

Prof. Dr. Ing. Gheorghe BRABIE

Lista selectivă de lucrări științifice și contracte de cercetare

Cărți, cursuri publicate în edituri recunoscute

- [1] Chiriță Bogdan, Brabie Gheorghe – Prelucrarea metalelor: operații și scule de prelucrare, Ed. Alma Mater, Bacău, 2014, ISBN 978-606-527-419-8, 204 pg.
- [2] Brabie Gheorghe, Chiriță Bogdan – Mașini unelte: construcție și exploatare, Ed. Alma Mater, Bacău, 2014, ISBN 978-606-527-420-4, 222 pg.
- [3] Brabie Gheorghe, Chiriță Bogdan – Creativitatea tehnică. Elemente de teorie și aplicații, Editura Alma Mater, Bacău, 2007, ISBN 978973-1833-45-6, 109 pg.
- [4] Brabie G., Schnakovszky C., Chiriță B., Axinte C., Chirila C. – Deformarea la rece a tablelor metalice. Fenomene de instabilitate a formei și dimensiunilor pieselor, Editura Junimea, Iași, 2005, ISBN 973-37-1098-9, 218 pg.
- [5] Brabie G., Schnakovszky C., Chiriță B., Axinte C., Chirila C., Axinte C. – Tensiuni reziduale generate de procesele de transformare a materialelor metalice, Editura Junimea, Iași, 2005., ISBN 973-37-1097-0, 212 pg.
- [6] 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, 268 pg.
- [7] Brabie Gheorghe, Chiriță Bogdan – Elemente de logistica industrială. Note de curs, Editura Universității din Bacău, 1999, 105 pag.

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1. Bogdan Chiriță, 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 cotată ISI)
2. G. Brabie, B. Chiriță, 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)
3. G. Brabie, E.M. Costache, B. Chiriță - 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 cotată ISI)
4. 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 cotată ISI)
5. Costache, E. M., Nanu, N., Chiriță, 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, ISSN 0020-7403 (revista cotată ISI)
6. Brabie, G., Costache, E. M., Nanu, N., Chiriță, 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, ISSN 0020-7403 (revista cotată ISI)
7. Ciobanu, I. Mallard, D. Landy, G. Brabie, D. Nistor, S. Fourmentin, Retention of aroma compounds from *Mentha piperita* essential oil by cyclodextrins and crosslinked cyclodextrin polymers, Food Chemistry, ISSN: 0308-8146, 2013, 138-1, 291-297

8. Brabie G., Chiriță 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)
9. Brabie G., Chiriță 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
10. Tampu NC, Brabie G, Chiriță 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 (ISI Proceedings)
11. Tâmpu Nicolae Cătălin, Brabie Gheorghe, Chiriță Bogdan Alexandru - Influence of inserts number on surface quality in milling, *Applied Mechanics and Materials*, vol. 809-810, pp. 177-182, doi:10.4028/www.scientific.net/AMM.809-810.177 (BDI)
12. Brabie Gheorghe, Chiriță 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, doi:10.4028/www.scientific.net/AMM.809-810.241 (BDI)
13. Brabie Gheorghe, Chiriță 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. 241-246, doi:10.4028/www.scientific.net/AMM.809-810.247 (BDI)
14. BRABIE Gheorghe, MUSTEA Gheorghe, CHIRIȚĂ 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)
15. CHIRIȚĂ 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)
16. BRABIE Gheorghe, CHIRIȚĂ 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)
17. BRABIE Gheorghe, CHIRIȚĂ 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)
18. Nanu N., Brabie G., Bologan M., Influence of the Blankholder Force on the Accuracy of the Rectangular Drawn Parts Made from Steel Sheets, *Applied Mechanics and Materials*, 2013, 371, 143-147
19. Brabie G., Nanu N., Jitaru A., Influence of the Thickness Value on the Mechanical and Formability Properties of the CuZn37 Thin Sheet Metal, *Applied Mechanics and Materials*, 2013, 371, 163-167
20. Brabie G., E.M.Radu, Bologan M., Influence of the Tool Clearance Values on the Quality of the Small Drawn Parts, *Applied Mechanics and Materials*, 2013, 371, 705-709

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22. Chiriță 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)
23. 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 (ISI Proceedings)
24. 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 (ISI Proceedings)
25. 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 (ISI Proceedings)

Alte articole publicate în reviste internaționale sau naționale și volume ale unor conferințe internaționale sau naționale

1. Brabie G., Schnakovszky C., Axinte C., Chiriță 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
2. Chiriță 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, 13th May, 2005, p. 123-134, ISBN 83-911809-4-8
3. Brabie G., Schnakovszky C., Chiriță 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, 13th May, 2005, p. 109-122, ISBN 83-911809-4-8
4. Brabie G., Schnakovszky C., Chiriță 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
5. 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, MOCM 11, vol. 1, Technical Sciences Academy of Romania, University of Bacau, 2005, p.57-64, ISSN 1224-7480
6. Schnakovszky C., Brabie G., Chirila C., Chiriță 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
7. Schnakovszky C., Brabie G., Chiriță 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
8. Brabie G., Chiriță 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
 9. Schnakovszky C., Brabie G., Chiriță 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
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 11. 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
 12. 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
 13. 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
 14. 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. 216-219, ISSN 1224-7449
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 17. 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
 18. 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.

