IOP Conference Series: Materials Science and Engineering 2018 vol.412 N1

## Investigation of a nickel coating deposition processes from solid nickel electrolyte

Kashapova R., Lyadov N., Kashapov R., Kashapov L., Kashapov N., Faizrakhmanov I. *Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia* 

## **Abstract**

© Published under licence by IOP Publishing Ltd. Nickel is the basis of most of the heat-resistant materials used in the aerospace industry for power plant parts. Recently, the method of electrolytic coating with nickel is used to create protective coatings on aluminum, magnesium, zinc and cast irons. It is known to use the method of nickel plating of aluminum and magnesium alloys, in particular to protect the duralumin blades of screw aircraft. The lifetime of nickel-plated cast-iron drums for drying in paper production is significantly higher than in conventional cast iron, and paper quality is also improving. The aim of the work is to influence the concentration of hypophosphite on the kinetics of the cathode process and on the properties of the resulting nickel coating.

http://dx.doi.org/10.1088/1757-899X/412/1/012008

## References

- [1] Kashapov R N, Kashapov L N and Kashapov N F 2017 Analysis and development of methods for obtaining metallic powders for selective laser melting IOP Conference Series: Materials Science and Engineering 240 012071
- [2] Kashapov R N, Kashapov L N and Kashapov N F 2015 The research of anodic microdischarges in plasmaelectrolyte processing IOP Conference Series: Materials Science and Engineering 86 012019
- [3] Kashapov L N, Kashapov N F and Kashapov R N 2013 Research of the impact acidity of electrolytic cathode on the course of the plasma-electrolytic process Journal of Physics: Conference Series 479 012011
- [4] Kashapov L N, Kashapov N F and Kashapov R N 2014 Influence of plasma-electrolyte discharge to the glass surface Journal of Physics: Conference Series 567 012024
- [5] Kashapov L N, Kashapov N F, Kashapov R N and Denisov D G 2016 Plasma electrolytic treatment of products after selective laser melting Journal of Physics: Conference Series 669 012029