

Table of Contents

Preface

Chapter 1: Wastewater Treatment

Pilot Scale Study of Tubular Continuous Flow Electrocoagulation for Color Removal in Textile Industry Wastewater Treatment

R. Ardhianto, V.S. Maharani and A. Rokhman 3

Analysis of well Water in the South of Ternate by Applying Silica Sand, Zeolite, and Activated Carbon Filter Media

B. Ahmad, S.H. Umar and M.T.Y. Saputra 13

Chapter 2: Hydrodynamics in Water Resources Management

2D Hydrodynamic Analysis Using HEC-RAS in the way Sulan Watershed

P.F. Sari and A. Aprizal 21

Modeling of Flood Prone Areas in the Remu Watershed

D.A. Asiyono, M.S. Pallu and M. Putra Hatta 37

Wave Characteristics Simulation in the Waters of Pesisir Barat Lampung with the Wind

Data Approach of the Bengkulu Recording Station

R. Hendriawan and A. Nurhasanah 47

Current Measurement Accuracy in Open Channel Instruments

E. Affandy, M.S. Pallu, F. Maricar and B. Bakri 57

Seawater Influence on Groundwater in Pisang Island, Lampung

S.M. Sinaga, H. Hendrayana and G.J. Laksono 65

The Occurrence of Springs in Scarce Groundwater Condition Area in Taebenu Sub-District, Kupang Regency

I.M. Deonal de Fatima and D.P.E. Putra 75

Flood Discharge Using Creager Graph Based on DAM Data in Jeneberang River Region

M. Rifaldi Mustamin, F. Maricar, R. Tahir Lopa and R. Karamma 83

Wave Running on the Oscillating Water Column (OWC) Breakwater Model

S. Sugianto, R.T. Lopa, R. Karamma and C. Paotonan 91

Hydrogeology Conceptual Model of Ponorogo-Ngawi Groundwater Basin in Ngawi Regency

R. Septiani, H. Hendrayana and N. Mulyaningsih 99

Horizontal Distribution of Salinity in the Estuary of Palu River

A. Sucipto, M.A. Thaha, M. Putra Hatta and F. Mahmuddin 107

Determination of the Groundwater Recharge Areas of Aquifers on the Northern Slope of Lawu Volcano Using the Isotope Method

I.N. Handayani, D.P.E. Putra and F. Abdurrachman 115

Application of GOD Method to Identify the Groundwater Vulnerability to Pollution in the Sub-District of West Limboto, Gorontalo Regency, Indonesia

R. Patanduk, W. Budianta, I.M. Deonal de Fatima and D. Umar 123

Modelling Analysis of Flow Patterns in the Palu River Estuary

R.R. Basalem, M.A. Thaha and M. Putra Hatta 133

Application of Oxygen-18 and Deuterium Isotopes to Determine the Groundwater Recharge Area of Dumoga Area, Bolaang Mongondow Regency, North Sulawesi Province

N.H. Kalo, W. Wilopo and D. Umar 141

Chapter 3: Geotechnical Engineering

Slope Stability Analysis in Jeneberang Watershed, Gowa Regency

D.D.A. Arsdin, P. Purwanto, G.B. Sahetapy and S. Bundang 151

Investigating the Impact of Mixing the Fine-Grained with Bentonite on its Physical Properties and Consistency Limits	
H. Hairulla, T. Hariyanto, A.R. Djamaruddin and A. Arsyad	157
Combining of Rock Mass Classifications for Preliminary Design of Excavation Method and Support System of Diversion Tunnel at Rongkong Dam, South Sulawesi, Indonesia	
S. Permatasari, I.G.B. Indrawan and I.W. Warmada	165
Analysis of Excavation Method and Support System Using Empirical Method of Pamukkulu Dam Intake Tunnel, South Sulawesi, Indonesia	
M.A. Tappang, I.G.B. Indrawan, D.H. Amijaya and D.H. Kunindra	177
Effect of Water on Shear Strength Parameter of Clay Shale	
D.P. Kusumastuti, B. Wicaksono, A.S.N. Chairat, M. Misbahudin, P.R.D. Perdana, D.Y. Fatimah and F.F. Amanda	185

Chapter 4: Safety and Disaster Management

Analysis of Stakeholder Perceptions of Safety-Risk Construction in High-Rise Building Projects to Increase Construction Safety Performance in Indonesia	
R.A. Machfudiyanto and M.F. Faizan	195
Evaluation of Operational Safety Risk in Tank Development Project	
Y. Olanta, R.U. Latief and M.A. Abdurrahman	207
A Review of Pedestrian in Rantepao North Toraja	
A.T. Arrang, E.A.R. Dendo, A. Sombolinggi and R.T. Bua	217
Risk Mitigation of Buried High Temperature Gas Pipeline Construction	
M. Yusuf, S. Kartohardjono, Y. Latief and A.D. Rasasati	227
Community Preference-Based Tsunami Disaster Mitigation Strategy in Barru Coastal City Area	
A. Akil, R. Ibrahim, R. Rasyid, W.W. Osman, M.A. Massinai, S.A. Yanti and A.P. Yudono	239