DEPARTMENT OF STEEL AND TIMBER STRUCTURES

Head of the Department: Assoc. Prof. Ján Brodniansky, PhD.

I. STAFF

Professors

Tel.: + 421 2 52964 404 Fax: + 421 2 52494 116 E-mail: brodo@svf. stuba.sk

r rolessors		
Agócs Zoltán, PhD.	+ 421 2 59274 368	agocs@svf.stuba.sk
Baláž Ivan, PhD.	+ 421 2 59274 379	balaz@svf.stuba.sk
Associate Professors		
Benková Anna, PhD.	+ 421 2 59274 376	benkova@svf.stuba.sk
Brodniansky Ján, PhD.	+ 421 2 59274 377	brodo@svf.stuba.sk
Draškovič Ferdinand, PhD.	+ 421 2 59274 372	draskof@svf.stuba.sk
Kalousek Vladislav, PhD.	+ 421 2 59274 371	kalousek@svf.stuba.sk
Lapos Jozef, PhD.	+ 421 2 59274 374	lapos@svf.stuba.sk
Visiting Associate Professors		
Bezák Anton, PhD.	+ 421 2 59274 377	partlova@svf.stuba.sk
Senior Lecturers		
Ároch Rudolf, PhD.	+ 421 2 59274 365	aroch@svf.stuba.sk
Čierna Jarmila, PhD.	+ 421 2 59274 378	chomova@svf.stuba.sk
Erdei Michal	+ 421 2 59274 367	erdei@svf.stuba.sk
Chladná Magdaléna	+ 421 2 59274 370	chladna@svf.stuba.sk
Mališ Peter	+ 421 2 59274 367	malis@svf.stuba.sk
Sandanus Jaroslav	+ 421 2 59274 366	sandanus@svf.stuba.sk
Research Fellows		
Sloboda Ivan	+ 421 2 59274 373	sloboda@svf.stuba.sk
Doctoral Students		
Slivanský Miloš	+ 421 2 59274 561	slivansky@svf.stuba.sk
Sógel Kristián	+ 421 2 59274 561	sogel@svf.stuba.sk
Voletz Rudolf	+ 421 2 59274 561	voletz@svf.stuba.sk
Technical Staff		
Magda Jozef	+ 421 2 59274 375	kdmagd@svf.stuba.sk
Partlová Gabriela (secretary)	+ 421 2 59274 377	partlova@svf.stuba.sk
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II. EQUIPMENT

II. 1 Teaching and Research Laboratories

The Department performs educational activities in the field of steel and timber structures and bridges at the Faculty of Civil Engineering. The main part of its teaching is aimed at the branches of Civil Engineering and Architecture, Structural Engineering and Water Management. Courses are offered in the theory, design, construction, erection and experimental investigation of building structures, bridges, and special engineering constructions with steel, timber and composite load-bearing systems. The Department has a mechanical workshop for metal and timber work, a welding shop, and testing equipment for materials, as well as plane and spatial structural models, members and connections. The laboratory is equipped to perform experiments with loads up to 2500 kN.

II. 2 Special Measuring Instruments and Computers

Strain gauge instrumentation - Hottinger Baldwin Messtechnik, connected with computer-aided analyses of experimental results.

Mechanical and hydraulic testing machines for tension and compression static loads up to 1000 kN and in torsion up to 2 kNm.

