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AAB Vedecké monografie vydané v domácich vydavateľstvách

AAB01 MLKVIK, Marek - OLŠIAK, Róbert - KNÍŽAT, Branislav. *Rozrušovanie pevných materiálov pomocou kavitácie*. 1. vyd. Bratislava Nakladateľstvo STU 2015. 99 s. 62 obr. ISBN 978-80-227-4323-5.

ADF Vedecké práce v ostatných domácich časopisoch

ADF01 OLŠIAK, Róbert - KNÍŽAT, Branislav - MLKVIK, Marek. Investigation of high speed cavitation flows. In *Komunikácie. Communications*. Vol. 14, Iss. 4A (2012), s.58-62. ISSN 1335-4205 (2012: 0.195 - SJR, Q3 - SJR Best Q). V databáze: SCOPUS.

Ohlasy:

1. [1] HOLUBCIK, Michal - JANDACKA, Jozef - PALACKA, Matej - VICIAN, Peter. Additives Application to Wheat Straw to Increasing the Ash Fusion Temperature. In *Proceedings of the 35th Meeting of Departments of Fluid Mechanics and Thermomechanics 2016 (35MDFMT)*, 2016, vol. 1768, no., pp. ISSN 0094-243X., Registrované v: WOS

ADM Vedecké práce v zahraničných časopisoch registrovaných v databázach Web of Science alebo SCOPUS

ADM01 MLKVIK, Marek - STÄHLE, Philipp - SCHUCHMANN, Heike - GAUKEL, Volker - JEDELSKÝ, Jan - JÍCHA, Miroslav. Twin-fluid atomization of viscous liquids : The effect of atomizer construction on breakup process spray stability and droplet size. In *International Journal of Multiphase Flow*. Vol. 77, (2015), s. 19-31. ISSN 0301-9322 (2015: 2.250 - IF, Q1 - JCR Best Q, 1.275 - SJR, Q1 - SJR Best Q). V databáze: SCOPUS.

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1. [1] GARCÍA, J. A. - SANTOLAYA, J. L. - LOZANO, A. - BARRERAS, F. - CALVO, E. Experimental characterization of the viscous liquid sprays generated by a Venturi-vortex atomizer. In *Chemical Engineering and Processing: Process Intensification*, 2015-10-05, pp. ISSN 02552701., Registrované v: SCOPUS

2. [1] SI, Chaorun - TANG, Xingling - ZHANG, Xianjie - WANG, Junbiao - WU, Weichao. Characteristics of 7055A1 alloy powders manufactured by gas-solid two-phase atomization: A comparison with gas atomization process. In *MATERIALS & DESIGN*, 2017, vol. 118, no., pp. 66-74. ISSN 0264-1275., Registrované v: WOS

3. [1] GARCIA, J. A. - LOZANO, A. - ALCONCHEL, J. - CALVO, E. - BARRERAS, F. - SANTOLAYA, J. L. Atomization of glycerin with a twin-fluid

