similar, and wherein, after preferably first depositing a first continuous galvanic layer of Cr in a conventional bath, at least a second layer of Cr is deposited galvanically in a chromium plating bath in which is dispersed a predetermined concentration of 0.1-20 μm particles of a nonmetal insoluble in the bath, and using a pulsating cathode current varying cyclically in time between a minimum and maximum value, so that the second Cr layer presents microcracks with a predetermined distribution, and the nonmetal particles are included partly inside and partly outside the microcracks, while at the same time limiting inclusion in the layer of the hydrogen developed in the bath. <IMAGE>

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CPC (source: EP)

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Cited by

DE102007050811A1; KR20110008027A; EP0841413A1; US6013380A; US6596410B2; DE19931829A1; DE102005023627A1; DE102005023627B4; US7318963B2; EP1253220A4; EP1719827A4; EP0909839A1; DE19745811A1; DE19745811C2; US6703145B1; US6503642B1; WO0056953A1; WO2009121443A1; WO2009021494A1; WO0104386A1; US8337687B2; US8277953B2; US7052018B2; US6838196B2; US7144017B2; US8110087B2; EP2660362B1

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