III. TEACHING

III.1 Graduate Study

Obligatory subjects

Subject	Semester	Hours per Week	Lecturer
		Lectures Semina	rs
Steel and Timber Structures	5	4 - 2	J. Brodniansky
Steel Members	5	4 - 2	F. Draškovič I. Baláž
Steel Members	5	4 - 2 2 - 2	I. Baláž
Steel Members	5	2 - 2	J. Brodniansky
Steel Structures	6	2 - 2	Z. Agócs
	Ū		J. Brodniansky
Steel Structures	6	3 - 2	Z. Agócs
Timber Structures I.	7	2 - 2	F. Draškovič
Timber Systems	7	2 - 2	F. Draškovič
Timber Systems	7	2 - 1	F. Draškovič
Construction Project	7	0 - 4	J. Čierna
			J. Sandanus
Timber Systems	8	2 - 1	F. Draškovič
High-Rise and Long-Span Steel Structures	8	2 - 1	Z. Agócs
			J. Brodniansky
Steel Bridges I.	8	3 - 2	J. Lapos
Composite Structures	8	2 - 2	J. Lapos
Stability and Plasticity of Steel Structures	9	2 - 2	I. Baláž
			J. Lapos
Steel Bridges II.	9	2 - 2	J. Lapos
High-Rise and Long-Span Steel Structures	9	2 - 2	Z. Agócs
	_		J. Brodniansky
Special Seminar	9	0 - 3	Z. Agócs
			I. Baláž
			J. Brodniansky
			J. Čierna
			F. Draškovič
			V. Kalousek
			J. Lapos

			J. Sandanus
Design Studio	9	0 - 5	Z. Agócs
			J. Brodniansky
Diagnosis and Reconstruction of Steel	10	2 - 1	Z. Agócs
and Timber Structures			F. Draškovič
Timber Structures II.	10	3 - 2	F. Draškovič
Diagnosis and Reconstruction of Steel	10	3 - 2	Z. Agócs
and Timber Structures			F. Draškovič
Thin-Walled Steel Structures	10	3 - 2	I. Baláž
Advanced Steel and Timber Structures	10	3 - 2	Z. Agócs
			F. Draškovič
Special Seminar	10	0 - 5	Z. Agócs
			I. Baláž
			J. Brodniansky
			J. Čierna
			F. Draškovič
			V. Kalousek
			J. Lapos
			J. Sandanus
Design Studio	10	0 - 5	Z. Agócs
			J. Brodniansky

Optional Subjects

Subject	Semester	Hours per Week	Lecturer
		Lectures Seminars	
Advanced Timber Structures	8	2 - 2	F. Draškovič
Advanced Steel Structures	9	2 - 2	Z. Agócs
			V. Kalousek
Hydrotechnical Steel Structures	9	2 - 1	J. Lapos
Special Timber Structures	9	2 - 1	F. Draškovič
Technological Steel Structures	10	2 - 2	V. Kalousek
Experimental Verification of Building	10	1 - 3	V. Kalousek
Structures			

IV. RESEARCH TARGETS

The research activity of the Department is devoted to problems involving:

- materials and connections (wood rheology, glued timber connections, protection of materials),
- stability of columns and frames, stability of plates, thin-walled systems (shear-lag, torsion, distortion),
- new types of construction design and their behaviour (cable structures, space trusses, crane runways, composite structures, glued timber structures),
- glass structures,
- diagnosis, reconstruction and strengthening of structures,
- computers in the research and design of structures.

V. RESEARCH PROJECTS

- 1. VEGA 1/0309/03 Analysis and Development of New Load-Bearing Systems Made from Steel, Glass, Membranes and Cables. Development of Methods of Reconstruction and Diagnoses for Important Structures and Pipeline Ducts, Taking Into Account the Protection of the Environment (Prof. Agócs)
- 2. VEGA 1/0325/03 Metal Thin-Walled Crane Runway Girders (Prof. Baláž)
- 3. VEGA 1/0326/03 Development of the Possibilities of the Usage of Timber, Its Composites and Combinations, for Load-Bearing Structures (Assoc. Prof. Draškovič)

