

## LISTA LUCRĂRILOR PUBLICATE

### 2019

- [1] **B. Chirita**, C. Grigoras, C. Tampu, E. Herghelegiu – **Analysis of cutting forces and surface quality during face milling of a magnesium alloy**, IOP Conf. Series: Materials Science and Engineering 591, 012006, 2019, doi:10.1088/1757-899X/591/1/012006 (ISI Proceedings)
- [2] E Herghelegiu, MC Radu, C Schnakovszky, **BA Chirita**, NC Tampu – **Study on the influence of the working regime on the quality of cut in the case waterjet processing of S 235 steel**, IOP Conf. Series: Materials Science and Engineering 591, 012019, 2019, doi:10.1088/1757-899X/591/1/012019 (ISI Proceedings)
- [3] C. Grigoraș, **B. Chiriță**, G. Brabie - **Additive manufacturing of a stretch forming die using 3D printing technology**, IOP Conf. Series: Materials Science and Engineering 564, 012017, 2019, doi: 10.1088/1757-899X/564/1/012017 (BDI)
- [4] C. Grigoras, **B. Chirita**, G. Brabie, C. Ciofu - **Experimental analysis of AZ31B magnesium alloy sheet failure using punch stretching**, IOP Conf. Series: Materials Science and Engineering 682, 012009, 2019, doi: 10.1088/1757-899X/682/1/012009 (BDI)
- [5] C. Ciofu, **B. Chirita**, R. Lupu, C. Grigoraș, C. Radu, G. Brabie – **Tendencies in forming sheet metal parts using incremental forming advanced technologies**, Journal of Engineering Studies and Research, vol. 25, no. 3, pp. 15-21, 2019, ISSN 2068-7559 (BDI)

### 2018

- [6] C. Ciofu, C. Carausu, S.N. Mazurchevici, V. Paunoiu, **B. Chirita** - **Equipment for Testing the Worm and Worm Gear Assembly From "Liquid Wood" and Comparative MEF Analyses**, International Journal of Modern Manufacturing Technologies, vol. X, No. 2, pp. 45-50, 2018, ISSN 2067–3604 (BDI)
- [7] C Schnakovszky, E Herghelegiu, MC Radu, **BA Chirita**, NC Tampu - **Optimization of working parameters in case of aluminium alloy abrasive water jet cutting (AWJC)**, IOP Conference Series: Materials Science and Engineering, vol. 400, iss. 2, 022052, 2018, doi: 10.1088/1757-899X/400/2/022052 (ISI Proceedings)

### 2017

- [8] R. B. Soares, A. M. P. de Jesus, R. J. L. Neto, **B. Chirita**, P. A. R. Rosa, A. Reis - **Comparison Between Cemented Carbide and PCD Tools on Machinability of a High Silicon Aluminum Alloy**, Journal of Materials Engineering and Performance, Volume 26, Issue 9, pp 4638–4657, September 2017, DOI: 10.1007/s11665-017-2870-9, ISSN: 1059-9495 (revista cotata ISI)
- [9] Abdelkrim M, Brabie G, Belloufi A, Catalin T, **Chirita B** - **Experimental Investigations to evaluate the effects of cutting parameters on cutting temperature and residual stresses during milling process of the AISI 1045**, IOP Conference Series: Materials Science and Engineering, vol. 227, iss. 1, 012001, 2017, doi: 10.1088/1757-899X/227/1/012001 (ISI Proceedings)
- [10] A.D. Borș, G. Brabie, **B. Chirita** - **Experimental research concerning the bending of AZ31 magnesium alloy sheets**, Proceedings in Manufacturing Systems, vol. 12, iss. 3, pp. 95-100, septembrie 2017, ISSN 2067-9238 (BDI)

### 2016

- [11] **B Chirita**, NC Tampu, G Brabie, MC Radu - **Experimental investigation on the effects of cooling system on surface quality in high speed milling of an aluminium alloy**, IOP Conference Series: Materials Science and Engineering, vol. 145, 022006, 2016, doi:10.1088/1757-899X/145/2/022006 (ISI Proceedings)
- [12] CC Grigoraș, G Brabie, **B Chirita** - **The influence of milling-burnishing successive and simultaneous processes on the surface roughness**, IOP Conference Series: Materials Science and Engineering, vol. 145, 022010, 2016, doi:10.1088/1757-899X/145/2/022010 (ISI Proceedings)
- [13] CC Grigoraș, G Brabie, **B Chirita** - **The influence of milling-burnishing successive and simultaneous processes on the material hardness**, IOP Conference Series: Materials Science and Engineering, vol. 145, 022009, 2016, doi:10.1088/1757-899X/145/2/022009 (ISI Proceedings)
- [14] S Petrila, G Brabie, **B Chirita** - **Determination of the optimal time and cost of manufacturing flow of an assembly using the Taguchi method**, IOP Conference Series: Materials Science and Engineering, vol. 145, 062009, 2016, doi:10.1088/1757-899X/145/2/062009 (ISI Proceedings)
- [15] S Petrila, G Brabie, **B Chirita** - **The use of Tecnomatix software to simulate the manufacturing flows**

- in an industrial enterprise producing hydrostatic components**, IOP Conference Series: Materials Science and Engineering, vol. 145, 042032, 2016, doi:10.1088/1757-899X/145/2/042032 (ISI Proceedings)
- [16] Iurea P., Cărăușu C-tin, Tâmpu C., **Chirita B.**, Hușanu V. - **Residual stresses generated at roughing grinding and hard turning of raceways of bearing rings**, International Journal of Modern Manufacturing Technologies, vol. VIII, nr. 2, pp. 19-24, 2016, ISSN 2067-3604 (BDI)