- swirl nozzle. In INTERNATIONAL JOURNAL OF MULTIPHASE FLOW, 2017, vol. 92, no., pp. 150-160. ISSN 0301-9322., Registrované v: WOS
4. [1] OCHOWIAK, Marek - WLODARCZAK, Sylwia - MATUSZAK, Magdalena - JESIONOWSKI, Teofil. Formation of oil/water emulsions inside the pressure-swirl atomizer. In CHEMICAL ENGINEERING AND PROCESSING, 2017, vol. 116, no., pp. 105-113. ISSN 0255-2701., Registrované v: WOS
5. [3] LEFEBVRE, Arthur H - MCDONELL, Vincent G. Atomization and sprays. 2.nd. London CRC press 2017. ISBN 9781498736251.
6. [1] CHEN, Bo - GAO, Dianrong - YANG, Chao - WU, Shaofeng - WANG, Mingzhe. Atomizing Characteristics of Twin-fluid Impact Nozzle Based on PDPA. In Nongye Jixie Xuebao/Transactions of the Chinese Society for Agricultural Machinery, 2017-04-25, 48, 4, pp. 362-369. ISSN 10001298., Registrované v: SCOPUS
7. [1] WITTNER, Marc O. - KARBSTEIN, Heike P. - GAUKEL, Volker. Spray performance and steadiness of an effervescent atomizer and an air-core-liquid-ring atomizer for application in spray drying processes of highly concentrated feeds. In Chemical Engineering and Processing Process Intensification, 2018-06-01, 128, pp. 96-102. ISSN 02552701., Registrované v: SCOPUS
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9. [1] BUFFI, Marco - SELJAK, Tine - CAPPELLETTI, Alessandro - BETTUCCI, Lorenzo - VALERA-MEDINA, Agustin - KATRAŠNIK, Tomaž - CHIARAMONTI, David. Performance and emissions of liquefied wood as fuel for a small scale gas turbine. In Applied Energy, 2018-11-15, 230, pp. 1193-1204. ISSN 03062619., Registrované v: SCOPUS
10. [1] TANG, Yan - SI, Shengnan - ZHONG, Xiaoxing. Experimental investigation of the performance of an effective self-suctioning water mist generator for controlling underground coal fires. In Process Safety and Environmental Protection, 2019-06-01, 126, pp. 98-105. ISSN 09575820., Registrované v: SCOPUS
11. [1] ALEKSEENKO, S. V. - ANUFRIEV, I. S. - DEKTEREV, A. A. - KUZNETSOV, V. A. - MALTSEV, L. I. - MINAKOV, A. V. - CHERNETSKIY, M. Yu - SHADRIN, E. Yu - SHARYPOV, O. V. Experimental and numerical investigation of aerodynamics of a pneumatic nozzle for suspension fuel. In International Journal of Heat and Fluid Flow, 2019-06-01, 77, pp. 288-298. ISSN 0142727X., Registrované v: SCOPUS
12. [1] HASHIGUCHI, K. - YAMANE, F. - FUJII, H. - SATO, K. - NISHIDA, K. DEVELOPMENT OF INTERNAL-MIXING TWIN-FLUID ATOMIZER WITH MULTIPLE EXIT PORTS FOR HEAVY OIL-FIRED BOILERS. In ATOMIZATION AND SPRAYS, 2019, vol. 29, no. 2, pp. 161-176. ISSN 1044-5110., Registrované v: WOS
13. [1] NAZEER, Y. H. - EHMANN, M. - KOUKOUVINIS, P. - GAVAISES, M. THE INFLUENCE OF GEOMETRICAL AND OPERATIONAL PARAMETERS ON INTERNAL FLOW CHARACTERISTICS OF INTERNALLY MIXING TWIN-FLUID Y-JET ATOMIZERS. In ATOMIZATION AND SPRAYS, 2019, vol. 29, no. 5, pp. 403-428. ISSN 1044-5110., Registrované v: WOS

14. [1] XIE, Wei - HU, Zongjie - ZHAO, Wenbo - ZHAI, Jiachen - WANG, Yufeng - LI, Liguang - WU, Zhijun. EXPERIMENTAL AND NUMERICAL STUDIES ON SPRAY CHARACTERISTICS OF AN INTERNAL OSCILLATING NOZZLE. In ATOMIZATION AND SPRAYS, 2019, vol. 29, no. 1, pp. 19-37. ISSN 1044-5110., Registrované v: WOS
15. [1] ARSHAD, Aizam Shahroni Mohd - NADA, Yuzuru - KIDOGUCHI, Yoshiyuki - NAKAMATSU, Shota - ONODA, Katsuki. Experimental investigation of nitrogen oxide emissions from emulsified fuel combustion incorporating a rapid internal mixing injector by using temperature-time scaling. In FUEL, 2019, vol. 257, no., pp. ISSN 0016-2361., Registrované v: WOS
16. [1] WITTNER, Marc O. - BALLESTEROS, Miguel A. - LINK, Frederik J. - KARBSTEIN, Heike P. - GAUKEL, Volker. Air-Core-Liquid-Ring (ACLR) Atomization Part II: Influence of Process Parameters on the Stability of Internal Liquid Film Thickness and Resulting Spray Droplet Sizes. In PROCESSES, 2019, vol. 7, no. 9, pp., Registrované v: WOS
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19. [1] WITTNER, Marc O. - KARBSTEIN, Heike P. - GAUKEL, Volker. Energy efficient spray drying by increased feed dry matter content: investigations on the applicability of Air-Core-Liquid-Ring atomization on pilot scale. In DRYING TECHNOLOGY, 2019, vol., no., pp. ISSN 0737-3937., Registrované v: WOS
20. [1] ALAJMI, Amer Eid Salem Eid Thafnan - ADAM, Nor Mariah - HAIRUDDIN, Abdul Aziz - ABDULLAH, Luqman Chuah. Fuel atomization in gas turbines: A review of novel technology. In INTERNATIONAL JOURNAL OF ENERGY RESEARCH, 2019, vol. 43, no. 8, pp. 3166-3181. ISSN 0363-907X., Registrované v: WOS
21. [1] WU, Zhao Wei - SHI, Zhe Hang - ZHAO, Hui - YAO, Feng - LIU, Hai Feng - LI, Wei Feng - XU, Jian Liang. Effects of bubbles in the liquid jet on the air-blast atomization. In Fuel, 2020-04-15, 266, pp. ISSN 00162361., Registrované v: SCOPUS
22. [1] XUE, Shuaijie - LIU, Hongjun - CHEN, Pengfei - XIA, Yizhi. Test on spray stability of swirl injector with gas injection. In Hangkong Xuebao/Acta Aeronautica et Astronautica Sinica, 2019-07-25, 40, 7, pp. ISSN 10006893., Registrované v: SCOPUS
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25. [1] NAJAFI, Seyed Mohammad Ali - MIKANI, Pouria - GHASSEMI, Hojat. Microscopic and macroscopic atomization characteristics of a pressure-swirl atomizer, injecting a viscous fuel oil. In *Chinese Journal of Chemical Engineering*, 2019-01-01, pp. ISSN 10049541., Registrované v: SCOPUS

