


**DIVK Video recordings**

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12th Annual Conference of  
Society of Structural Integrity  
and Life (DIVK12) - 2024



# 12th Annual Conference of Society of Structural Integrity and Life (DIVK12) November 17-19, 2024 Belgrade, Serbia

Aims of this international conference was to include researches concerning innovation and recent trends, multidisciplinary approach, as well as case studies, involving structural integrity assessment, risk analysis and safety of engineering structures taking into account environmental effects, materials behaviour, their characterisation, and the specificity of the structure itself. We invited an academic and engineering communities as well to take participation to this event, and to share their knowledge on following areas:

- Structural integrity approach on engineering structures: development and recent trends
- Structural integrity assessment: classic approaches
- Methods for reliability and probabilistic safety assessment
- Investigation on structural integrity of engineering structures under specific loading condition
- Environmental effect concerning structural integrity and material characterisation
- Mechanical characterisation of engineering materials
- Structural integrity of newly developed materials in engineering application
- FEM and analytical modelling of failure under various loading conditions
- Fracture mechanics approach in structural integrity assessment
- Welding and welding constructions as a specific problem: damage analysis, environmental effects and specificity

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Ksenija Djokovic, IMS institute, Belgrade, Serbia  
Isaak Trajkovic, Innovation center of Faculty of Mechanical Engineering in Belgrade, Serbia

## VIDEO-PRESENTATIONS

Presentation title	Authors	DOI
Ductile Cast Irons - porous steels or natural composites	Francesco Iacoviello	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.1">https://doi.org/10.53254/ESISTUBE.DIVK12.1</a>
Fatigue assessment of large structures - open issues and possible solutions	Filippo Berto	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.2">https://doi.org/10.53254/ESISTUBE.DIVK12.2</a>
Hydrogen embrittlement mechanisms synergy in metallic materials - HELP + HEDE model	Milos Djukic	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.3">https://doi.org/10.53254/ESISTUBE.DIVK12.3</a>
Probabilistic stress-life prediction at variable amplitude loading based on the non-linear accumulation	José A. F. O. Correia	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.4">https://doi.org/10.53254/ESISTUBE.DIVK12.4</a>
Computational fracture mechanics - Homage to Mladen Berkovic	Aleksandar Sedmak	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.5">https://doi.org/10.53254/ESISTUBE.DIVK12.5</a>
Non-standard tensile and bending ring specimens for fracture examination of pipeline materials	Bojan Medjo	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.6">https://doi.org/10.53254/ESISTUBE.DIVK12.6</a>
Strain energy density parameters as a crack driving force in fatigue crack growth rate analysis	Grzegorz Lesiuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.7">https://doi.org/10.53254/ESISTUBE.DIVK12.7</a>
Structural integrity assessment – part of a sustainable development	Dorin Radu	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.8">https://doi.org/10.53254/ESISTUBE.DIVK12.8</a>
Al-Cu joints with AlxCu <sub>y</sub> interlayers produced under static and dynamic conditions	Veljko Milašinović, Stefan Dikić, Bojan Gligorijević	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.9">https://doi.org/10.53254/ESISTUBE.DIVK12.9</a>
Comparing approaches for predicting critical loads in 3D printed graphene-reinforced PLA plates containing notches	S. Arrieta, S. Cicero, M. Sánchez, J. Gil Calderón	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.10">https://doi.org/10.53254/ESISTUBE.DIVK12.10</a>
Ductile fracture response for steels with Lüders plateau	Shengwen Tu, Guangxu Cheng	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.11">https://doi.org/10.53254/ESISTUBE.DIVK12.11</a>
Experimental study on mechanical and fracture behaviour of a pervious concrete	Daniela Scorza, Camilla Ronchei, Andrea Zanichelli, Sabrina Vantadori	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.12">https://doi.org/10.53254/ESISTUBE.DIVK12.12</a>
Increasing the service life of titanium Ti64 structures with stress concentrators using laser shock peening	Oleg Plekhov, Maria Bartolomei, Alexei Vshivkov, Elena Gachegova, Michail Verejak	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.13">https://doi.org/10.53254/ESISTUBE.DIVK12.13</a>
Numerical analysis of the thick-walled pipe stone diverter fatigue strength	Dražan Kozak, Janko Morosavljević, Ivan Morosavljević, Nenad Gubelj	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.14">https://doi.org/10.53254/ESISTUBE.DIVK12.14</a>