## 2015

- [17] **Bogdan Chirita**, Gheorghe Mustea, Gheorghe Brabie - **A statistical analysis applied for optimal cooling system selection and for a superior surface quality of machined magnesium alloy parts**, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, vol. 229, iss. 3, pp. 392-408, 2015, DOI: 10.1177/0954405414530895, ISSN 0954-4054 (revista cotata ISI)
- [18] G. Brabie, **B. Chirita**, A. Albut - **Minimization of sheet thickness variation and other defects of mini drawn parts using a blank holder plate made from concentric rings**, Precision Engineering, vol. 42, October 2015, pp. 311-320, 2015, doi:10.1016/j.precisioneng.2015.03.011, ISSN 0141-6359 (revistă cotată ISI)
- [19] **Chirita Bogdan Alexandru**, Tâmpu Nicolae Cătălin – **The impact of cooling system on surface quality in milling**, Applied Mechanics and Materials, vol. 809-810, pp. 135-140, 2015, doi: 10.4028/www.scientific.net/AMM.809-810.135, ISSN: 1662-7482 (BDI)
- [20] Tâmpu Nicolae Cătălin, Brabie Gheorghe, **Chirita Bogdan Alexandru** - **Influence of inserts number on surface quality in milling**, Applied Mechanics and Materials, vol. 809-810, pp. 177-182, 2015, doi:10.4028/www.scientific.net/AMM.809-810.177, ISSN: 1662-7482 (BDI)
- [21] Brabie Gheorghe, **Chirita Bogdan Alexandru** - **Minimization of sheet thickness variation and other defects of the mini drawn parts using the genetic algorithms method**, Applied Mechanics and Materials, vol. 809-810, pp. 241-246, 2015, doi:10.4028/www.scientific.net/AMM.809-810.241, ISSN: 1662-7482 (BDI)
- [22] Brabie Gheorghe, **Chirita Bogdan Alexandru** - **Analysis of the sheet wrinkling variation and causes in the case of mini drawn parts**, Applied Mechanics and Materials, vol. 809-810, pp. 247-252, 2015, doi:10.4028/www.scientific.net/AMM.809-810.247, ISSN: 1662-7482 (BDI)
- [23] Tâmpu NC, Brabie G, **Chirita BA**, Herghelegiu E, Radu MC - **Influence of the cooling liquid on surface quality characteristics in milling**, IOP Conference Series: Materials Science and Engineering, vol. 95, 2015, doi:10.1088/1757-899X/95/1/012024, ISSN: 1757-8981 (ISI Proceedings)

## 2014

- [24] G. Brabie, E.M. Costache, **B. Chirita** - **Reduction of the sheet thickness variation and its negative effects on the accuracy of mini drawn parts using different geometries of tool components**, Precision Engineering, vol. 38, iss. 4, pp. 828-838, 2014, doi: 10.1016/j.precisioneng.2014.04.011, ISSN 0141-6359 (revista cotata ISI)
- [25] N. C. Tâmpu, **B. Chiriță**, E. Herghelegiu, G. Brabie - **Influence of the cutting regime on the residual stresses generated by carbon steel milling**, Indian Journal of Engineering Materials Sciences, vol. 21, iss. 3, pp. 283-288, 2014, ISSN 0971-4588 (revista cotata ISI)
- [26] **Chirita, Bogdan-Alexandru**, Tâmpu, Nicolae Catalin - **Analysis of Surface Roughness for High Speed Milling of a Magnesium Alloy Part**, Advanced Materials Research, vol. 837, pp. 33-38, 2014, doi: 10.4028/www.scientific.net/AMR.837.33, ISSN: 1662-8985 (ISI Proceedings)
- [27] BRABIE Gheorghe, **CHIRITA Bogdan**, COSTACHE Elena, TEACA Stefan - **Influence of the tool clearances on the dimensional accuracy of mini drawn parts**, Advanced Materials Research, vol. 1036, pp. 309-313, 2014, doi: 10.4028/www.scientific.net/AMR.1036.309, ISSN:1662-8985 (BDI)
- [28] BRABIE Gheorghe, **CHIRITA Bogdan**, COSTACHE Elena, TEACA Stefan - **Determination of the Optimal Blank Diameter in the Case of Mini Deep Drawing by Applying the Fuzzy Logic and Taguchi Methods**, Advanced Materials Research, vol. 1036, pp. 304-308, 2014, doi: 10.4028/www.scientific.net/AMR.1036.304, ISSN:1662-8985 (BDI)
- [29] **CHIRITA Bogdan Alexandru**, TÂMPU Nicolae Catalin - **Study of Residual Stresses Distribution Generated from Milling of Magnesium Alloy Parts**, Applied Mechanics and Materials, vol. 657, pp. 18-22, 2014, doi: 10.4028/www.scientific.net/AMM.657.18, ISSN 1660-9336 (ISI Proceedings)
- [30] BRABIE Gheorghe, MUSTEA Gheorghe, **CHIRITA Bogdan** – **Residual Stresses Generated by the Combined Burnishing – Cutting Process in the Worked Parts**, Applied Mechanics and Materials, vol. 657, pp. 103-107, 2014, doi: 10.4028/www.scientific.net/AMM.657.103, ISSN 1660-9336 (ISI Proceedings)
- [31] **CHIRITA Bogdan**, BRABIE Gheorghe, MUSTEA Gheorghe - **Determination of Optimal Working Parameters of the Combined Burnishing – Turning Process by Applying the Method of Response Surfaces**, Applied Mechanics and Materials, vol. 657, pp. 98-102, 2014,

doi:10.4028/www.scientific.net/AMM.657.98, ISSN 1660-9336 (ISI Proceedings)

