

Table of Contents

Preface

Chapter 1: Properties and Processing of Alloys and Steel

Weld Cold Cracking Susceptibility in SKD 11 Die Steel during MAG Welding Using Implant Testing K. Nurinram, R. Phaoniam and S. Peansukmanee	3
Evaluation of Cold Cracking Susceptibility in Fully Pearlitic Rail Steel during Flux Cored-Arc Welding Using Implant Testing N. Intawong, R. Phaoniam and S. Wonthaisong	13
Study of Weld Cracking Detectability on JIS G4404-SKD 11 Cold Work Steel Using Eddy-Current Testing S. Wonthaisong, R. Phaoniam, J. Chara and J. Kaewwichit	23
Fatigue Properties of Welded Structural Steels Initiated from Long-Term Corroded Surfaces N. Konda and Y. Kayamori	31
High Temperature Oxidation of Fe-18Cr-Nano Al₂O₃ ODS Steel in Humidified Atmospheres R. Nilprapa, S. Chaleawler-Umpun, P. Treewiriyakitja, P. Thongyong and J. Tungtrongpairoj	39
Hot Corrosion, Phase Stability and Compressive Strength of AlCrFeNiCu-Nb High Entropy Alloy Fabricated via Additive Manufacturing L.R. Kanyane, N. Malatji and M.B. Shongwe	45
Microstructural Evolution and Mechanical Behaviour of AlCrFeNiCu High Entropy Alloy Doped with Ti L.R. Kanyane, N. Malatji and M.B. Shongwe	53

Chapter 2: Protective Coatings

Evaluation of TWAS Coatings Wear Mechanism by Means of SEM J. Duliškovič, D. Aišman and S. Houdková	63
Analysis of Stainless Steel 316L Coatings Prepared by High-Speed and Conventional Laser Cladding P. Martínek and K. Brom	69
Optimization of Hardness and Adhesion of Al₂O₃-40%TiO₂ Coating Obtained by HVOF Spraying through Process Parameter Control V.. Constantin, A.C. Murariu, I.A. Perianu, M. Cocard, I. Duma and C.A. Antal	77