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 21. 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
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 23. 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
 24. 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
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 26. 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
 27. Brabie Gheorghe, Chiriță Bogdan – Recent trends and evolutions in the machine tools market and industry, TSTM5 – Romanian Academy, 1999, ISSN 1224-7449
 28. Brabie Gheorghe, Chiriță Bogdan – Possibilities to improve the disponibility and reliability features of the machine tools, TSTM5 – Romanian Academy, 1999, ISSN 1224-7449
 29. 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
 30. 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
 31. 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 – Director
- [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) – Director

Granturi naționale:

- [1] PN II 297/2014 Tehnologii ecologice și economice pentru prelucrarea tablelor metalice folosite la realizarea blindajelor, 2014 - membru în colectivul de cercetare
- [2] Factori de influență, modelarea fenomenelor specifice și optimizarea procesului de micro/mili ambutisare a tablelor metalice cu grosimi sub 0.2mm, PNII PCE 178, 2012-2014 – Director
- [3] 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 – Director
- [4] 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 – Director
- [5] Tehnologie integrată de fabricație a pieselor realizate din table metalice subțiri, Program CEEEX 317/2006, 2006-2008 – Director
- [6] Rețea națională de cercetare în domeniul ingineriei integrate a produselor și proceselor, Program CEEEX 243/6 – 2006 – Director
- [7] O nouă tehnologie privind creșterea productivității și calității rulmenților, Program CEEEX 20/2005 – Director
- [8] 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 – Director
- [9] Cercetări experimentale și prin simulare pentru determinarea tensiunilor reziduale în cazul deformării plastice la rece a tablelor metalice, Grant CNCSIS 1003/2004, 2004-2005 – Director
- [10] Studiul fenomenului de revenire elastică la ambutisarea plastică la rece a tablelor metalice, Grant CNCSIS nr. 278/2002 – Director
- [11] Studiul fenomenului de revenire elastică la îndoirea plastică la rece a tablelor metalice, Grant CNCSIS 1169/2 2001 – Director
- [12] 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
- [13] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 2/2014 cu SC SPECTROMAS SRL București, 2014 – Director
- [14] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 3/2014 cu SC SPECTROMAS SRL București, 2014 – membru în colectivul de cercetare
- [15] 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
- [16] 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
- [17] 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
- [18] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 8/2014 cu SC SPECTROMAS SRL București, 2014 – Director
- [19] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 9/2014 cu SC SPECTROMAS SRL București, 2014 – membru în colectivul de cercetare
- [20] 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

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- [22] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 14/2014 cu SC SPECTROMAS SRL București, 2014 – membru in colectivul de cercetare
- [23] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 15/2014 cu SC SPECTROMAS SRL București, 2014 – Director
- [24] 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 – membru in colectivul de cercetare
- [25] 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 – Director
- [26] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 11/2013 cu SC SPECTROMAS SRL București, 2013 – membru in colectivul de cercetare
- [27] Analiza tensiunilor reziduale din piesele turnate la SC LUFKIN Industries SRL Ploiești, Contract nr. 12/2013 cu SC SPECTROMAS SRL București, 2013 – membru in colectivul de cercetare

Lucrări comunicate la manifestări științifice

1. Mustea Gheorghe, Brabie Gheorghe, Raveica Crinel, The influence of working parameters on the surface quality machined by turning combined with burnishing of AZ61 A magnesium alloy, OPROTEH 2013 Conference – Bacau mai 2013, <http://oproteh.ub.ro>
2. Mustea Gheorghe, Brabie Gheorghe, Chirita Bogdan, Determination of optimal working parameters of the combined turning- burnishing process in the case of AZ 61 A magnesium using Taguchi method, OPROTEH 2013 Conference – Bacau mai 2013, <http://oproteh.ub.ro>
3. Gheorghe Mustea, Gheorghe Brabie, Influence of cutting parameters on the surface quality of round parts made from AZ61 magnesium alloy and machined by turning, ModTech 2013 Conference – Sinaia iunie 2013, www.modtech.ro
4. Gheorghe Mustea, Gheorghe Brabie, The influence of burnishing parameters on the surface quality of bars made from AZ61 magnesium alloy, ModTech 2013 Conference – Sinaia iunie 2013, www.modtech.ro
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7. G. Brabie, E.M Costache, A.Jitaru, M. Bologan, Analysis and determination of the diameter variation in the case of micro/milli cylindrical drawn parts, ModTech 2013 Conference – Sinaia iunie 2013, www.modtech.ro
8. Nanu N., E.M Costache, G. Brabie, R.Teaca, Application of the Pettern Search method to reduce or eliminate the defects of conical micro/milli drawn parts, ModTech 2013 Conference – Sinaia iunie 2013, www.modtech.ro