VI. COOPERATION

VI. 1 Cooperation in Slovakia

- 1. Alu Global, Bratislava
- 2. Doprastav Bratislava
- 3. Dopravoprojekt Bratislava
- 4. ELBEVA v.o.s., Dunajská Streda
- 5. Ingsteel Bratislava
- 6. Ing. Pavol Nádaský, PhD, Trnava
- 7. Orange, Bratislava
- 8. SND, Bratislava
- 9. Slovnaft, Bratislava
- 10. Stavokov, Trenčín
- 11. Steel OK, Levice
- 12. SPP, SLOVTRANSGAZ Nitra
- 13. SPP, SLOVTRANSGAZ Senica
- 14. SÚTN Bratislava
- 15. ŠDVÚ Bratislava
- 16. Vodárne a kanalizácie Bratislava
- 17. Výskumný ústav zváračský, Bratislava
- 18. City of Dunajská Streda

VI. 2 International Cooperation

- 1. ČVUT Prague, Czech Republic
- 2. Faculty of Civil Engineering, VUT Brno, Czech Republic
- 3. University of Stuttgart, Germany
- 4. Technische Universität, Munich, Germany
- 5. Technische Universität, Cottbus, Germany
- 6. Bauhaus Universität, Weimar, Germany
- 7. Technische Universität, Graz, Austria
- 8. HTWS, Zittau, Germany
- 9. Technische Universität, Vienna, Austria
- 10. TU Budapest, Hungary
- 11. University of Miskolc, Hungary
- 12. Politechnika Szczeczinska, Poland
- 13. Politechnika Gdanska, Poland
- 14. Politehnica Timisoara, Romania

- 15. ASTRON Building Systems, Luxembourg and the Czech Republic
- 16. Academy of Steel Construction, Sheffield, UK
- 17. Application Centre for Mixed Building Technology, Innsbruck, Austria
- 18. University of Liège, Belgium
- 19. Foundation University of Oviedo, Spain
- 20. Technical Chamber of Greece, Athens, Greece
- 21. Institute of Continuing Training and Education for the Members of TCG, Athens, Greece
- 22. Steel Construction Institute, Ascot, UK
- 23. Epistemics Ltd, Sheffield, UK
- 24. Centre Information Acier, Brussels, Belgium
- 25. Aristotle University of Thessaloniki, Greece

International Projects

- 1. Leonardo da Vinci: A New and Flexible Approach to Training for Engineers in Construction NFATEC
- 2. Slovak-Greek Bilateral Cooperation Working Programme on Science and Technology: Analysis, Design and Manufacturing Recommendations for Glass-Aluminium Facades with Improved Strength Properties According to Eurocode 9
- 3. EC FP5 HPRI: Access to Research Infrastructures Programme: Tensile Membrane Action and Robustness of Structural Steel Joints under Natural Fire

VI. 2. 1 Visitors to the Department

- 1. Dr. Christian Schaur, Application Centre for Mixed Building Technology, Innsbruck, Austria
- 2. Dr. Geza Varga, University of Budapest, Hungary
- 3. Prof. Miguel Serrano Lopez, Foundation University of Oviedo, Spain
- 4. Clive Emberey, Epistemics Ltd, Sheffield, UK
- 5. Karen Anderson, Epistemics Ltd, Sheffield, UK
- 6. Prof. Ian Burgess, University of Sheffield, UK
- 7. Sam Foster, University of Sheffield, UK
- 8. Sue Armstrong, University of Sheffield, UK
- 9. Prof. Pat Kirby, University of Sheffield, UK
- 10. Prof. John Ermopoulos, Technical Chamber of Greece, Athens, Greece
- 11. Polytimi Economou, Institute of Continuing Training and Education for the Members of TCG, Athens, Greece
- 12. Lia Tsialta, Institute of Continuing Training and Education for the Members of TCG, Athens, Greece

VI. 2. 2 Visits of Staff Members and Postgraduate Students to Foreign Institutions

- 1. M. Chladná, Bedford, UK, Jan. 8 23, 2003
- 2. J. Brodniansky, Munich, Germany, Jan. 15 16, 2003
- 3. M. Chladná, Innsbruck, Austria, Jan. 23 26, 2003
- 4. R. Ároch, Innsbruck, Austria, Jan. 23 26, 2003
- 5. Z, Agócs, Budapest, Hungary, Feb. 24 25, 2003
- 6. R. Ároch, Prague, Czech Republic, March 12 13, 2003
- 7. I. Baláž, Madrid, Spain, April 23 28, 2003
- 8. F. Draškovič, Zittau, Germany, June 18 21, 2003