Presentation title	Authors	DOI
Review of INCEFA-scale project advances in environmentally assisted fatigue in pressurized water reactor	S. Arrieta, S. Cicero, A. McLennan, R. Cicero, J. Beswick, S. Courtin, Z. Que	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.15">https://doi.org/10.53254/ESISTUBE.DIVK12.15</a>
Modeling of SMAs hysteretic behavior considering the loading cycle	Oleh Yasniy, Dmytro Tymoshchuk, Iryna Didych, Volodymyr Iasnii, Vitaliy Tymoshchuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.16">https://doi.org/10.53254/ESISTUBE.DIVK12.16</a>
AI in metallurgy and quantitative image analysis	Gábor Balogh	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.17">https://doi.org/10.53254/ESISTUBE.DIVK12.17</a>
Application of AI of agricultural machinery	István Domokos, Sándor Pálinkás	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.18">https://doi.org/10.53254/ESISTUBE.DIVK12.18</a>
Finite element analysis of product tanker deckhouses under severe sea state conditions	Nemanja Ilić, Nikola Momčilović, Milan Kalajdžić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.19">https://doi.org/10.53254/ESISTUBE.DIVK12.19</a>
Mathematical modeling of output parameters for a synthetic jet actuator	Emre Kara	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.20">https://doi.org/10.53254/ESISTUBE.DIVK12.20</a>
Smoke wire flow visualization of a fluidic thrust vectoring system based on coanda effect	Emre Kara, Milad Deniz Enderya, Dilek Funda Kurtuluş	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.21">https://doi.org/10.53254/ESISTUBE.DIVK12.21</a>
Experimental investigations of tensile properties of Ultra-High Strength Steel S1100QL at room and elevated temperature	Djordje Ivković, Dušan Arsić, Srbslav Aleksandrović, Vukić Lazić, Anđela Ivković	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.22">https://doi.org/10.53254/ESISTUBE.DIVK12.22</a>
Identification of elastic soil constants based on experimental information from a submerged steel pile	Georgii Gusev, Tsvetkov Roman, Epin Valerii	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.23">https://doi.org/10.53254/ESISTUBE.DIVK12.23</a>
Numerical analysis of deformation of underground pipelines as a result of ground surface deflection	Andrey Fedorov, Valerii Matveenko	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.24">https://doi.org/10.53254/ESISTUBE.DIVK12.24</a>
Optimal parameters for strain measurement using distributed fiber-optic sensors	Valerii Matveenko, Grigorii Serovaev, Elizaveta Galkina, Vladislav Koniukhov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.25">https://doi.org/10.53254/ESISTUBE.DIVK12.25</a>
Research of the draw gear and screw coupling failures of rail vehicles	Jagoš Stojanović, Jovan Tanasković, Marija Vukšić Popović	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.26">https://doi.org/10.53254/ESISTUBE.DIVK12.26</a>
Volumetric analysis of creep cavitation using small angle neutron scattering (SANS)	Hedieh Jazaeri, John Bouchard, Michael Hutchings, Yadunandan Das,	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.27">https://doi.org/10.53254/ESISTUBE.DIVK12.27</a>

