PROCEEDINGS
OF
THE 6TH INTERNATIONAL
CONFERENCE
ON
CONCRETE TECHNOLOGY
FOR
DEVELOPING COUNTRIES

21- 24 OCTOBER 2002
AMMAN, JORDAN

VOLUME 1
Edited by
Musa Resheidat
Prediction of Conventional Strengths from 1-Day Age Accelerated Cured Strength of High Strength Concrete
A. H. Mahawish and J. A. Jabir

Comparing Concrete Properties of Ca-Lignosulfonate and Molasses Based Water Reducer for Concrete
Kåre Reknes

Ecological Clean Fireproof Fine-Grained Concrete from Secondary Mineral Resources
Tuleev A.G., Pavlenko S.I., Lukhanin M.V., Dobretsoy N.L., Bortnikova S.B. and Sidenko N.V.

Inhibiting Chloride Induced Corrosion of Concrete Rebar by Adding Calcium Nitrate to the Concrete Mix
H. Justnes

Effect of Elevated Temperature on Chloride Ingress Into Concrete
Moufaq J. Katwan and Khaldon, K. Al-Umer

Does pH of the Admixture Affect the Performance of Lignosulfonate Based Water-Reducing Admixtures for Concrete?
Kåre Reknes

Aggregate Made from Industrial Unprocessed Slag
M. Kamal, A. H. Gailan A. Haatam and H. Hameed

Effect of Aggregate Properties on Concrete Compressive Strength
Mohamed I. El-Abboud, Munsif A. Y. Mosmari

Creep Behavior of Normal and Superplasticized Concrete Under Variable Temperature and Humidity
Hani M. Fahmi and Auday A. Al-Kayyali

Some Properties of No-Fines Concrete
Janan Al-Feel

Some Properties Of No-Fines Polymer Concrete
Abdulkader Ismail Al-Hadithi, Bayan S. Al-Nu’man and Ibrahim Ahmed Al-Jumaily

Compressive Strength Of Concrete Cubes And Cylinders Versus Cores
Ahmed E. Ben-Zeitun

Concrete Using Ceramic Insulator Scrap As Aggregate [Cera Crete]
P. Devadas Manoharan and Rm. Senthamarai

VOLUME 2

Properties Of High Strength Concrete At Different Ages
A Al-Hussaini, K-E Ramdane, H-Y Xue

The Development Of High Strength Concrete Mixes
Yehia Anis Daou
Characterization Of Natural Fiber Concrete Using Destructive And Nondestructive Testing Methods
Hashem M. A. Al-Mattarneh, Zakiah Ahmad 551

Concreting In Arid Climates
F. Kharchi And K Chabbi 561

Evaluation Of Roller Compacted Concrete Pavement Properties
Saad Issa Sarsam 567

The Effect Of Concrete Overlay Thickness On Concrete Cracking Due To Corrosion Of Reinforcement
Sami Masadeh 579

The Effect Of Capping Condition On The Compressive Strength Of Concrete Hollow Blocks
Osama A. Abaza And Ameed Abu Salamh 585

Compressive Strength Of Concrete-Backed Stone Masonry Prisms
Nart Mawloud Abdel-Qader 595

Expert Systems And Concrete Mix Design: A Review
M. N. Islam, Hashem Al-Mattarneh, M. F. M. Zain And H. B. Basri 605

Properties Of High Strength Plain And Fiber Reinforced Concretes
H. F. Abusiaf And A. A. Elshab 613

Strength Comparisons Between Rolled Sand Concrete And Dune Sand Concrete
A. Guettala, B. Mezghiche, R. Chebili 621

Production Of High Strength Concrete Using Locally Available Materials
Tareq Rasheed A. Mohammad, Hassan S. Saffarini 631

The Potential Of Using Local Materials In Producing High Strength Concrete
S. Y. Barony, A. Saklul And R. S. Murad 641

Concrete, From The Laboratory To The Building Site
Souad Boutamine And Fattoum Kharchi 651

New Nondestructive Testing System For In-Site Determination Of Concrete Compressive Strength
Hashem Al-Mattarneh, Abdul Manaff, And F. M. Zain 659

Durable Concrete in Salt Weathering Environment
Mokhtar Moamer Aburawi 671

Laboratory Measurement of Complete Tensile Stress-Deformation Curves For Large-Size Plain Concrete Specimen
Ping Chen, Z. P. Liang, S. Q. Huang and Y. Q. Chen 683

Use of Banana Leaves as Fiber Reinforcement in Concrete
Nofal Al-Araji, Tojan Al-Gaghbeer And Musa Resheidat 695
Determination Of Flexural Strength And Fiber Content Of Steel Fiber Concrete Using Far Field Microwave Method
Hashem M. A. Al-Mattamleh, M. F. M. Zain, And Z. A. A. Rashid

Essence of Training of Manpower for Concrete Technology
R. K. Dhiman

Temperature Development in a Mass Concrete Spillway Containing High Proportions of Ggb's in the Binder
Y. Ballim

Effect of Curing on the Strength and Durability of High Performance Concrete for Bridge Structures
Mohsen A. Issa And Atef M. Khalil