- [32] **Chirita Bogdan**, Brabie Gheorghe – **Prelucrarea metalelor: operații și scule de prelucrare**, Ed. Alma Mater, Bacău, 204 pg., ISBN 978-606-527-419-8
- [33] Brabie Gheorghe, **Chirita Bogdan** – **Mașini unelte: construcție și exploatare**, Ed. Alma Mater, Bacău, 222 pg., ISBN 978-606-527-420-4

## 2013

- [34] Radu, Crina, Tampu, Catalin, Cristea, Ion, **Chirita, Bogdan** - **The Effect of Residual Stresses on the Accuracy of Parts Processed by SPIF**, Materials and Manufacturing Processes, vol. 28, iss. 5, 2013, pp. 572-576, DOI: 10.1080/10426914.2013.763967, ISSN 1042-6914 (revista cotata ISI)
- [35] Costache, E. M., Nanu, N., **Chirita, B.**, Brabie, G. - **Prediction and prevention of material cracking in the case of micro or milli drawn parts made from aluminium foils**, International Journal of Mechanical Sciences, vol. 69, 2013, pp. 125-140, doi: 10.1016/j.ijmecsci.2013.02.001, ISSN 0020-7403 (revista cotata ISI)
- [36] Brabie, G., Costache, E. M., Nanu, N., **Chirita, B.** - **Prediction and minimisation of sheet thickness variation during deep drawing of micro/milli parts**, International Journal of Mechanical Sciences, vol. 68, 2013, pp. 277-290, DOI: 10.1016/j.ijmecsci.2013.01.028, ISSN 0020-7403 (revista cotata ISI)
- [37] TAMPU Nicolae Cătălin, RADU Maria Crina, **Chirita B.** - **Influence of the Temperature and Mechanical Stresses Generated by Milling Process in Machined Part Surfaces on their Accuracy**, Proceedings of Innovative Manufacturing Engineering (IManE), Applied Mechanics and Materials Vol. 371 (2013) pp 59-63, DOI: 10.4028/www.scientific.net/AMM.371.59, ISSN 1660-9336 (ISI Proceedings)
- [38] Chirita B. - **Spring-back of Pre-strained High Strength Steel Stripes**, Proceedings of Innovative Manufacturing Engineering (IManE), Applied Mechanics and Materials Vol. 371 (2013) pp 333-337, DOI: 10.4028/www.scientific.net/AMM.371.333, ISSN 1660-9336 (ISI Proceedings)

## 2011

- [39] Chirita B. – **Effect of pre-straining on springback of sheet metals in U-bending**, Proceedings of The 15th International Conference Modern Technologies, Quality and Innovation ModTech 2011, Volume I, Vadul lui Vodă, Chișinău, Republica Moldova, 25-27 mai 2011, p. 201-204, ISSN 2069-6736 (ISI Proceedings)

## 2010

- [40] Chirita B. – **Influence of residual stress distribution in sheet metal forming**, Proceedings of The 14th International Conference Modern Technologies, Quality and Innovation ModTech 2010, Slanic Moldova, Romania, 20-22 mai 2010, p. 183-186, ISSN 2066-3919 (ISI Proceedings)

## 2009

- [41] Chirita B. – **Methods of optimisation of sheet metal forming processes concerning the reduction of springback**, Proceedings of the International Conference Newtech 2009, The Annals of "Dunarea de Jos" University Galati, Fascicle V Technologies in Machine Building, Galati, Romania, 23-25 septembrie 2009, pp. 155-158, ISSN 1221-4566 (revista B+ CNCISIS)
- [42] Brabie G., **Chirita B.**, Nanu N., Ciubotariu V. – **Analysis of the springback and residual stresses generated by cold plastic forming in drawn round parts made from steel sheets**, Metalurgia International, vol. XIV, no. 12, Editura Stiintifica F.M.R., 2009, p. 21-27, ISSN 1582-2214 (revista cotata ISI)
- [43] Chirita B. – **Research upon residual stress distribution and springback behaviour of sheet metals**, TSTM-15, nr. 2, Technical Sciences Academy of Romania, University of Bacau, 2009, p. 21-27, ISSN 1224-7499

## 2008

- [44] Chirita B. – **Sheet metal forming optimisation for the reduction of springback**, Annals of DAAAM for 2008 & Proceedings of the 19th International DAAAM Symposium, Published by DAAAM International, Vienna, Austria, 22-25 octombrie 2008, pp. 243-244, ISSN 1726-9679, ISBN 978-3-901509-68-1 (ISI Proceedings)
- [45] Chirita B. – **Optimization of sheet forming process for the reduction of springback**, 12<sup>th</sup> International Research/Expert Conference "Trends in the Development of Machinery and Associated Technology" TMT

2008, Istanbul, Turcia, 26-30 August 2008, p. 129-132, ISBN 978-9958-617-41-6

- [46] Axinte C., Chirita B., Cristea I., Schnakovszky C. – **Optimization procedure for the springback reduction in sheet metal forming**, Metalurgia International, vol. XIII, no. 11, Editura Stiintifica F.M.R., 2008, p. 27-34, ISSN 1582-2214 (revista cotata ISI)
- [47] Chirita B. – **Studies for the reduction of springback in sheet metal forming**, IMT Oradea – 2008, Annals of Oradea University, Fascicle of Management and Technological Engineering, volume VII (XVII), 29-30 mai 2008, p. 1295-1299, ISSN 1583-0691 (CNCSIS B+)
- [48] Chirita B. – **Optimal design of sheet metal forming processes**, TSTM-14, nr. 1, Technical Sciences Academy of Romania, University of Bacau, 2008, p. 18-23, ISSN 1224-7499 (CNCSIS C)