Presentation title	Authors	DOI
	Ashutosh Bhagurkar, Johannes Nicol	
Comparison of the properties of the welded joint of structural steel S235 and S460 before and after incremental sheet forming	Nedeljko Vukojević, Zlatan Ištvančić, Fuad Hadžikadunić, Amna Bajtarević-Jeleč	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.28">https://doi.org/10.53254/ESISTUBE.DIVK12.28</a>
Defects – damage in the RC wall of the fermentor	Boris Folić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.29">https://doi.org/10.53254/ESISTUBE.DIVK12.29</a>
Design of reinforced plywood panels using deformation methods	Petro Gomon, Serhii Drobyshynets, Mariia Smal, Oksana Dziubynska, Olga Uzhegova, Yolana Golyk, Diana Kaynts, Iryna Kutsyn	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.30">https://doi.org/10.53254/ESISTUBE.DIVK12.30</a>
Determination of the main strength and deformation parameters of the complete diagrams of the deformation of glue-laminated wood	Sviatoslav Homon, Petro Gomon, Svyatoslav Gomon, Andrii Pavluk, Bohdan Karavan, Oleksiy Petrenko, Olha Homon, Oleksandr Chapiuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.31">https://doi.org/10.53254/ESISTUBE.DIVK12.31</a>
Horizontal shear force in RC internal beam-column connection at initiation and crack growth from linearly distributed load on a cantilever beam	Albena Doicheva	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.32">https://doi.org/10.53254/ESISTUBE.DIVK12.32</a>
Variation of shear force in RC internal beam-column connection from concentrated moments on a frame beam	Albena Doicheva	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.33">https://doi.org/10.53254/ESISTUBE.DIVK12.33</a>
AI-driven X-ray image analysis for enhanced NDT performance	Szabolcs Szávai, Judit Dudra, Zsombor Zsíros, Péter Margitai, Márton Pataki	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.34">https://doi.org/10.53254/ESISTUBE.DIVK12.34</a>
Application of Machine Learning in the Stability Analysis of Orthotropic Plates	Mirko Dinulović, Aleksandar Bengin, Marta Trninić, Vuk Adžić, Dragi Satmenković	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.35">https://doi.org/10.53254/ESISTUBE.DIVK12.35</a>
Beremin parameter determination for 15KH2MFAA steel for standard and subsized specimens	Péter Ungár, Zoltán Bézi, Szabolcs Szávai	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.36">https://doi.org/10.53254/ESISTUBE.DIVK12.36</a>



Presentation title	Authors	DOI
Fracture toughness determination by the simulation of ct specimens using VCCT and CZM method	Benedek Kulcsár, Szabolcs Szávai, Zoltán Bézi, Réka Erdei	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.37">https://doi.org/10.53254/ESISTUBE.DIVK12.37</a>
Impact properties of FDM-grade PLA material relative to infill density	Aleksa Milovanović, Milovan Paunić, Ivana Filipović, Sergiu-Valentin Galațanu, Liviu Marșavina, Miloš Milošević, Aleksandar Sedmak	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.38">https://doi.org/10.53254/ESISTUBE.DIVK12.38</a>
Measurement of technological and residual strains using fiber-optic sensors in 3D-printed samples	Elizaveta Galkina, Grigorii Serovaev, Vladislav Koniukhov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.39">https://doi.org/10.53254/ESISTUBE.DIVK12.39</a>
Numerical modeling of laser shock impact based on pdv data	Mariia. Bartolomei, Denis Lozhkin, Aleksey Vshivkov, Elena Gachegova, Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.40">https://doi.org/10.53254/ESISTUBE.DIVK12.40</a>
Thermo-mechanical resistance of additively manufactured carbon fiber-reinforced PLA	Miloš Vorkapić, Marija Baltić, Bojana Fidanovski, Danica Bajić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.41">https://doi.org/10.53254/ESISTUBE.DIVK12.41</a>
Experimental study on the influence of natural fiber fabrics in concrete	Ivelina Ivanova, Cheikhna Diagana, Jules Assih, Isabelle Titeux-Peth	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.42">https://doi.org/10.53254/ESISTUBE.DIVK12.42</a>
Forecasting Behaviors of Tubular Designs in Marine Transportation Structures - Effect of Mesh Variations in Nonlinear Finite Element Approach	Muhammad Daffa Alifianto, Aditya Rio Prabowo, Hermes Carvalho, Bo Cao, Ristyanto Adiputra	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.43">https://doi.org/10.53254/ESISTUBE.DIVK12.43</a>
Increasing the reliability of welded joints in trucks by modelling	Irina Makarova, Eduard Mukhametdinov, Larisa Gabsalikhova, Alexey Boyko	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.44">https://doi.org/10.53254/ESISTUBE.DIVK12.44</a>
Managing the operational reliability of intelligent trucks	Irina Makarova, Eduard Mukhametdinov, Larisa Gabsalikhova, Vadim Mavrin	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.45">https://doi.org/10.53254/ESISTUBE.DIVK12.45</a>
Toward residual velocity of ballistic impact on plate of ship's containment bunker - mesh convergence in FE simulation	Gusti Kid Faiq Syah, Aditya Rio Prabowo, Jung Min Sohn, Hermes Carvalho	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.46">https://doi.org/10.53254/ESISTUBE.DIVK12.46</a>

