Edward Petzek · Radu Băncilă (Eds.)

The Eight International Conference "Bridges in Danube Basin"

New Trends in Bridge Engineering and Efficient Solutions for Large and Medium Span Bridges



Contents

Twenty Years Devoted to International Conferences on Bridges Across Danube
Miklos Ivanyi & Radu Băncilă
Trends in the Application of High-Performance Steel in European Bridge Building
Falko Schröter & Tobias Lehnert
Economic Composite Constructions for Bridges: Construction Methods Implementing Composite Dowel Strips
Günter Seidl, Mislav Stambuk, Wojciech Lorenc, Tomasz Kołakowski & Edward Petzek
The Assessment of Riveted Railway Bridges in Accordance with Swiss Codes SIA 26981
Marcel Tschumi
Some General Aspects of the Bridge Refurbishment93
Miklós Iványi & M. Miklós Iványi
Concise History of Liberty Bridge in Budapest103
Miklós Iványi & M. Miklós Iványi
Assessment of Cable-Stayed Pedestrian and Motorway Overpass
Damir Zenunović, Mirsad Topalović & Radomir Folić
Rehabilitation of the Gazelle Road Bridge in Belgrade129
Aleksandar Bojović & Novak Velović
Railway Road Bridge Across the Danube in Novi Sad – Design and Construction
Aleksandar Rojović Zlatko Marković Antonio Mora, Jorrit Rlom, Dimitrije Aleksić

ł

Aleksandar Bojović, Zlatko Marković, Antonio Mora, Jorrit Blom, Dimitrije Aleksić, Marko Pavlović, Milan Spremić, Novak Novaković & Boško Janjušević

The Bridge over the Ijssel – a Railway Bridge in Line with the Landscape	1
Hans-Joachim Casper	
The First Fully Welded Integral Tube-Truss Bridge of Germany	3
Hans-Joachim Casper	
The Approach Bridges for Sava Crossing in Belgrade, Serbia – Design And Redesign under Fidic Red Book And Yellow Book17.	3
Martin Steinkühler	
Hanger Intersection Points in Box Sections of Steel Bridges Chords – Calculation Models for Consistent Dimensioning Rules	3
Francesco Aigner & Josef Fink	
Experimental Investigation of the Fatigue Behaviour of Concrete Dowels for the Use in Composite Constructions	7
Lukas Juen & Josef Fink	
The Dynamic Behaviour of Railway Ballast Beds: Influence of Different Conditions on the Stiffness and Damping Ratio Shown on a Test Bridge	9
Johannes Kirchhofer & Josef Fink	
Innovative Composite Deck Slab for Railway Bridges. Finite Element Studies and Comparison with Test Results	1
Paul Herrmann & Josef Fink	
Investigation and Simulation of Dynamic Behaviour of Railway Bridges with Ballast Substructure23	5
Klaus Hackl, Johannes Kirchhofer & Josef Fink	
Assessment of Riveted Railway Bridges Across the River Pegnitz	5
Martin Mensinger, Andreas Hacker & Thiemo Langen	
The Role of Traffic in Sustainability Assessment of Road Bridges25 <i>Tim Zinke, Thomas Ummenhofer, Marjolaine Pfaffinger & Martin Mensinger</i>	5

.

Josef Vican, Jaroslav Odrobinak, Jozef Gocal & Richard Hlinka

8

Behaviour of Steel-Concrete Composite Truss Beams
Jan Bujnak, Patricia Duratna & Abdelhamid Bouchair
Pre-Stressed Granite Bridges: A New Generation of Granite Bridges
Markus Hennecke & Georg Kusser
Assessment and Re-Analysis of Existing RC/PC Bridges in Germany. General Aspects and Exemplary Presentation of an Incrementally Launched 2 x 3 Lane Autobahn bridge Across the Danube
Oliver Fischer, Andreas Müller & Andreas Jähring
VTR® - A Modern Composite Bridge Concept
Edward Petzek, Luiza Toma, Elena Meteş, Radu Băncilă & Victor Schmitt
New Integral Bridges Solutions for the Romanian Motorway
Edward Petzek, Elena Meteş, Luiza Toma & Victor Schmitt
Seismic Isolation and Decrease of Seismic Effects on Bridges
Rudolf Ároch & Milan Sokol
Seismic Resisistance of the Existing Highway Bridges in Bulgaria
Kostadin Hristev Topurov, Peter Vasilev Nikolov & Ivanka Kostadinova Topurova
Determination of the Safety Factor of Bridges Applying Full-Probabilistic Approach
Attila Fülöp & Miklós Iványi
The Design and Experimental Verification of a Bascule Bridge in the River Port České Vrbné
Vojtěch Kolínský, Pavel Očadlík & Pavel Ryjáček
Lateral Torsional Buckling Resistance of Steel Plate Girders according to Euronorms
Ştefan I. Guțiu, Petru Moga, Alexandra D. Danciu & Cătălin Moga
Holistic Approach to Design of New Bridges Across Sava River in Zagreb
Jure Radić & Marija Kušter
The Necessity to Mentain in Operation the Old Metal Bridges417
Silvia Mihaela Hernea & Anamaria Feier

Design of Bridges According to the Balanced Lift Method425
Johann Kollegger & David Wimmer
Effect of Shear Forces for the Deflection of Steel Railway Girder Bridges
Gábor Németh, Miklós Iványi & M. Miklós Iványi
The First European Approval for an Expansion Joint Flexible Plug Joint System with New Material451
Gustav Gallai
About Some Solutions for a Prestressed Concrete Bridge Rehabilitation
Adrian Bota
Analysis of Auxiliary Bridge Structural Elements with Advanced Design Method475
Eszter Noficzer, Miklós Iványi, M. Miklós Iványi
Danube Bridge Günzburg485
Jürgen Schmidt & Anton Klotzner
Bridges in Slovakia
Ivan Baláž
Historical Development of Danube Bridges in Slovakia509
Ivan Baláž
Presentation of the Design and Construction of the New Bridge Over The Danube River Near Beška515
Slobodan Mitrović, Zoran Kostić, Milorad Stevanović & Milan Perić
Construction of Zemun-Borca Bridge Across Danube and its Approach Roads529
Djordje Pavkov, Miodrag Stanković, Gabor Kasa & Branislava Češljević

ł