- 9. I. Baláž, Munich, Germany, July 1 5, 2003
- 10. Z. Agócs, Prague, Czech Republic, Sept. 17 19, 2003
- 11. J. Brodniansky, Prague, Czech Republic, Sept. 17 19, 2003
- 12. V. Kalousek, Prague, Czech Republic, Sept. 17 19, 2003
- 13. Z. Agócs, Stuttgart, Germany, Oct. 3 8, 2003
- 14. J. Brodniansky, Stuttgart, Germany, Oct. 3 8, 2003
- 15. M. Chladná, Budapest, Hungary, Oct. 17, 2003
- 16. R. Ároch, Budapest, Hungary, Oct. 17, 2003
- 17. J. Brodniansky, Brno, Czech Republic, Nov. 21, 2003
- 18. Z, Agócs, Budapest, Hungary, Nov. 26, 2003
- 19. Z, Agócs, Hustopeče, Czech Republic, Dec. 4, 2003
- 20. I. Baláž, Hustopeče, Czech Republic, Dec. 4, 2003
- 21. A. Benková, Hustopeče, Czech Republic, Dec. 4, 2003

VI. 2. 3 Membership in International Associations

- 1. J. Brodniansky, IASS International Association for Space Structures
- 2. Z. Agócs, IASS International Association for Space Structures
- 3. I. Baláž, IABSE International Association for Bridges and Structural Engineering
- 4. I. Baláž, ASCE American Society for Civil Engineering

VII. THESES

VII.1 Graduate Theses

No.	Student's name	Title	Supervisor
1.	Andrej Bartoš	Steel Structure of a Grandstand	Z. Agócs
2.	Martin Oboňa	Ice-Skating Rink in Žiar nad Hronom	J. Brodniansky
3.	Robert Renczés	Steel Structure of a Multi-Purpose Stadium	Z. Agócs
4.	Miloš Slivanský	Ice-Skating Rink in Dubnica nad Váhom	J. Brodniansky
5.	Juraj Šušoliak	Hypernova Hypermarket in Liptovský Miluláš	J. Brodniansky
6.	Peter Juriga	Timber Roofing of a Swimming Pool	F. Draškovič
7.	Emília Lenárová	Design of a Timber Framework of an Apartment House in Bratislava	J. Čierna
8.	Ladislav Marištiak	Timber Roofing of a Hotel Restaurant	F. Draškovič
9.	Kristián Sógel	Multi-Purpose Timber Sport Stadium	F. Draškovič
10.	Pavol Kohutiar	Steel Structures of a Press Center at the ŠK Slovan Bratislava Stadium	V. Kalousek
11.	Peter Čičmanec	Sports Stadium in Prievidza	J. Sandanus
12.	Anton Rosík	Resistance of a Slender Web under Local Loading	I. Baláž
13.	Juraj Schubert	Steel Structures of Mobile Grandstand Roofings	V. Kalousek
14.	Martin Moravčík	Industrial Building of the EDSCHA Company in Veľký Meder	J. Brodniansky
15.	Ján Kopčák	Study of a Bridge Across the Danube in Bratislava for a Tram to Petržalka	J. Lapos

16.	Tomáš Csoma	Design of a Railway Bridge for a High-Speed	J. Lapos
		Track at Šenkvice for a Design Speed of v =	
		160 km/h	
17.	Pavol Kmeťo	Danube Bridging in the Štúrovo Region.	Z. Agócs
18.	Matúš Kusý	Danube Bridging in the Štúrovo Region.	Z. Agócs
19.	Ladislav Zelina	Problems of the Lateral-Torsional Buckling	I. Baláž
		of Continuous Girders and Crane Runway	
		Girders	

