ABSTRACT

Diploma work: 80 pp., 30 pages., 17 tab., 26 sources., 1 application.

ELEKTRIC SPARK ALLOYING (ESA), ALLOY LAYER, MAINTENANCE IRON, TUNGSTEN, NICKEL, CARBON, ALUMINUM, COPPER

Objective: to study the kinetics of structure formation, phase composition, micro hardness and wear resistance of alloyed layer obtained on the surface of iron electric-doped by tungsten, nickel, aluminum, copper anode in the atmosphere of air.

Methods: microstructural, microhardness, gravimetric, X-ray and wear resistance.

Subject of study: the surface layers of iron received by electric-doping with tungsten, nickel, aluminum and copper anodes in the atmosphere air.

Practical value: The obtained results and formation laws and established formation of structure and properties of alloyed layers by electric-doping process on air can be used to lengthen the life of the machine parts and mechanisms operating under extreme loads.