

ПН
М 39/51

Volume 49 Number 3 • November 2013

Materials Science

ФІЗИКО-ХІМІЧНА МЕХАНІКА МАТЕРІАЛІВ
(Fizyko-Khimichna Mekhanika Materialiv)

An International Journal
Translated from Ukrainian

 Springer

11003 • ISSN 1068-820X
49(3) 281-424 (2013)

MATERIALS SCIENCE

A translation of *Fizyko-Khimichna Mekhanika Materialiv*

Volume 49, Number 3

November, 2013

CONTENTS

Engl./Ukr.

<i>V. I. Pokhmurs'kyi, L. M. Bilyi, and Ya. I. Zin'</i> , Corrosion-Resistant Inhibited Coatings for Welded Joints of Pipelines	281	7
<i>M. O. Glushkova, M. V. Ved', and M. D. Sakhnenko</i> , Corrosion Properties of Cobalt-Silver Alloy Electroplates	292	17
<i>I. M. Zin', O. P. Khlopyk, and M. Ya. Holovchuk</i> , Protective Action of Inorganic Inhibitors on Mechanically Activated Aluminum Surfaces	298	22
<i>D. A. Tkachenko, Yu. P. Vyshnevs'ka, Yu. S. Herasymenko, and I. F. Khirkh-Yalan</i> , Changes in Polarization Resistance in the Process of Formation of Protective Phase Layers with Participation of Organic Ligands	304	28
<i>Z. V. Slobodyan, L. A. Mahlatyuk, and R. B. Kupovych</i> , Influence of Carbon Dioxide and Gas Condensate on the Corrosion Rate of 20 Steel in Deaerated NACE Solutions	311	34
<i>O. E. Chyhrynets' and V. I. Vorob'iova</i> , Anticorrosion Properties of the Extract of Rapeseed Oil Cake as a Volatile Inhibitor of the Atmospheric Corrosion of Steel	318	39
<i>V. B. Obraztsov, E. D. Rubl'ova, and N. V. Amirulloeva</i> , Influence of Zinc Ions on the Inhibiting Properties of Polyhexamethylene Guanidine Derivatives	326	46
<i>M. S. Khoma, M. R. Chuchman, V. R. Ivashkiv, and H. M. Sysyn</i> , Influence of Cyclic Loads on the Fracture Resistance of Pipe Steels and Their Welded Joints in Hydrogen-Sulfide Media	334	52
<i>G. V. Snizhnoi</i> , Dependence of the Corrosion Behavior of Austenitic Chromium-Nickel Steels on the Paramagnetic State of Austenite	341	58
<i>A. A. Skrebtssov, I. M. Pohrelyuk, O. H. Luk'yanenko, and A. T. Pichuhin</i> , Influence of Oxidation on the Corrosion Resistance of Sintered Titanium	347	63
<i>V. V. Malyshев and D. B. Shakhnin</i> , Corrosion Resistance of Nanopowders of Borides and Carbides of the Metals of Groups IV-VIB in Nickel-Plating Electrolytes	356	70
<i>Z. A. Duryahina and V. Ya. Pidkova</i> , Structure of Aluminum-Nitride Layers Formed by Ion-Plasma Spraying	361	74

CONTENTS

(continued)

Engl./Ukr.

<i>V. T. Yavors'kyi, Z. O. Znak, and R. V. Mnykh, Influence of Cavitation Treatment on the Physicochemical Properties of Calcium Hydroxide</i>	368	80
<i>V. A. Vynar and M. O. Dykha, Influence of the Stress-Strain State on the Wear Resistance of the Surface of 40Kh Steel After Discrete Electromechanical Treatment</i>	375	86
<i>O. I. Balyts'kyi, M. R. Havrylyuk, R. M. Devyatkin, and I. R. Fedusiv, Application of Modified Sunflower Oil as an Emulsifier of Lubricating-Cooling Liquids</i>	382	92
<i>M. H. Stashchuk, Corrosion Currents in the Cathodic and Anodic Sections of a Circular Stress Concentrator</i>	386	96
<i>M. I. Hredil', Express Method for the Evaluation of the Effect of Corrosion of Reinforcement on the Integrity of Reinforced Concrete</i>	394	102
<i>V. A. Voloshyn and R. Ya. Kosarevych, Specific Features of the Analysis of the Initial Stage of Corrosion-Erosion Destruction of High-Strength Steel</i>	398	105
<i>V. A. Chervatyuk and I. M. Kushnir, Anticorrosion Coatings Based on a Water-Bitumen-Polymeric Composite with High Rates of Formation</i>	404	110
<i>P. I. Vankevych, Selection of the Optimal Tribological Characteristics of Materials in Devices for the Monitoring of Temperature of Moving Objects</i>	408	114
<i>V. I. Kyryliv, Nitriding of Steels in the Course of Their Mechanical Pulsed Treatment</i>	413	118
<i>O. O. Onyshchuk and V. D. Rud', Structures and Tribological Characteristics of TiFe-xC Triboengineering Materials Obtained by Self-Propagating High-Temperature Synthesis.....</i>	418	123