

Table of Contents

Preface

Chapter 1: Materials and Structural Elements for Construction

Field Investigations, Simulation and Numerical Analysis of the Suitability of Aluminium Opening Design in the Residential Sector Inmauritius P. Jankee, M. Gooroochurn and D. Bhoodoo	3
Re-Engineering Plastic Waste for the Modification of Bitumen Blends A. Osbert, S. Rwahwire and Y. Tusiimire	15
Effects of N-Octadecane as PCM on the Thermal and Mechanical Properties of Polyurethane Foams Utilizing Coconut-Based Polyols M.R.D. Magdadaro, R.Y. Capangpangan, A.A. Lubguban and A.C. Alguno	21

Chapter 2: Technologies for Environmental Engineering and Waste Recycling

Study on a Recycling Solution of Basic Oxygen Furnace Slag in Pelletizing Process C.S. Nguyen	29
Effect of Temperature on Desulphurization of Liquid Iron Using Basic Oxygen Furnace Slag C.S. Nguyen, T.T.H. Tran and A.H. Bui	35
A Brief Study on Defect Reduction of Cast Fe-Ni-Cr Alloy (UNS N08120) for Petrochemical Industry K. Samvatsar and H. Dave	43
Effect of Buffer Layer on <i>In Situ</i> Temperatures in Laser Cladding N. Thawari, C. Chaitanya, A. Chandak and T.V.K. Gupta	53

Chapter 3: Digital Technologies in Waste Recycling Industry

Developing a Digital Twin for Carbon Fiber Composites Recycling: Challenges and Future Research Direction E. Shehab, T. Kazhymurat, N. Jyeniskhan, A. Amantayeva, A. Meirbekov, S. Singh and S. Tokbolat	61
Challenges and Opportunities of Implementing Industry 4.0 in Recycling Carbon Fiber Reinforced Composites A. Amantayeva, E. Shehab, A. Meirbekov, A. Suleimen, S. Tokbolat and S. Sarfraz	67