Presentation title	Authors	DOI
An extended sandwich model for structural integrity analysis of adhesive bondings	Thomas Steffen Methfessel, Wilfried Becker	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.47">https://doi.org/10.53254/ESISTUBE.DIVK12.47</a>
Anisotropic ice adhesion on fish scale	Feng Wang, Senbo Xiao, Zhiliang Zhang, Jianying He	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.48">https://doi.org/10.53254/ESISTUBE.DIVK12.48</a>
Mechanical integrity and friction stir spot welding performance of aluminum and magnesium sheets for next-generation aerospace and automotive applications	Hassanein I. Khalaf, Ahmet Atak, Raheem Al-Sabur, Andrzej Kubit	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.49">https://doi.org/10.53254/ESISTUBE.DIVK12.49</a>
New concept for the structural integrity calculations of large-scale pressure systems	Tamás Fekete	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.50">https://doi.org/10.53254/ESISTUBE.DIVK12.50</a>
Sensitivity analysis using digital twins for tensile tests	Levente Tatár, Dániel Antók, Tamás Fekete, Péter Bereczki	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.51">https://doi.org/10.53254/ESISTUBE.DIVK12.51</a>
Studies on laser shock peening with different absorbing coatings	Elena Gachegova, Oleg Plekhov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.52">https://doi.org/10.53254/ESISTUBE.DIVK12.52</a>
Accidental load on žezelj bridge and analysis of soil caisson bridge interaction	Boris Folić, Miloš Čokić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.53">https://doi.org/10.53254/ESISTUBE.DIVK12.53</a>
Ball bearing life assessment depending on lubricant contamination level	Tatjana Lazović, Pavle Ljubojević, Milan Stojanović	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.54">https://doi.org/10.53254/ESISTUBE.DIVK12.54</a>
Residual fatigue life estimation of the high-pressure pipeline in the thermal power plant	Mirko Maksimović, Ivana Vasović Maksimović, Dragi Stamenković	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.55">https://doi.org/10.53254/ESISTUBE.DIVK12.55</a>
The effect of build orientations and raster angles on impact toughness of PET-G FDM material	Milovan Paunić, Aleksandar Sedmak, Aleksa Milovanovic, Milan Janković, Sergiu-Valentin Galațanu, Horia Dascau, Igor Balać	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.56">https://doi.org/10.53254/ESISTUBE.DIVK12.56</a>
Windage loses of the high-speed cylindrical gear drives	Aleksandar Dimić, Nenad Kolarević, Miloš Stanković, Dimitrije Mihajlović	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.57">https://doi.org/10.53254/ESISTUBE.DIVK12.57</a>
Žezelj`s bridge and critical load due to building the long arch	Boris Folić, Željko Žugić, Miloš Čokić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.58">https://doi.org/10.53254/ESISTUBE.DIVK12.58</a>
Cohesive zone of tubular adhesive joints subjected to impact stresses	Pedro D.A. da Silva, Raul D.S.G. Campilho, André L. Faria, Miguel J.R.	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.59">https://doi.org/10.53254/ESISTUBE.DIVK12.59</a>