VIII. OTHER ACTIVITIES

VIII. 1 Special Lectures

- [1] Agócs, Z. Brodniansky, J.: Lessons Learned from the Diagnosis and Repair of the Structures of a Transit Gas Pipeline on Slovak Territory, 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003
- [2] Agócs, Z. Djubek, J. Maťaščík, M.: Is the Crack Spreading in the Danube Bridge Košická – Bratislava? 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003
- [3] Agócs, Z.: New Bridges Across the Danube on the Slovak and Hungarian Territories, 41st Conference of Steel Structure Fabricators, Hustopeče 2003, Czech Republic (in Slovak)
- [4] Agócs, Z.: Steel Structures in Slovakia, ECCS Meeting, Lucerne, Switzerland, September 2003
- [5] Brodniansky, J. Agócs, Z.: Selected Examples of the Reconstruction of Engineering Structures and Buildings, 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003 (in Slovak)
- [6] Chladná, M.: Fire Resistance of Steel and Concrete Composite Structures, NFATEC Seminar, Budapest, Hungary, Oct. 17, 2003
- [7] Kalousek, V.: Problems of Rail Connections and Their Interaction with Crane Runway Girders (in Slovak), 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003

VIII. 2 Commercial Activities for Firms and Institutions

- 1. Design of Aluminium Structures. Part 1-1: General Rules. General Rules and Rules for Buildings I. Baláž
- 2. Expert Survey of Cable 110kV/P354 Z. Agócs, et al.
- 3. Expert Survey of Cable 110kV Z. Agócs, et al.
- 4. Diagnostic Inspection of SPP DSTG Bridges, Phases I and II Z. Agócs, et al.
- 5. Diagnostic Analysis of the Life Expectancy of Two Bridges, Laborec and Nitra, Phases I and II Z. Agócs, et al.

- 6. Proposed Measurement System of Surface Mechanical Stresses in Pipeline Webs during the Repair of an Anchor Block on Side B of the SIKENICA Bridge Line I and Evaluation of the New Pipeline Anchorage, Phases I and II Z. Agócs, et al.
- 7. Proposed Measurement System of the Surface Mechanical Stresses in Pipeline Webs during the Repair of an Anchor Block on Side B of the NITRA Bridge Line I and Evaluation of the New Pipeline Anchorage, Phases I and II Z. Agócs, et al.
- 8. Assessment of the Maximum Lengths of Cuttings during the Repair of Corroded Defects on TS DN1400 Pipelines Z. Agócs, et al.
- 9. Repair of Corroded Defects in the Anchor Block at the NITRA Line 1 Bridging, DN1200 side B, Phases I and II Z. Agócs, et al.
- 10. Repair of Corroded Defects in the Anchor Block at the SIKENICA Line 1 Bridging, DN1200 side B, Phases I and II Z. Agócs, et al.
- 11. Proposed Strain Gauge System at K. Kosihy Line I to V, Phases I and II Z. Agócs, et al.
- 12. Košická Bridge Bratislava. Expert Consultations for the Steel Structure of the Main Bridge Structure and Static (ANSYS) and Dynamic Calculations Z. Agócs, et al.
- 13. Appraisal of Bids for the Fabrication of Steel Masts Z. Agócs, et al.
- 14. Expert Opinion on the Technical State of Steel Structures of the Grandstands of DAC Dunajská Streda Stadium Z. Agócs, et al.
- 15. Check of Static Calculations for the Fabrication of Masts J. Brodniansky et al.
- 16. Static Check of a Structure Above the Stage of the Slovak National Theatre Historical Building Z. Agócs, et al.
- Assessment of Allowable Surface Mechanical Stresses, Maximum Lengths of Cuttings and Deflections during the Manipulation or Repair of Damages of the DN 700 Pipeline - J. Brodniansky, et al.
- 18. Expert Inspection of the Steel Load-Bearing Elements and Glass Panels Used at the EUROPEUM BUSINESS CENTER Building Suché Mýto Bratislava Z. Agócs, et al.
- 19. Final Inspection of the Rectification and Diagnosis of the Blh Bridging J. Brodniansky, et al.
- 20. Diagnosis of a Steel Structure of a Telescopic Bridge Formwork Z. Agócs, et al.

