## **Table of Contents**

**Preface** 

Chapter	1:	Materials	for	Membrane	<b>Production</b>
---------	----	-----------	-----	----------	-------------------

Characteristics of Polyethersulfone Membranes Modified by Silika and Nanocellulose Extracted from Biomass as Additives F. Bashair, M.R. Rida, N.F. Idrus and S. Aprilia	3				
Effect of Adding Mg(OH) <sub>2</sub> Additives to Polyethersulfone (PES) Hydrophobic Membranes A. Abubakar, U. Fathanah, M.R. Lubis, S. Muchtar, T.P. Rahmania and I. Syarwani					
Chapter 2: Properties and Processing Technologies of Structural Steel and Alloys					
Hardness Degradation Behaviors of Ni-Base Superalloys after Phase Coarsening S.Y. Zhang, Y.D. Chen, Y.H. Shi, J.C. Li and X.C. Huang	23				
Molecular Dynamics Study on the Influence of Ti-Al-V Phase Interface Characteristics on Deformation Behavior and Mechanisms G.Y. Liu, J.Y. Li, P. Liu and D. He	29				
Effect of Weld-Pass Morphology and Molten-Pool Flow on Lack of Fusion Formed in the Fully Automatic Welded Joint at 6 o'Clock Direction					
D. Yang, Z.Z. Li, L.H. Han, C. Yan, Z. Xin and D.Y. Feng  Effect of Cu Additive on the Microstructure and Magnetic Properties of Fe-6.5wt%Si High  Silicon Steel by Induction Melting Method	37				
Z.Q. Dong, E.B. Pan and X. Zhang  Effect Cu and La on the Solidification Structure and Magnetic Properties of Fe-6.5wt.%Si  Alloy under Arc Melting	43				
Z.Q. Dong, E.B. Pan and X. Zhang  Measurement of Dynamic Mechanical Property Parameters of 12X18H10T at High Strain	51				
Rates Q. Niu, X.S. Zhang and Y.X. Zhang	57				
Chapter 3: Building Materials					
Development and Characteristics of Infra-Lightweight Foamed Concrete H. Al-Kroom and M.A. Elrahman	67				
Adobe Block Design with Addition of Fiberglass to Improve the Compression Resistance in the District of Saylla, Province and Department of Cusco A.C.G. Hinostroza Berrios, A.A. Sosa Cusihuaman and E.A.A. Carlos	73				
Application of Laterite-Based Geopolymer Mortar for Masonry Bedding Z.K. Nuru, E.P. Kearsley and W.A.H. Elsaigh	81				
The Effect of Nanosilica on the Fresh Properties of Sustainable Self-Compacting Concrete S. Papatzani, G. Hloupis, P. Giatra and G. Aslanis	87				
Fabrication of Metakaolin/Ignimbrite Geopolymer from the Añashuayco Quarry in Arequipa A.Í.S. Morais, D.K.O. Palmeira, J.A. Osajima, R.R.P. Garcia and F.A. Huamán-Mamani	93				
Influence of the Incorporation of Recycled Glass Powder on the Fresh State Properties and Compressive, Tensile, and Flexural Strength at 7, 14, and 28 Days of a Sustainable Concrete with f'c = 280 kg/cm², Designed Using the ACI Method, in the City of Lima					
D.H.T. Brad, R.A.M. Henrry and E.A.A. Carlos  Substitution of River Sand with Fly Ash in Self-Compacting Concrete by Utilizing Novel	101				
Admixture P.R. Khare, K.P. Vinay and S.P. Wanjari	111				

## Effect of Incorporating Oat Husk Ash on the Compressive Strength of Concrete with Recycled Aggregates C.S. Miguel Angel and M. Serrano

117