

Investigation of nanometalloyceramic composite coatings obtained by vibro-arc surfacing

Kolomeichenko A., Titov N., Kuznetsov Y., Kalashnikova L., Bagrintsev O., Sharifullin S.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© Published under licence by IOP Publishing Ltd. The paper presents a description of the method of hardening the working bodies of agricultural machines, working in conditions of abrasive wear. The method includes vibro-arc surfacing of nanometalloyceramic composite powder materials with simultaneous thermal diffusion hardening. The optimal composition and concentration of components of the material, ensuring the best physical and mechanical properties and resources of the hardened working bodies tillage machines.

<http://dx.doi.org/10.1088/1757-899X/412/1/012049>

References

- [1] Litovchenko N N, Kulikov V N and Titov N V 2013 Vibro-arc surfacing with a graphite electrode of nanometallic ceramic composites *Welding production* 51-53
- [2] Titov N V, Vinogradov V V and Slobodchikov D A 2016 Import-substituting technology for strengthening lancet paws of tillage machines *Innovations in Agriculture* 1 138-41
- [3] Titov N V, Kolomeichenko A V, Logachev V N, Kravchenko I N and Litovchenko N N 2015 Investigation of the hardness and wear resistance of vibro-arc surfacing using cermet materials *Welding International* 29 737-39
- [4] Titov N V 2015 Increase of wear resistance of working surfaces of lancet paws of soil-cultivating machines by carbibifrodug hardening *Engineering and equipment for the village* 38-41
- [5] Titov N V 2012 Hardening of the working organs of machines operated in an abrasive medium Collected materials of the International Scientific and Practical Conference "Modern problems and solutions to them in science, transport, production and education - 2012" II 46-48