Presentation title	Authors	DOI
	Queirós, João P.A. Valente	
Equilibrium of an elastic plate with parallel contact cracks under antisymmetric bending	Taras Dalyak, Ivan Shatskyi, Igor Shopa	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.60">https://doi.org/10.53254/ESISTUBE.DIVK12.60</a>
Integrity increasing of HSLA welded joints applying post weld treatment	Illés Sas, János Lukács	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.61">https://doi.org/10.53254/ESISTUBE.DIVK12.61</a>
Interaction of a functionally gradient ceramic coating with fixed and unfixed abrasive	Liubomyr Ropyak, Ivan Shatskyi, Mykola Makoviichuk, Igor Lazariev	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.62">https://doi.org/10.53254/ESISTUBE.DIVK12.62</a>
Prediction of structural elements lifetime of titanium alloy by neural network	Oleh Yasniy, Iryna Didych, Dmytro Tymoshchuk, Roman Zoloty, Pavlo Maruschak	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.63">https://doi.org/10.53254/ESISTUBE.DIVK12.63</a>
Random vibration driven prediction of residual fatigue life and strength of thermoplastic coupons - an experimental and numerical approach	Niki Tsivouraki, Konstantinos Tserpes, Spilios Fassois	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.64">https://doi.org/10.53254/ESISTUBE.DIVK12.64</a>
Review of current welding technology and literature review of weld repair without post-weld heat treatment for X10CrMoVNb9-1 steel in dissimilar metal welds	Aleksandra Krtevska, Filip Zdraveski, Marjan Gavriloski, Elisaveta Doncheva, Martin Petreski	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.65">https://doi.org/10.53254/ESISTUBE.DIVK12.65</a>
Single-leg bending (SLB) analysis of a structural adhesive as a function of the adhesive thickness	Armando F.L. Macedo, Raul D.S.G. Campilho, André L. Faria	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.66">https://doi.org/10.53254/ESISTUBE.DIVK12.66</a>
A new approach to fire resistance design of boiler room building structure	Ivan Arandžlović, Radenko Rajić, Nikola Tanasić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.67">https://doi.org/10.53254/ESISTUBE.DIVK12.67</a>
Additional tool for pull out test - polymer samples with brass nut	Miloš Vorkapić, Toni Ivanov, Miloš Vasić, Marija Baltić, Aleksandar Simonović	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.68">https://doi.org/10.53254/ESISTUBE.DIVK12.68</a>
Dynamic analysis in geotechnics. Influence of loading level and boundary conditions on obtained results	Zeljko Zugic, Boris Folic	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.69">https://doi.org/10.53254/ESISTUBE.DIVK12.69</a>
Numerical analysis of natural frequencies of shallow shells under temperature load	Alexander Kamenskikh, Sergey	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.70">https://doi.org/10.53254/ESISTUBE.DIVK12.70</a>

Presentation title	Authors	DOI
	Lekomtsev, Valerii Matveenko	
Reliability methods in earthquake engineering	Zeljko Zugic, Boris Folic	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.71">https://doi.org/10.53254/ESISTUBE.DIVK12.71</a>
Structural integrity and electrochemical properties of graphene-PVB functional coating	Milica Košević, Marija Baltić, Bojana Fidanovski, Miloš Vorkapić, Danica Bajić	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.72">https://doi.org/10.53254/ESISTUBE.DIVK12.72</a>
Analysis of symmetrically delaminated beam-like structural component subjected to harmonic load	Victor Rizov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.73">https://doi.org/10.53254/ESISTUBE.DIVK12.73</a>
Influence of supporting conditions on longitudinal fracture in functionally graded frame under periodic dynamic loading	Victor Rizov	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.74">https://doi.org/10.53254/ESISTUBE.DIVK12.74</a>
Method of determining the minimum anchorage length of a reinforcement in concrete - an experimental study	Oleksandr Chapiuk, Oleh Kratiuk, Iryna Zadorozhnikova, Inna Boyarska, Vadym Rud, Maksym Boyarskyi, Ihor Mudryy, Andriy Pelekh	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.75">https://doi.org/10.53254/ESISTUBE.DIVK12.75</a>
Sensitivity to hydrogenation of steel used in the bend of a TPP steam pipeline and after its restorative heat treatment	Halyna Krechkovska, Ivan Tsybailo, Oleksandra Student	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.76">https://doi.org/10.53254/ESISTUBE.DIVK12.76</a>
Stress-deformed state of compressed-bent and stretched-bent wooden elements	Denys Mykhailovskyi, Petro Gomon, Ihor Mudryy, Olena Pakholiuk, Viktor Karbovskyi, Pavlo Shevchuk, Oleh Hlushenko, Andrii Oksentiuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.77">https://doi.org/10.53254/ESISTUBE.DIVK12.77</a>
Study of low-cycle fatigue of specimens from fine-grained and coarse-grained concrete	Yuriy Panchuk, Volodymyr Dovbenko, Ivan Dobryanskyi, Lyubov Dobryanska, Nataliia Ilchuk, Igor Melnyk, Andriy Pelekh, Oleksandr Kononchuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.78">https://doi.org/10.53254/ESISTUBE.DIVK12.78</a>

Presentation title	Authors	DOI
Work of steel fiber concrete beams under the action of repeated loads - an experimental study	Serhii Drobyshynets, Pavlo Sunak, Igor Melnyk, Andriy Pelekh, Vasyl Rizak, Oksana Mykaylo, Mykhailo Nesukh, Oleh Kukhniuk	<a href="https://doi.org/10.53254/ESISTUBE.DIVK12.79">https://doi.org/10.53254/ESISTUBE.DIVK12.79</a>