ADM02 OLŠIAK, Róbert - MLKVIK, Marek - RIDZOŇ, František - SLOVÁK, Pavol. Two stage ejector as a pre-stage of the water ring vacuum pump. In *Mechanics & Industry*. Vol. 20, iss. 7 (2019), s. 1-11, art.no. 703. ISSN 2257-7777 (2018: 0.747 - IF, Q4 - JCR Best Q, 0.314 - SJR, Q2 - SJR Best Q). V databáze: SCOPUS: 2-s2.0-85075829666.

ADM03 VILÁGI, František - KNÍŽAT, Branislav - MLKVIK, Marek - URBAN, František - OLŠIAK, Róbert - MLYNÁR, Peter. Mathematical model of steady flow in a helium loop. In *Mechanics & Industry*. Vol. 20, iss. 7 (2019), s. 1-8, art.no. 704. ISSN 2257-7777 (2018: 0.747 - IF, Q4 - JCR Best Q, 0.314 - SJR, Q2 - SJR Best Q).

ADN Vedecké práce v domácich časopisoch registrovaných v databázach Web of Science alebo SCOPUS

ADN01 MLKVIK, Marek - OLŠIAK, Róbert - SMOLÁR, Marek. Comparison of the viscous liquids spraying by the OIG and the oil configurations of an effervescent atomizer at low inlet pressures. In *Strojnícky časopis = Journal of Mechanical engineering*. Vol. 66, no. 1 (2016), s. 53-64. ISSN 0039-2472 (2016).

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1. [2] KAPILAN, Natesan - JULLYA, Naik. Studies on improvement of performance of compression ignition engine fuelled with mixture of honge biodiesel and tire pyrolysis oil. In *Strojnický Casopis*, 2018-04-01, 68, 1, pp. 15-24. ISSN 00392472., Registrované v: SCOPUS

2. [1] GEBAUER, Marek - BRZOBOHATÝ, Tomáš - BLEJCHAR, Tomáš - KARÁSEK, Tomáš. Numerical Simulation of Heat Treatment Process of Aluminium Profiles. In *Strojnický Casopis*, 2019-11-01, 69, 3, pp. 43-50. ISSN 00392472., Registrované v: SCOPUS

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AEC01 OLŠIAK, Róbert - MLKVIK, Marek. Experimental research cavitation in channels of very small scales. In *Sborník vědeckých prací Vysoké školy báňské - Technické univerzity Ostrava*. Roč. 56, č. 3 (2010), s.131-138. ISSN 1210-0471.

AED Vedecké práce v domácich recenzovaných vedeckých zborníkoch, monografiách

AED01 HLBOČAN, Peter - VARCHOLA, Michal - KNÍŽAT, Branislav - MLKVIK, Marek - OLŠIAK, Róbert. Numerical simulation of flow in the chamber of the water-argon plasma generator. In *Scientific Proceedings Faculty of Mechanical Engineering STU Bratislava*. s.79-84. ISSN 1338-1954.

AED02 KNÍŽAT, Branislav - HLBOČAN, Peter - MLKVIK, Marek. CFD simulation of a natural circulation helium loop. In *Scientific Proceedings Faculty of Mechanical Engineering STU Bratislava*. Vol. 23, iss. 1 (2015), s. 57-62. ISSN 1338-1954.