## 2007

- [49] Chirita B., Brabie G. – **Control of springback in sheet metal U-bending through design experiment**, 9th International Conference on Numerical Methods in Industrial Forming Processes NUMIFORM'07, Porto, Portugal, 17-21 Iunie 2007, p. 829-834, ISBN 978-0-7354-0416-8, (ISI Proceedings)
- [50] Chirita B., Gherghel M. - **Experimental researches concerning the influence of the clearance angle “ $\alpha$ ” on the roughness of the machined surface and tool wearing at the finishing milling of the gray cast iron**, XIV International Science and Engineering Conference “Machine Building and Technosphere of the XXI Century”, Sevastopol, Ucraina, 17-22 Septembrie 2007, p. 301-307, tom 5, ISBN 966-7907-22-8.
- [51] Gherghel M., Chirita B. - **Experimental researches concerning the influence of the rake angle “ $\gamma$ ” on the roughness of the machined surface and tool wearing at the finishing milling of the gray cast iron**, XIV International Science and Engineering Conference “Machine Building and Technosphere of the XXI Century”, Sevastopol, Ucraina, 17-22 Septembrie 2007, p. 42-46, tom 4, ISBN 966-7907-22-8.
- [52] Gherghel M., Chirita B. - **Finishing face milling cutter with super dense teeth**, XIV International Science and Engineering Conference “Machine Building and Technosphere of the XXI Century”, Sevastopol, Ucraina, 17-22 Septembrie 2007, p. 47-50, tom 4, ISBN 966-7907-22-8.
- [53] Chirita B. – **Optimization of U-bending for the reduction of springback**, 11<sup>th</sup> International Research/Expert Conference “Trends in the Development of Machinery and Associated Technology” TMT 2007, Hammamet, Tunisia, 5-9 September 2007, p. 931-934, ISBN 9958-617-34-8
- [54] Chirita B. – **Considerations on the design of sheet metal forming process for springback reduction**, TSTM-13, vol. 2, Technical Sciences Academy of Romania, University of Bacau, 2007, p. 22-27, ISSN 1224-7499
- [55] Chirita B. – **Sisteme flexibile de fabricație. Note de curs și aplicații**, Ed. Alma Mater, Bacău, 2007, ISBN 978-973-1833-45-3
- [56] Chirita B. – **Mașini unelte. Îndrumar de laborator pentru uzul studenților**, Ed. Alma Mater, Bacău, 2007, ISBN 978-973-1833-46-0
- [57] Brabie G., Chiriță B. – **Creativitate tehnică: elemente de teorie și aplicații**, Ed. Alma Mater, Bacău, 2007, ISBN 978-973-1833-44-6

## 2006

- [58] Chirita B. – **Analysis of the residual stress in sheet metal U bending**, 10th International Research/Expert Conference “Trends in the Development of Machinery and Associated Technology”, TMT 2006, Barcelona – Lloret de Mar, Spain, 11-15 September, 2006, p. 133-136, ISBN 9958-617-30-7
- [59] Brabie G., Chirita B., Chirila C. – **System of tools and process parameters design based on the Taguchi's method for the compensation of errors determined by springback in the case of conical drawn parts**, Conferinta Stiintifica Internationala TMCR2006 “Tehnologii moderne, Calitate, Restructurare”, Iasi, 25-27 mai 2006, p. 427-430, ISSN 1011-2855
- [60] Chirita B. – **Analysis of the residual stress state in sheet metal U bending**, Conferinta Stiintifica Internationala TMCR2006 “Tehnologii moderne, Calitate, Restructurare”, Iași, 25-27 mai 2006, p. 455-460, ISSN 1011-2855
- [61] Chirita B. – **Parameters optimization for sheet metal U bending using design experiment method**, Conferinta Stiintifica Internationala TMCR2006 “Tehnologii moderne, Calitate, Restructurare”, Iași, 25-27 mai 2006, p. 461-468, ISSN 1011-2855
- [62] Chirita B., Albut A., Axinte C. – **Influence of the distribution of residual stress on springback in U-bending**, TSTM-12, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2006, p. 16-21, ISSN 1224-7499

## 2005

- [63] Chirita B. – **Control of springback intensity in U bending through variation of blankholder force**, 9th International Research/Expert Conference “Trends in the Development of Machinery and Associated