Thermal Analysis in Large Diameter Bored Piles
Mosa J. Al-Mosawe, Ahmed A. H. Al-Obaydi

High Strength Concrete Columns Reinforced with High Strength Steel
Muhammad N.S. Hadi

VOLUME 3

Thermal Analysis In Large Diameter Bored Piles
Mosa J. Al-Mosawe And Ahmed A. H. Al-Obaydi

Experimental Study Of Strengthened Reinforced Concrete Columns Subjected To Axial Loads
R. S. Murad And S. Y. Barony

Effect Of Helical Reinforcement On The Behaviour Of Reinforced Concrete Beams
Muhammad N.S. Hadi And Lewis C. Schmidt

The Use Of High Performance Fiber Reinforced Cementitious Composites For Seismic Rehabilitation
M. Jamal Shannag, Samer Barakat And M. Abdul- Kareem

Repairing Of R. C. Beams By Means Of Externally Bonded CFRP Sheets
Omar A. F. Ahmed

Cracking Of Ground Beams In A Commercial Building: Case Study
I. M. Asi, H. Y. Qasrawi, H. I. Al-Abdul Wahhab And A. K. Azad

Diagnosis And Repair Of A Reinforced Concrete Bridge
A. Guettala, S. Benmebarek and A. Abibsi

Strengthening Of Loaded Beams By CFRP
H.Allam And M.Hosien

Crack Repair Methods For Concrete Structures
M. Tahrawi
A Study On Ultimate Strength Of External Plated R/C Beams: An FEM Approach
B.G. Jagadeesh Kumar And K.U. Muthu

The Effect Of Concrete Confinement On The Strength Of Filled Steel Pipe Columns
Bassam Z. Mahasneh And Emhaidy S. Gharaibeh

Aspects Of Full Composite Action In The Structural Behaviour Of Slab-Beam Floors
N. Chikh, J. Harrop

Analysis Of Rectangular Orthotropic Plates With Variable Line Boundary Conditions
Ali S. Zregh And Mustafa M. Tawil and Ziad H. Abu Mustafa

Analysis And Design Of Reinforced Concrete Cylindrical Grouped Silos
Can Balkaya

Experimental Study Of The Minimum Shear Reinforcement In High Strength Concrete Beams
Yehia Anis Daou And Hassan Akram Ghanem

Effect Of Irregular Shape On The Analysis, Design And Construction Of Reinforced Concrete Structures - A Case Study -
Raid A. Othman

An Overview of the Membrane Effect on Ultimate Loads of Simply Supported Slabs
Mohammed Almograbi

Conceptual Seismic Analysis of Multistorey Buildings Tied Retaining Walls
Jamal Omari and Amal Al-Far

Irregular Seismic Response of Building Frame Resisting System Due to Slab Openings
Yehya Timsah And Ziad Hamdan

Prediction of Potential Seismic Damage to Reinforced Concrete Buildings Based on Damage Probability Matrices
M. S. Yüceemen

Inelastic Cyclic Response of Stone-Concrete Bearing Walls
H. S. Al-Nimry, N. S. Arnouti And A. S. Najmi

Soil-Structure Interaction Under Dynamic Analysis of Infilled Frames
Jamal A. Omari

Trends In Bridge Research: Materials And Structural Behavior
Mohsen A. Issa

Sustainable Concrete Technology For Developing Countries
Ali S. Ngab And S.P. Bindra

Extended Use of Supplementary Cementing Materials In Construction for Economic and Environmental Benefits
V.G. Papadakis And S. Tsimas
Concrete Properties Modelling Using Neural Networks
Ali A. Ramezanianpour And Arash Davarpanah T. Q. 1021

Assessment And Development of an Expert System for Gas Transport Through Mat Foundations
Rami Issa Al-Ruzouq, Abdallah Qudah, Wa’il Abu-El-Sha’r 1033

Recycling of the Waste Limestones, Middle Egypt for Concrete Works and Road Construction
H.S. Hassan And Z. S. Houssein 1045

Performance of Cement Concrete Pavements in India
S.D. Sharma, T. Muraleedharan, Prashant Kumar and P.K. Nanda 1055

Towards a Reliability Based Design Code
Emhaidy S. Gharaiibeh 1063

Essence of Training of Manpower for Concrete Technology
R. K. Dhiman 1071

Study of Waterproofness of Fine Slag-Ash Concrete for Water Supply Structures
Tuleyev A.G., Pavlenko S.I., Avtushko E.A. 1077

Stabilization of Kaolinitic Soil for Construction Purposes by Using Mineral Polymerisation Technique
M. Alshaaer, H. Cuypers, J. Wastiels 1085

Deviations Between Estimated And Actual Cost of Construction Projects in Iraq
Maha Jamil Al-Rayes 1093

Overview on of Potential Use of Surveying Instruments for Concrete Structures Displacements
Nedal Al-Hanbali 1107

Concrete Structures Monitoring Using Tiltmeters
Bassam Saleh 1117

Laser Scanning System for Monitoring Surface Deformation
Nedal Al-Hanbali 1123

Presentation of Great Man-Made River Project
Mounsif Adem Mosmari 1135

Index of Authors 1145

Subject Index 1149