IX. PUBLICATIONS

IX.1 Journals

- [1] AGÓCS, Z. BRODNIANSKY, J.: Steel Structures of a Transit Gas Pipeline on the Territory of Slovakia. Stavba, Vol. VI, Nos. 1-2, 2003, pp. 40-48 (in Slovak)
- [2] ÁROCH, R. LAPOS, J.: Behaviour of Steel Frames with Semi-Rigid Joints, Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 5-9
- [3] <u>ÁROCH, R. CHLADNÁ, M.</u> SERRANO, M. A. KIRBY, P. A.: A New and Flexible Approach to Training for Engineers in Construction, Academia, Vol. XIV, 3/2003, Ústav informácii a prognóz školstva, Bratislava, pp. 53-55 (in Slovak)
- [4] BAHMER, R. BATHON, L. <u>SANDANUS, J.</u>: Courage and Reality Composite Timber and Concrete Floor with a 9.84m Span. Materiály pro stavbu 8/2003, Bertelsmann Springer CZ, Prague, pp. 42-43 (in Slovak)

- [5] BALÁŽ, I.: Discussion on the Paper by Janics, F. Kolenič, M.: Buckling Resistance of Frames. Projekt a stavba No.4, 2003, pp. 9-12. Projekt a stavba Nos. 5-6, 2003, pp. 40-42 (in Slovak)
- [6] BALÁŽ, I.: History of Bridge Records. Eurostav No. 6/2003, pp.12-16 (in Slovak)
- [7] BALÁŽ, I.: Structural Eurocodes European Standards for the Design of Structures. Stavebnícka ročenka 2004, Bratislava, 2003, pp. 205-209 (in Slovak)
- [8] BRODNIANSKY, J.: Glass in Steel Structures. Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 2–8
- [9] BRODNIANSKY, J.: Department of Steel and Timber Structures, Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, p. 1
- [10] CHLADNÁ, M.: Means for the Fire Protection of a Steel Beam in a Worked Example. Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 26-30
- [11] DRAŠKOVIČ, F.: Behaviour of a Reinforced Glued Frame Node. Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 31–35
- [12] KALOUSEK, V.: What Should You Do with an Old Timber Framework Which is One Too Many? Renovujeme, staviame, zariaďujeme – všetko o podkroví 2/2003, Vol. III, Jaga Group (in Slovak)
- [13] KALOUSEK, V. ČIERNA, J.: Superstructures and Reconstruction of Residential Houses. Stavba Nos. 7-8, Vol. 6, 2003, pp. 36–37 (in Slovak)
- [14] SANDANUS, J. VOLETZ, R.: Parametric Study of the Factors Affecting the Resistance of a Composite Timber-Concrete Cross-Section, Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 16-18
- [15] TATARKO, P. LAPOS, J.: The Interaction Between the Main Girders and Bridge Deck in Steel Railway Bridges, Slovak Journal of Civil Engineering, SUT Bratislava, Vol. X, 2002/4, pp. 19–25

IX. 2 Books and Textbooks

[1] BALÁŽ, I.: High-Rise Constructions. In: Stavební ročenka 2003, Bratislava 2003, pp. 214-223 (in Slovak)