- Technology”, TMT2005, Antalya, Turkey, 26-30 September, 2005, pp. 175-178, ISBN 9958-617-28-5
- [64] Brabie G., Schnakovszky C., Axinte C., Chirita B. – **Analysis by simulation of the residual stresses distribution as a function of different factors in the case of hemispherical draw parts made from metal sheets**, 9th International Research/Expert Conference ”Trends in the Development of Machinery and Associated Technology”, TMT2005, Antalya, Turkey, 26-30 September, 2005, pp. 157-162, ISBN 9958-617-28-5
- [65] Chirita B., Brabie G., Schnakovszky C. – **Simulative techniques for the reduction of springback in U-bending of sheet metal**, International Conference ”Net-Shape Sheet Metal Forming”, Poznan – Wasowo, Poland, 13<sup>th</sup> May, 2005, p. 123-134, ISBN 83-911809-4-8
- [66] Brabie G., Schnakovszky C., Chirita B., Chirila C., Axinte C. – **Application of Taguchi’s method for tools and process optimization in the case of industrial parts made by metal sheets forming**, International Conference ”Net-Shape Sheet Metal Forming”, Poznan – Wasowo, Poland, 13<sup>th</sup> May, 2005, p. 109-122, ISBN 83-911809-4-8
- [67] Brabie G., Schnakovszky C., Chirita B., Axinte C., Chirila C. – **Deformarea la rece a tablelor metalice. Fenomene de instabilitate a formei si dimensiunilor pieselor**, Editura Junimea, Iasi, 2005, ISBN 973-37-1098-9
- [68] Brabie G., Schnakovszky C., Chirita B., Axinte C., Chirila C., Axinte C. – **Tensiuni reziduale generate de procesele de transformare a materialelor metalice**, Editura Junimea, Iasi, 2005, ISBN 973-37-1097-0
- [69] Chirita B. – **Studies on the influence of blankholder force on springback of U-bended sheet metals**, Conferinta Stiintifica Internationala TMCR2005 ”Tehnologii moderne, Calitate, Restructurare”, Chisinau, 19-21 mai 2005, p. 356-359, ISBN 9975-9775-8-3
- [70] Chirita B. – **Studies on the influence of blankholder force on the distribution of residual stress in U-bending operation**, Conferinta Stiintifica Internationala TMCR2005 ”Tehnologii moderne, Calitate, Restructurare”, Chisinau, 19-21 mai 2005, p. 360-363, ISBN 9975-9775-8-3
- [71] Chirita B. – **Experimental study of the influence of sheet metal properties on springback parameters in U bending**, Conferinta Stiintifica Internationala TMCR2005 ”Tehnologii moderne, Calitate, Restructurare”, Chisinau, 19-21 mai 2005, p. 364-367, ISBN 9975-9775-8-3
- [72] Brabie G., Schnakovszky C., Chirita B., Chirilă C., Axinte C. – **Application of the Taguchi method for the compensation of errors determined by springback in the case of a conical lid made from metal sheets**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p.49-56, ISSN 1224-7480
- [73] Brabie G., Schnakovszky C., Axinte C., Chirilă C., Chirita B. - **Application of the Taguchi method for the compensation of errors determined by springback in the case of a draw half-rim with stiffness channels made from metal sheets**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p.57-64, ISSN 1224-7480
- [74] Chirita B. – **Analysis of stress – strain state in U bending of sheet metals using finite element method**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p.68-73, ISSN 1224-7480
- [75] Chirita B. – **Reduction of springback phenomenon in U bending of sheet metal using design experiment**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p.74-79, ISSN 1224-7480
- [76] Gherghel M., Chirita B. – **Experimental researches concerning the influence of the edge radius  $r$  and pitch feed  $S_a$  on the roughness of the surfaces mechined by finishing milling of cast iron**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 92-95, ISSN 1224-7480
- [77] Schnakovszky C., Brabie G., Chirila C., Chirita B., Axinte C. – **Experimental and simulation analysis of spring back in the case of a conical draw lid made using tools corrected by applying the Taguchi method of optimization**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 167-170, ISSN 1224-7480
- [78] Schnakovszky C., Brabie G., Chirita B., Chirila C., Axinte C. – **Experimental and simulation analysis of springback in the case of a drawn half-rim made using tools corrected by applying the Taguchi method of optimization**, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 171-174, ISSN 1224-7480
- [79] Chirita B. - **Study of the influence of residual stress distribution on springback in sheet metal forming**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 11-15, ISSN 1224-7449
- [80] Chirita B. – **Design experiment for springback control in U-bending of sheet metal**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 16-21, ISSN 1224-7449
- [81] Brabie G., Chirita B., Albut A. – **Conditions and steps needed in the application of an optimization system based on Taguchi’s method for the compensation of errors generated by springback in the case of draw parts made from metal sheets**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 32-36, ISSN 1224-7449

- [82] Schnakovszky C., Brabie G., Chirita B., Chirila C., Axinte C. – **Experimental and simulation analysis of springback in the case of a drawn half-rim made using tools corrected by applying the Taguchi method of optimization**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 37-40, ISSN 1224-7449
- [83] Schnakovszky C., Brabie G., Chirila C., Chirita B., Axinte C. – **Experimental and simulation analysis of springback in the case of a conical draw lied made using tools corrected by applying the Taguchi method of optimization**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 41-44, ISSN 1224-7449
- [84] Brabie G., Schnakovszky C., Axinte C., Chirilă C., Chiriță B. - **Application of the Taguchi method for the compensation of errors determined by springback in the case of a draw half-rim with stiffness channels made from metal sheets**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 45-50, ISSN 1224-7449
- [85] Gherghel M., Chirita B. – **Considerations concerning the influence of the curvilinear edge of radius  $r$  on the roughness of the surfaces machined by finishing milling of cast iron**, TSTM-11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p. 104-107, ISSN 1224-7449

## 2004

- [86] Brabie G., Chirita B., Chirila C. – **Basic problems concerning the formability of the tailor welded blanks**, The XVI International Scientific and Technological Conference “Design and Technology of Drawpieces and Die Stampings”, Poznan – Wasowo, Poland, June 14-16, 2004, p. 85-87
- [87] Brabie G., Chirita B., Chirila C. – **Determination of the weld metal properties and behaviour in the case of tailor-welded blanks using the parallel tensile test and image-analysis method**, Archives of civil and mechanical engineering, Vol. IV, No. 2, Polish Academy of Science – Wroclaw Branch, Wroclaw, 2004, p. 41-47, ISSN 1644-9665
- [88] Chirita B. – **Studies concerning the influence of the friction coefficient on springback of U-bended sheet metals**, TSTM10, Technical Sciences Academy of Romania, University of Bacau, 2004, p. 32-35, ISSN 1224-7449
- [89] Chirita B. – **Studies concerning the influence of blankholder force on springback of U-bended sheet metals**, TSTM10, Technical Sciences Academy of Romania, University of Bacau, 2004, p. 36-41, ISSN 1224-7449
- [90] Chirita B. – **Experimental analysis of the influence of material properties on springback parameters in U-bending**, TSTM10, Technical Sciences Academy of Romania, University of Bacau, 2004, p. 42-46, ISSN 1224-7449
- [91] Chirita B. – **Influence of blankholder force on the distribution of residual stress in U-bending operation**, TSTM10, Technical Sciences Academy of Romania, University of Bacau, 2004, p. 57-62, ISSN 1224-7449