AED03 MLKVIK, Marek - HLBOČAN, Peter - KNÍŽAT, Branislav. Numerical model of the multiphase vortex flow in the presence of a powerful volumetric heat source. In *Scientific Proceedings Faculty of Mechanical Engineering STU Bratislava*. s.127-132. ISSN 1338-1954.

AFC Publikované príspevky na zahraničných vedeckých konferenciách

AFC01 KNÍŽAT, Branislav - OLŠIAK, Róbert - MLKVIK, Marek. Experiences with a visualisation of cavitating flows behind a microorifice. In *31. setkání kateder mechaniky tekutin a termomechaniky : sborník příspěvků z mezinárodní konference. Mikulov /ČR/, 26.-28.6. 2012*. Brno : Vysoké učení technické v Brně, 2012, s.99-102. ISBN 978-80-214-4529-1.

AFC02 KNÍŽAT, Branislav - OLŠIAK, Róbert - MLKVIK, Marek. Experimental research of a microjet cavitation. In *Experimental Fluid Mechanics 2011 : Proceedings of the international conference. Vol.2 . - Jičín/ČR/, 22.-25.11. 2011*. Liberec : Technical University of Liberec, 2011, s.257-262. ISBN 978-80-7372-784-0.

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AFC03 KNÍŽAT, Branislav - MLKVIK, Marek - OLŠIAK, Róbert. Disintegration of materials by cavitating microjets. In *EPJ Web of Conferences [elektronický zdroj] : EFM12 - Experimental Fluid Mechanics 2012. Hradec Králové, Czech Republic, November 20-23, 2012*. Vol. 45 (2013), s.online, Art.num.01050. ISSN 978-80-7372-912-7 (2013: 0.166 - SJR).

AFC04 KNÍŽAT, Branislav - OLŠIAK, Róbert - MLKVIK, Marek. Observation of development of cavitation damage. In *EPJ Web of Conferences [elektronický zdroj] : EFM'13. Experimental Fluid Mechanics 2013. Kutná Hora, Czech Republic, November 19-22, 2013*. Vol. 67, (2014), s. art.no.02053. ISSN 2100-014X (2014: 0.190 - SJR).

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1. [4] JABLONSKÁ, Jana - KOZUBKOVÁ, Milada - ZAVADILOVÁ, Barbora - ZAVADIL, Lukáš. Mathematical investigation of the cavitation phenomenon in the nozzle with partially surface wetting. In: *Scientific proceedings 2015, Vol. 23, 2015, pp. 25-30*

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Vapor and Air Cavitation. In APPLICATION OF EXPERIMENTAL AND NUMERICAL METHODS IN FLUID MECHANICS AND ENERGY 2016: XX ANNIVERSARY OF INTERNATIONAL SCIENTIFIC CONFERENCE, 2016, vol. 1745, no., pp. ISSN 0094-243X., Registrované v: WOS

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5. [4] JABLONSKÁ, Jana - KOZUBKOVÁ, Milada. Mathematical modelling of vapour and air cavitation. In 35. stretnutie Katedier mechaniky tekutín a termomechaniky [elektronický zdroj] : zborník príspevkov z medzinárodnej vedeckej konferencie. Šamorín, SR, 20.-23.6. 2016. 1. vyd. Bratislava : STU Strojnícka fakulta, 2016, S. 89-94. ISBN 978-80-227-4525-3.

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AFC05 KNÍŽAT, Branislav - VILÁGI, František - URBAN, František - OLŠIAK, Róbert - MLKVIK, Marek - RIDZONĚ, František. A model of flow in a helium loop. In AIP Conference Proceedings. Vol. 1889, (2017), s. 020020-1 - 020020-6. ISSN 0094-243X (2017: 0.165 - SJR). V databáze: SCOPUS.

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AFC06 MLKVIK, Marek. Vizualizácia prúdenia s fázovou zmenou v kanáloch veľmi malých rozmerov. In 29. Setkání kateder mechaniky tekutin a termomechaniky : Rožnov pod Radhoštěm, 23.-25.6. 2010. Ostrava : Vysoká škola báňská - Technická univerzita v Ostravě, 2010, s.197-200. ISBN 978-80-248-2244-0.

AFC07 MLKVIK, Marek - OLŠIAK, Róbert - KNÍŽAT, Branislav. Visualization of the cavitating jet using flashlamp for illumination. In *Experimental Fluid Mechanics 2011 : Proceedings of the international conference. Vol.2 . - Jičín/ČR/, 22.-25.11. 2011.* Liberec : Technical University of Liberec, 2011, s.303-308. ISBN 978-80-7372-784-0.

