

Table of Contents

Preface

Chapter 1: Machines and Technological Equipment

Investigation on Generative Designs for Fast Connector Socket (FCS) Using High-Strength Low-Alloy (HSLA) Steel V. Narayana, B.S.K. Reddy and V.V. Reddy	3
Research and Selection of Optimal Hydrodynamic Parameters of Rotary Cavitation Devices for Processing Oil Blends and Distillates I. Lavrova, W.S. Ammar, S. Copylov, V. Vladymyrenko and A. Cherkashina	19
Intelligent Surveillance Using Robot Eye and Sensor System P.J.P. Swamy, B.Y. Reddy and K. Chandrasekhar	27
Thermoelastic Analysis of Functionally Graded Cylinder P.R. Kumar, T. Nancharaiah, B. Ajay, B. Rajesh, B.D.P. Nayak and I.J.N.S. Babu	39
Experimental Study on the Effect of Process Parameters on the Build Time and Part Accuracy of Direct Metal Laser Sintering Components T. Nancharaiah, V.S.K. Reddy, T. Chakravarthi, G.T.S. Chowdary and Y.B. Teja	49

Chapter 2: Equipment for Fire Extinguishing Works

Improvement of the Prototype of the Compressed Air Foam System and its Testing A. Kodrik, O. Titenko, S. Vinogradov and S. Shakhov	59
Technical Implementation of the Concept of Using Gel-Forming Systems to Protect Tanks with Oil Products from Thermal Effects of a Fire A. Savchenko, O. Basmanov and S. Hovalenkov	69
Increasing the Efficiency of Extinguishing Fires in a Pressurized Space due to the Adhesive Properties of Gel-Forming Fire Extinguishing Compounds K. Ostapov, Y. Senchykhin, V. Avetisian and I. Kirichenko	77
Structure of the Device and Experimental Research of Verifying the Functionality of Elements of Easy-Dropped Construction D. Dobriak, V. Nizhnyk, S. Pozdieiev and O. Nikulin	87
Creation of Equipment for Testing Roofs for Resistance to External Fire Influence T. Samchenko, O. Dobrostan, V. Pokaliuk and R. Chernysh	95