## 2003

- [92] Chiriță Bogdan – **Experimental study of the influence of blankholder force on springback of sheet metal**, Archives of civil and mechanical engineering, No. 1, Vol. III, Polish Academy of Science – Wroclaw Branch, Wroclaw, 2003, p. 6-12, ISSN 1644-9665
- [93] Chiriță Bogdan, Brabie Gheorghe – **Experimental analysis of different influences on springback of parts formed by U-bending**, TMT2003, 7th International Research/Expert Conference “Trends in the Development of Machinery and Associated Technology”, Lloret del Mar, Barcelona – Spain, 15-17 September, 2003, p. 141-144
- [94] Gheorghe Brabie, Chiriță Bogdan – **Experimental analysis of the influence of blankholder force variation on springback of drawn rectangular parts made in steel sheets**, TMT2003, 7th International Research/Expert Conference “Trends in the Development of Machinery and Associated Technology”, Lloret del Mar, Barcelona – Spain, 15-17 September, 2003, p. 209-212
- [95] Chiriță Bogdan, Judele Adrian – **Investigation of residual stresses distribution and springback in the case of tailor welded sheets forming**, TSTM9, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 91-97, ISSN 1224-7449
- [96] Chirilă Ciprian, Chiriță Bogdan, Profir Dan – **Experimental analysis of the residual stresses distribution in the rectangular drawparts made in homogeneous sheets**, TSTM9, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 108-111, ISSN 1224-7449
- [97] Chiriță Bogdan, Chirilă Ciprian, Profir Dan, Axinte Crina – **Analysis by simulation of the residual stresses distribution in the rectangular drawparts made in tailor welded sheets**, TSTM9, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 116-123, ISSN 1224-7449
- [98] Brabie Gheorghe, Chirilă Ciprian, Chiriță Bogdan – **Determination of weld metal properties in the case of tailor welded sheets**, TSTM9, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p.

- [99] Brabie Gheorghe, Chiriță Bogdan, Chirilă Ciprian – **Investigation of the strain variation during tensile test of tailor welded sheets by using the image analysis method**, MOCM9, vol. 3, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 7-10, ISSN 1224-7480
- [100] Brabie Gheorghe, Chiriță Bogdan, Chirilă Ciprian – **Analysis of the stress strain curves experimentally determined for tailor welded sheets**, MOCM9, vol. 3, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 11-17, ISSN 1224-7480
- [101] Brabie Gheorghe, Chiriță Bogdan, Chirilă Ciprian – **Residual stresses control by experiment and simulation – in formed tailor welded sheets**, MOCM9, vol. 3, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 18-22, ISSN 1224-7480
- [102] Schnakovszky Carol, Chiriță Bogdan, Chirilă Ciprian, Axinte Crina – **Determination of springback parameters by simulation of the forming process in the rectangular drawparts made in tailor welded sheets**, MOCM9, vol. 3, Technical Sciences Academy of Romania, Universitatea Bacău, 2003, p. 131-133, ISSN 1224-7480

## 2002

- [103] Chiriță Bogdan – **Factors of influence on the springback of formed metal sheets**, ESAFORM - The 5th International Conference on Material Forming, Krakow, April 14-17, 2002, p. 535-538
- [104] Brabie Gheorghe, Mohora Cristina, Chiriță Bogdan – **Mașini-unelte. Caracteristici de calitate**, Editura Agir ISBN 973-8130-35-2, Editura Academiei Române ISBN 973-27-0928-6, București, 2002
- [105] Chiriță Bogdan, Brabie Gheorghe – **Influence of material models on springback in the cold forming of sheet metals**, Buletinul Institutului Politehnic din Iași, Tomul XLVIII (LII), Fasc. 1-2, 2002, p. 85-90, ISSN 1453-1690
- [106] Chiriță Bogdan – **Experimental study of the influence of blankholder force on springback of sheet metal**, TSTM8, Universitatea Bacău, 2002, p. 115-119, ISSN 1224-7449
- [107] Chiriță Bogdan – **Experimental study of the influence of material properties on springback of sheet metal**, TSTM8, Universitatea Bacău, 2002, p. 120-129, ISSN 1224-7449
- [108] Brabie Gheorghe, Chiriță Bogdan – **Basic problems in the study of springback of the parts made in metal sheets – a review**, TSTM8, Universitatea Bacău, 2002, p. 130-134, ISSN 1224-7449
- [109] Brabie Gheorghe, Chiriță Bogdan – **Experimental analysis of springback in the case of a lid made by deep drawing of different metal sheets**, TSTM8, Universitatea Bacău, 2002, p. 139-144, ISSN 1224-7449
- [110] Brabie Gheorghe, Chiriță Bogdan – **Methods of reducing or eliminating effects of instability phenomena that occur in metal sheets forming processes**, MOCM8, Universitatea Bacău, 2002, p. 40-44, ISSN 1224-7480
- [111] Chiriță Bogdan – **Experimental analysis concerning the influence of of the rolling direction and strain rate on the stress-strain curve in the case of FEPO5MB steel sheet without coating**, MOCM8, Universitatea Bacău, 2002, p. 51-55, ISSN 1224-7480

## 2001

- [112] Chiriță Bogdan – **Analysis of the instability phenomena in the deformation processes of metal sheets**, TSTM7 – Romanian Academy, 2001, p. 114-119, ISSN 1224-7449
- [113] Brabie Gheorghe, Apostol Marian, Chiriță Bogdan – **The influence of the sheets material on the shape and position of the FLSDs determined from FLDs by using the Hill'79 criterion**, TSTM7 – Romanian Academy, 2001, p. 103-108, ISSN 1224-7449