Ohlasy:

1. [3] JANDAČKA, Jozef - ET AL. Investigation of particulate matter

velocity. In Conference proceedings of the 36th Meeting of Departments of Fluid Mechanics and Thermodynamics [elektronický zdroj] : Pilsen, Czech Republic, 13. - 15.6. 2017. 1. vyd. Praha : ČVUT Praha, 2017, S. ISBN 978-0-7354-1572-0.

2. [1] KANTOVÁ, Nikola - JANDAČKA, Jozef - HOLUBČÍK, Michal - CAJA, Alexander. Downfall and take-off particulate matter velocity. In AIP Conference Proceedings, 2017-09-25, 1889, pp. ISSN 0094243X., Registrované v: SCOPUS, WOS

- AFC08 MLKVIK, Marek. Zariadenie určené na skúšky tesniacich vlastností nových uhlíkových materiálov. In *Quaere 2011 : Recenzovaný sborník příspěvků interdisciplinární mezinárodní vědecké konference dokotrandů. Hradec Králové, ČR, 25 - 29. dubna 2011.* Hradec Králové : Magnanimitas, 2011, s.781-788. ISBN 978-80-904877-3-4.
- AFC09 MLKVIK, Marek - ZAREMBA, Matouš - STÄHLE, Philipp - SCHUCHMANN, Heike P. - GAUKEL, Volker - JEDELSKÝ, Jan. Influence of working parameters and primary breakup conditions on the quality of twin-fluid atomizers spray quality. In *Applied Mechanics and Materials : selected, peer reviewed papers from the Engineering Mechanics 2015, Svratka, ČR, 11. - 14. 5. 2015.* Vol. 821, (2016), s. 91-96. ISSN 1660-9336 (2016: 0.116 - SJR, Q4 - SJR Best Q).
- AFC10 MLKVIK, Marek - ZAREMBA, Matouš - JEDELSKÝ, Jan - JÍCHA, Miroslav. Comparison of Y-jet and OIL effervescent atomizers based on internal and external two-phase flow characteristics. In *EPJ Web of Conferences [elektronický zdroj]*. Vol. 114, (2016), s. 1-9, art. no.02078, online. ISSN 2100-014X (2016: 0.200 - SJR). V databáze: SCOPUS ; WOS ; DOI: 10.1051/epjconf/201611402078.
- AFC11 MLKVIK, Marek - OLŠIAK, Róbert - KNÍŽAT, Branislav - JEDELSKÝ, J. Character of the cavitation erosion on selected metallic materials. In *EPJ Web of Conferences [elektronický zdroj] : EFM'13. Experimental Fluid Mechanics 2013. Kutná Hora, Czech Republic, November 19-22, 2013.* Vol. 67, (2014), s. art. no. 02076. ISSN 2100-014X (2014: 0.190 - SJR).
- Ohlasy:
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- AFC12 MLKVIK, Marek - STÄHLE, Philipp - GAUKEL, Volker - ZAREMBA, Matouš - JEDELSKÝ, J. - JÍCHA, Miroslav. Performance of Twin-Fluid Atomizers for Atomization of Viscous Solutions. In *EPJ Web of Conferences [elektronický zdroj]*. Vol. 92, (2015), s.art. no. 02052. ISSN 2100-014X (2015: 0.201 - SJR).
- AFC13 OLŠIAK, Róbert - MLKVIK, Marek - KNÍŽAT, Branislav. Visualization of flow in nuclear reactor fuel cell model. In *31. setkání kateder mechaniky tekutin a termomechaniky : sborník příspěvků z mezinárodní konference. Mikulov /ČR/, 26.-28.6. 2012.* Brno : Vysoké učení technické v Brně, 2012, s.161-164. ISBN 978-80-214-4529-1.

- AFC14 OLŠIAK, Róbert - KNÍŽAT, Branislav - MLKVIK, Marek. Visualization of cavitating microjets. In *Experimental Fluid Mechanics 2011 : Proceedings of the international conference. Vol.2 . - Jičín/ČR, 22.-25.11. 2011*. Liberec : Technical University of Liberec, 2011, s.331-336. ISBN 978-80-7372-784-0.
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AFH Abstrakty príspevkov z domácich konferencií

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AGI Správy o vyriešených vedeckovýskumných úlohách

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AGJ Autorské osvedčenia, patenty, objavy

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BEF Odborné práce v domácich zborníkoch (konferenčných aj nekonferenčných)

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