

## **Thermo-chemical treatment of iron based composite electroplates**

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### **Abstract**

A scheme of renovating and hardening the parts with the use of composite electrochemical coatings is described. The powders of CrB<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> serve as a dispersed phase in the electrodeposited coating from electrolytes containing FeCl<sub>2</sub> and FeSO<sub>4</sub>. Chemical-and-thermal treatment (CTT) of parts was carried out at 210°C via sulfonitriding. Comparative tests of modified coatings and St45 for wear resistance in contact with 12KhN4A steel as a counterbody and for corrosion showed the improved characteristics after CTT.

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