## 2000

- [114] Brabie Gheorghe, Chiriță Bogdan – **Basic problems concerning the application of the industrial ergonomic concepts in the design of the machine tools**, International Design Conference – Design2000, Dubrovnik, May 23-26, 2000, p. 205-209
- [115] Brabie G., Chiriță B. – **Strategical Objectives Concerning the Machine Tools Conception, Manufacture and Utilization**, International Design Conference – Design2000, Dubrovnik, May 23-26, 2000, p. 617 – 621
- [116] Chiriță Bogdan – **Basic problems concerning the utilization of the nonconventional materials in machine tools construction**, TSTM6 – Romanian Academy, 2000, p. 232-235, ISSN 1224-7449
- [117] Ungureanu Viorel, Chiriță Bogdan, Apostol Marian – **The experimentally determined strain for deep drawing of L-shaped SOLDUR 340 parts**, TSTM6 – Romanian Academy, 2000, p. 56-60, ISSN 1224-7449
- [118] Brabie Gheorghe, Apostol Marian, Chiriță Bogdan – **The influence of stress exponent  $m$  on the shape**

**and position of the FLSDs determined for aluminium sheets from FLDs using the Hill'79 criterion, TSTM6 – Romanian Academy, 2000, p. 83-90, ISSN 1224-7449**

- [119] Chiriță Bogdan – **Basic conditions and criteria applied for the selection of the materials used in the construction of the structural elements of the machine tools**, Buletinul Institutului Politehnic din Iași, Tomul XLVI(L), fasc. 1-2, Secția IX, Știința și Ingineria Materialelor, 2000, p. 197-202, ISSN 1453-1690
- [120] Gheorghe Brabie, Chiriță Bogdan – **Considerations and criteria applied for the optimum selection of materials in the designing stage of the machine components**, Buletinul Institutului Politehnic din Iași, Tomul XLVI(L), fasc. 1-2, Secția IX, Știința și Ingineria Materialelor, 2000, p. 79-84, ISSN 1453-1690
- [121] Brabie Gheorghe, Chiriță Bogdan – **Basic principles and technical solutions applied to improve the stiffness of the machine tool structural components**, TCMM 40 (Tehnologii, Calitate, Mașini, Materiale), Ed. Tehnică, București, 2000, p. 29-34
- [122] Chiriță Bogdan – **Aspecte privind utilizarea deferitelor materiale la realizarea elementelor de structură ale mașinilor unelte**, Lucrările Sesiunii de Comunicări Științifice a Universității „Petru Maior” Tg. Mureș, vol. 3, Mașini Unelte – Echipamente, 27-28 Octombrie 2000, p. 45-50
- [123] Brabie Gheorghe, Chiriță Bogdan – **Aspecte privind optimizarea construcției batiurilor de mașini unelte**, Lucrările Sesiunii de Comunicări Științifice a Universității „Petru Maior” Tg. Mureș, vol. 3, Mașini Unelte – Echipamente, 27-28 Octombrie 2000, p. 19-24

## 1999

- [124] Brabie Gheorghe, Chiriță Bogdan – **Etapes, criteriums et indicateurs fondamentals pour le choix optimal des matériaux dans la construction des machines outils**, 1<sup>er</sup> Symposium International Euretech, Settat, Maroc, 16/17 Juillet 1999
- [125] Chiriță Bogdan – **Some aspects concerning the utilization of the nonconventional materials for the structural elements of the machine tools**, MOCM5 – Romanian Academy, 1999, p. 169-175, ISSN 1224-7480
- [126] Brabie Gheorghe, Chiriță Bogdan – **Methods and technical solutions applied to improve the protection of the machine tool operators**, MOCM5 – Romanian Academy, 1999, p. 151-154, ISSN 1224-7480
- [127] Brabie Gheorghe, Chiriță Bogdan – **Recent trends and evolutions in the machine tools market and industry**, TSTM5 – Romanian Academy, 1999, ISSN 1224-7449
- [128] Brabie Gheorghe, Chiriță Bogdan – **Possibilities to improve the disponibility and reliability features of the machine tools**, TSTM5 – Romanian Academy, 1999, ISSN 1224-7449
- [129] Ungureanu Viorel, Brabie Gheorghe, Chiriță Bogdan – **The experimentally determined strain for deep drawing of L-shaped aluminium parts**, TSTM5 – Romanian Academy, 1999, ISSN 1224-7449
- [130] Brabie Gheorghe, Chiriță Bogdan - **Elemente de logistica industrială. Note de curs**, Editura Universității din Bacău, 1999

## 1998

- [131] Brabie Gheorghe, Chiriță Bogdan – **Mathematical model describing the basic functions of the machine tools, the activities and phases in their designing stage**, International Design Conference – Design'98, Dubrovnik, May 19-22, pp. 539-544, 1998
- [132] Brabie Gheorghe, Chiriță Bogdan – **The technologic character of the construction applied in the designing stage of the machine tools**, TSTM4 – Romanian Academy, 1998, ISSN 1224-7449
- [133] Brabie Gheorghe, Chiriță Bogdan – **The effects of different factors on the forming limit diagrams**, MOCM4 – Romanian Academy, 1998, ISSN 1224-7480

## Lista contractelor de cercetare

### *Granturi internaționale:*

- [1] The Intelligent System for Netshape Forming of Metal Sheet Products, Program Cadru 5, 2002-2005, in parteneriat cu Universitatea Tehnica din Wroclaw – Polonia, Universitatea Savoie – Franta, Universitatea Porto – Portugalia, Autotools – Polonia, MFI Poznan – Polonia, SEP – Franta, PJ Ferramentas – Portugalia, WMW Bacau – Romania, SC Mecanica Ceahlau Piatra Neamt – Romania – **membru in colectivul de cercetare**
- [2] The System for Metal Sheet Forming Design, Program Copernicus IC15CT970708, 1997-2000, in parteneriat cu Universitatea Savoie – Annecy (Franta), Universitatea Tehnica din Wroclaw (Polonia), Universitatea Porto (Portugalia) – **membru in colectivul de cercetare**



