

Abstract Submitted  
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**Surface Layers Modification of Tungsten-Cobalt Alloy by Low Pressure RF Plasmas**<sup>1</sup> ILGIZAR SAGBIEV, ILDAR ABDOULLIN, Kazan State Technological University, VICTOR ZHELTOUKHIN, Kazan State University, ROUSTEM SHARAFEEV, Kazan State Technological University — A process of surface layer modification of tungsten-cobalt alloy by low pressure RF plasmas is investigated. Analysis of materials from 10 up to 700 nm by thickness was studied by both X-ray and auger electrons spectroscopy. There are three sublayers within the surface layer after plasma action. The outer sublayer is from 10 up to 500 nm by thickness. One consists of carbon of unordered or diamond like structure, contents of tungsten and cobalt is decreased monotonous up in surface. The transitional sublayer is from 150 up to 200 nm by thickness. Carbon state in this one correspondence to mix of C-C and C-W bonds, concentration of tungsten and cobalt is fluctuating. The modifying layer is raising to some limit at increasing the time of plasma action.

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