

**INTEGRITET I
VEK KONSTRUKCIJA –
Specijalno izdanje
STRUCTURAL INTEGRITY
AND LIFE – Special Issue**

**ZAJEDNIČKO IZDANJE DRUŠTVA ZA INTEGRITET I
VEK KONSTRUKCIJA „PROF. DR STOJAN SEDMAK“
I INSTITUTA ZA ISPITIVANJE MATERIJALA (IMS)
PERIODIČNOST IZLAŽENJA - TRIPUT GODIŠNJE
PUBLISHED IN THREE ISSUES ANNUALLY
JOINT EDITION OF THE SOCIETY FOR STRUCTURAL
INTEGRITY AND LIFE “PROF. DR STOJAN SEDMAK”
AND THE INSTITUTE FOR MATERIALS TESTING**

Vol. 20 | Special Issue | S1 – S64 | BEOGRAD | Srbija / Serbia | 2020

IZDAVAČI / PUBLISHERS

Društvo za integritet i vek konstrukcija „Prof. dr Stojan Sedmak“
Institut za ispitivanje materijala (IMS), Beograd
Society for structural integrity and life “Prof. Dr Stojan Sedmak”
Institute for materials testing (IMS), Belgrade

GOST UREDNIK / GUEST EDITOR

Manoj Sahni

GLAVNI I ODGOVORNI UREDNIK / EDITOR-IN-CHIEF

Zoran Radaković

UREDNIK EMERITUS/ EDITOR EMERITUS

Aleksandar Sedmak

UREDNIŠTVO / EDITORIAL BOARD

Miodrag Arsić, Zijah Burzić, Katarina Čolić, Miloš Đukić, Katarina Gerić, Radomir Jovičić, Snežana Kirin, Taško Maneski, Ljubica Milović, Dejan Momčilović, Milosav Ognjanović, Miodrag Pavišić, Blagoj Petrovski, Marko Rakin, Dragoslav Šumarac, Milica Tošić, Nataša Trišović, Milorad Zrilić, Vera Šijački-Žeravčić

MEĐUNARODNO UREDNIŠTVO / INTERNATIONAL EDITORIAL BOARD

Moussa Naït Abdelaziz (France), Todor Adžiev (Macedonia), Petar Agatonović (Germany), Donka Angelova (Bulgaria), Claudia Barile (Italy), Željko Božić (Croatia), Julien Capelle (France), Katia Casavola (Italy), José António Correia (Portugal), Dorin Dehelean (Romania), Nenad Gubelj (Slovenia), Francesco Iacoviello (Italy), Abílio De Jesus (Portugal), Philippe Jodin (France), Dražan Kozak (Croatia), Mersida Manjgo (Bosnia and Herzegovina), Liviu Marshavina (Romania), Giovanni Pappalettera (Italy), Carmin Pappalettera (Italy), Guy Pluvinage (France), G.C. Rana (India), Ivan Samardžić (Croatia), Pankaj Thakur (India), László Tóth (Hungary), Rosina Yordanova (Bulgaria)

Direktor časopisa / Journal director – Ljubica Milović

Tehnički urednik / Technical editing – Zoran Radaković

Anotirana bibliografija i stručna klasifikacija / Bibliography and library classification – Ilinka Smiljanić

Priprema i štampanje ovog broja potpomognuto je od strane Ministarstva prosvete, nauke i tehnološki razvoj Republike Srbije

Published with financial support of the Ministry of Education, Science and Technological Development of the Republic of Serbia

CENE I NARUČIVANJE / PRICES AND ORDERING

Godišnja pretplata / Annual subscription (only Serbia)

– preduzeća / corporate order2400 RSD

– pojedinačno / personal order1200 RSD

– pojedinačni broj / single issue1000 RSD

Inostranstvo / Annual subscription (all other countries).....50 EUR

Uplata na dinarski tekući račun DIVK broj 200-2410200101872-30 Banka Poštanska štedionica, Beograd

Foreign Euro payments through bank account:

IBAN: CS73245007080000056231

No. of party: 00-708-0000056.2 544300/978

Tiraž / Circulation: 400

Štampanje / Print: RIC grafičkog inženjerstva Tehnološko-metalurškog fakulteta Univerziteta u Beogradu, Karnegijeva 4

SADRŽAJ / CONTENTS

Guest Editorial of Structural Integrity and Life–Special Issue 2020 / Introduction to the Special Issue S3

S.P. Jena, D.R. Parhi, N.K. Sarila, S. Bhavanasi: Crack Detection in Moving Load Dynamics Problem Based on Statistical Process Control Approach S5

B.M. Yeolekar, M.A. Yeolekar: Stability of Limit Cycles of Passive Dynamic Kneed Biped S11

G.C. Panchal, H.A. Patel, H.C. Patel: A Comparative Study of Slider Bearing Performance for Dissimilar Shapes of Lubricant Film with a Transverse Rough Surface S19

R. Panchal, S. Sharma: Analytical Solution for Creep Deformation of Functionally Graded Orthotropic Cylinder Under Mechanical and Centrifugal Loads S25

A. Mishra, S.K. Govindarajan: Mathematical Model for CBM (Coal Bed Methane) Production Under the Coupled Effect of Multi-Mechanistic Methane Flow and Coal Geomechanics S32

V. Thokala, S.S. Pandey, S.K. Govindarajan: Mathematical Perspective of Modelling Fluid Flow Inside Fractured Carbonate Reservoir Producing Under Steam Flooding Enhanced Oil Recovery S38

R. Sharma, M. Sahni: Analysis of Creep Stresses in Thin Rotating Disc Composed of Piezoelectric Material S45

K. Maheshwari, S. Sharma: Numerical Solutions of Plastic Stresses in Piezoelectric Material S50

M. Parikh, M. Sahni, R. Sahni: Modelling of Mechanical Vibrating System in Classical and Fuzzy Environment Using Sumudu Transform Method S54

P.L. Thakkar, H.C. Patel: Effect of Transverse Roughness on Characteristics of Squeeze Film Between Porous Complete Conical Plates S61

CIP – Katalogizacija u publikaciji

Народна библиотека Србије, Београд

621

INTEGRITET i vek konstrukcija: časopis Društva za integritet i vek konstrukcija (DIVK) = Structural Integrity and Life: Journal of the Society for Structural Integrity and Life / glavni i odgovorni urednik Aleksandar Sedmak – God. 1, br. 1 (2001) – Beograd (Bulevar vojvode Mišića 43): Društvo za integritet i vek konstrukcija (DIVK): Institut za ispitivanje materijala (IMS), 2001 – (Beograd: RIC grafičkog inženjerstva Tehnološko-metalurškog fakulteta Univerziteta u Beogradu). -29cm
Triput godišnje. – Članci i rezimeji uporedo na engleskom jeziku. -
Nastavak publikacije:

Stručni bilten GOŠA = ISSN 0352-017X

ISSN 1451-3749 = Integritet i vek konstrukcija

COBISS.SR-ID 181616135

REDAKCIJA ČASOPISA / OFFICE

Adresa / Address:

Kraljice Marije 16 (soba 503), 11000 Beograd

Tel: +381-11- 3302497 Fax: +381-11-3370364

E-mail: kancelarija@divk.org.rs

www.divk.org.rs/ivk