IX.3 Conferences

- [1] <u>AGÓCS, Z.</u> DJUBEK, J. MAŤAŠČÍK, M.: Is the Crack Spreading in the Košická – Bratislava Danube Bridge? In: Proceedings of the 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003, pp. 281-286
- [2] AGÓCS, Z.: New Bridges Across the Danube on the Slovak and Hungarian Territories. In: Proceedings of the 41st Conference of Steel Structure Fabricators, Hustopeče 2003, Czech Republic, pp. 7–11 (in Slovak)
- [3] AGÓCS, Z. BRODNIANSKY, J.: Lessons Learned from the Diagnosis and Repair of the Structures of a Transit Gas Pipeline on Slovak Territory. In: Proceedings of the 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003, pp. 263-268

- [4] AGÓCS, Z. BRODNIANSKY, J. ERDEI, M. MALIŠ, P. VOLETZ, R.: Renewal of the Steel Structures of Grandstands. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, L'ubovnianske kúpele, Oct. 15 – 17, 2003, pp. 5-10 (in Slovak)
- [5] <u>ÁROCH, R.</u> <u>CHLADNÁ, M.</u> SERRANO, M. A. KIRBY, P. A.: A New and Flexible Approach to Training for Engineers in Construction. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, Ľubovnianske kúpele, Oct. 15 – 17, 2003, pp. 19-24 (in Slovak)
- [6] BAHMER, R. BATHON, L. <u>SANDANUS, J.</u>: News in the Area of Composite Timber and Concrete Floors. In: Proceedings of the 4th Conference (with international participation) on Timber – Material of the 21st Century in Architecture and Construction, Smolenice, Sept. 10 – 11, 2003, pp. 75-78 (in Slovak)
- [7] BAHMER, R. BATHON, L. <u>SANDANUS, J.</u>: Present Trends in the Area of Composite Timber and Concrete Structures. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, L'ubovnianske kúpele, Oct. 15 – 17, 2003, pp. 25-29 (in Slovak)
- [8] BALÁŽ, I.: Buckling Lengths of Frame Columns in STN 73 1401. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, Ľubovnianske kúpele, Oct. 15 – 17, 2003, pp. 31-38 (in Slovak)
- [9] BALÁŽ, I.: Structural Eurocodes Their Status in August 2003. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, L'ubovnianske kúpele, Oct. 15 – 17, 2003, pp. 39-44 (in Slovak)
- [10] <u>BALÁŽ, I.</u> HÖGLUND, T.: Torsion Constant I_t of Aluminium Profiles with Bulbs and Fillets. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, Ľubovnianske kúpele, Oct. 15 – 17, 2003, pp. 45-52
- [11] <u>BALÁŽ, I.</u> KOLEKOVÁ, Y.: Distribution of Internal Forces and Moments and Influence Lines of Beams under Torsion and Bending with Consideration of the 2d Order Theory. In: Proceedings of the 2d International Conference on New Trends in Statics and Dynamics of Buildings, Bratislava, Oct. 16 – 17, 2003
- [12] <u>BALÁŽ, I.</u> HÖGLUND, T. KOLEKOVÁ, Y.: Torsion Constant I_t of Aluminium and Steel Profiles with Non-Parallel Flanges and Fillets. In: Proceedings of the 5th Conference (with international participation) on Static-Constructional and Building-Physics Problems of Building Structures, Tatranská Lomnica – Vysoké Tatry, Nov. 26 – 28, 2003, pp. 163-172
- [13] BENEŠ, M. WALD, F. HŘEHÍKOVÁ, P. <u>CHLADNÁ, M.</u> PAŠEK, J.: Fire Test of an Eight-Storey Building in Cardington. In: Proceedings of the 20th Czech and Slovak Conference (with international participation) on Steel Structures and Bridges 2003, Prague, Sept. 17 – 20, 2003, pp. 209-214 (in Czech)
- [14] BENKOVÁ, A.: Anti-Corrosion Protection of Load-Bearing Steel Structures. In: Proceedings of the 29th Meeting of Experts on Steel Structures: Steel and Timber Structures in the Present and Future, Lubovnianske kúpele, Oct. 15 – 17, 2003, pp. 53-56 (in Slovak)
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