Journal of Physics: Conference Series 2017 vol.789 N1

Purification the surface of detail from biological contaminations

Gabdrakhmanov A., Israphilov I., Galiakbarov A. Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© Published under licence by IOP Publishing Ltd. More than 70% of biodegradation occur due to the corrosion processes. A biological corrosion causes the greatest damage to the oil and gasproduction industry, the Navy and pipelines, constructions of water supply, means of communication. This paper proposes an effective method of purification various surfaces from biological contaminations by using of cold plasma.

http://dx.doi.org/10.1088/1742-6596/789/1/012011

References

- Samatov R.R. 2013 Oil. Gas. Innovations (Samara: «Oil. Gas. Innovations») Caution biocorrosion! Risks, myths and solutions 51-57 no 10 (177)
- [2] Nanzatool J.V., Romankov N.V., Troshina M.V. and Tsublova E.G. 2015 Biosphere compatibility: people, region, technology (Kursk: Southwest State University) Biocorrosion facilities of industrial enterprises and methods of protection from her 79-87 no 4 (12)
- [3] Gorlenko V.M. 1979 Microorganisms and lower plants destroyers of materials and products (Moscow: Nauka) Microbial deterioration of industrial materials
- [4] Zlochevskaya I.V. 1984 Biodegradation in construction Biodegradation of stone materials by microorganisms and lower plants in atmospheric conditions
- [5] Gabdrakhmanov Az.T., Galiakbarov A.T. and Israphilov I.H. 2014 Study generator of a cold plasma for sterilization Contemporary engineering sciences 7 973-978
- [6] Israfilov I.H., Saubanov R.R. and Rakhimov R.R. 2011 Prospective application of highly concentrated energy for the surface heat treatment products Socio-economic and technical systems: research, design, optimization 25-30
- [7] Kashapov N.F. and Sharifullin S.N. 2015 IOP Conference Series: Materials Science and Engineering 86 012021
- [8] Denisov D G, Kashapov N F and Kashapov R N 2015 IOP Conference Series: Materials Science and Engineering 86 012005
- [9] Kashapov N.F. and Luchkin A.G. 2014 The use of low-temperature plasma deposition of hardening coatings on plastics Proceedings of the higher educational institutions. Physics. 57 160-163
- [10] Zaripov R G, Kashapov N F, Tkachenko L A and Shaydullin L R 2016 J. Phys.: Conf. Ser. 669 012053
- [11] Kashapov N.F. and Kashapov R.N. 2014 A study of plasma-electrolytic process for different ratios of the anode space to the cathode Proceedings of the higher educational institutions. Physics. 57 168-170
- [12] Kashapov L N, Kashapov N F and Kashapov R N 2013 J. Phys.: Conf. Ser. 479 012011