### ***Granturi naționale:***

- [1] **Tehnologii de fabricare inteligente pentru producția avansată a pieselor din industriile de automobile și aeronautică, PN-III-P1-1.2-PCCDI-2017-0446, contract nr. 82PCCDI/2018, PNCDI III - Programul 1 - Proiecte Complexe realizate în consorții CDI – 2017, 2018 – 2020, buget total 5.287.500 – **Responsabil proiect Universitatea „Vasile Alecsandri” din Bacău****
- [2] PN II 297/2014 Tehnologii ecologice și economice pentru prelucrarea tablelor metalice folosite la realizarea blindajelor, 2014 - **membru în colectivul de cercetare**
- [3] Factori de influență, modelarea fenomenelor specifice și optimizarea procesului de micro/milli ambutisare a tablelor metalice cu grosimi sub 0.2mm, PNII PCE 178, 2012-2014 – **membru în colectivul de cercetare.**
- [4] Modelarea pe baza analizei experimentale și prin simulare a interacțiunii dintre procesele fizice de generare a tensiunilor reziduale și revenire elastică la deformarea plastică a tablelor metalice, Program PNII – IDEI 595/2008 - 2011 – **membru în colectivul de cercetare**
- [5] **Studiul tensiunilor reziduale, a efectelor asupra revenirii elastice a pieselor obținute prin deformarea plastică a tablelor metalice și a posibilităților de eliminare a acestor efecte, Program de excelență pentru tineri cercetători CEEEX nr. 3169/12.10.2005, 2005-2007 – director de proiect.**
- [6] **Cercetări experimentale și prin simulare privind factorii de influență ai revenirii elastice la îndoirea în U a tablelor metalice, Program CNCISIS tip Td nr. 3380/29.06.2004 – director de program.**
- [7] Modernizarea și consolidarea infrastructurii de cercetare a grupului de laboratoare de cercetare specifice deformării plastice la rece a tablelor metalice, Program PNII – Capacități nr. 115/2007 – **membru în colectivul de cercetare**
- [8] Tehnologie integrată de fabricație a pieselor realizate din table metalice subțiri, Program CEEEX 317/2006, 2006-2008 – **membru în colectivul de cercetare**
- [9] Rețea națională de cercetare în domeniul ingineriei integrate a produselor și proceselor, Program CEEEX 243/6 – 2006 – **membru în colectivul de cercetare**
- [10] O nouă tehnologie privind creșterea productivității și calității rulmenților, Program CEEEX 20/2005 – **membru în colectivul de cercetare**
- [11] Metode de simulare, modelare și producție virtuală sau digitală bazate pe tehnologia informației și comunicării (ICT) și dedicate noii generații de sisteme de prelucrare reconfigurabile, Proiect CEEEX, 2005-2007, – **membru în colectivul de cercetare**
- [12] Cercetări experimentale și prin simulare pentru determinarea tensiunilor reziduale în cazul deformării plastice la rece a tablelor metalice, Grant CNCISIS 1003/2004, 2004-2005 – **membru în colectivul de cercetare**
- [13] Studiul fenomenului de revenire elastică la ambutisarea plastică la rece a tablelor metalice, Grant CNCISIS nr. 278/2002 – **membru în colectivul de cercetare**
- [14] Studiul fenomenului de revenire elastică la îndoirea plastică la rece a tablelor metalice, Grant CNCISIS 1169/2 2001 – **membru în colectivul de cercetare**

### ***Contracte cu parteneri industriali:***

- [1] **Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 3/2014 cu SC SPECTROMAS SRL București, 2014 – director de proiect**
- [2] **Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 9/2014 cu SC SPECTROMAS SRL București, 2014 – director de proiect**
- [3] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 1/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [4] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 2/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [5] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 4/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [6] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 5/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [7] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 7/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [8] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 8/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [9] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 10/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [10] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 12/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [11] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 14/2014 cu SC SPECTROMAS SRL București, 2014 – **membru în colectivul de cercetare**
- [12] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr.

- 15/2014 cu SC SPECTROMAS SRL București, 2014 – **membru in colectivul de cercetare**
- [13] **Analiza tensiunilor reziduale din piesele turnate (reperele 3, 4 și 5) la SC LUFKIN Industries SRL Ploiești, Contract nr. 3/2013 cu SC SPECTROMAS SRL București, 2013 – director de proiect**
- [14] Analiza tensiunilor reziduale din piesele turnate (reperele 1 și 2) la SC LUFKIN Industries SRL Ploiești, Contract nr. 2/2013 cu SC SPECTROMAS SRL București, 2013 – **membru in colectivul de cercetare**
- [15] **Studiul experimental și prin simulare al factorilor de influență ai fenomenului de revenire elastică la ambutisarea tablelor metalice, Contract nr. 10/2004 cu S.C. Mecanica Ceahlău S.A. Piatra Neamț, 2004 – director de proiect**
- [16] Studiul experimental și prin simulare privind factorii de influență ai preciziei de prelucrare la ambutisarea pieselor cu pereți circulari, Contract de cercetare nr. 11/2005 cu S.C. Mecanica Ceahlău S.A. Piatra Neamț, 2005 RON – **membru in colectivul de cercetare**
- [17] Sistem de proiectare optimizată a sculelor de ambutisare, Contract de cercetare nr. 12/2004 cu S.C. Mecanica Ceahlău S.A. Piatra Neamț, 2004-2005 – **membru in colectivul de cercetare**
- [18] Optimizarea constructivă și geometrică a frezelor frontale de finisare și a regimurilor de lucru la frezarea fină a ghidajelor, Contract nr. 528/2005 cu societatea World Machinery Works S.A. Bacău, 2005 – **membru in colectivul de cercetare**