

**Universitatea Tehnică din Cluj-Napoca**  
**Facultatea de Ingineria Materialelor si a Mediului**  
**Departamentul Știința si Ingineria Materialelor**  
**S.L.dr.ing. Adriana NEAG**  
Researcher ID: A-9852-2015  
Orcid ID: 0000-0002-9651-1934

**LISTA DE LUCRĂRI**  
in domeniul disciplinelor din postul didactic

**A. Teză de doctorat - Adriana Voica NEAG**

**Titlu:** Cercetări privind obținerea și comportarea la deformare a aliajelor tixotrope de aluminiu.

Conducator științific: Prof.dr.ing.Traian CANTA

Universitatea Tehnică din Cluj-Napoca

**Sustinere publică:** iunie 2008

**B. Materiale didactice**

**Cărți publicate**

1. **A.Neag**, M.Pop, Deformari plastice – Aplicate, U.T.Press Cluj-Napoca, ISBN 978-973-662-449-0, 2009.
2. **Adriana NEAG**, Elemente de modelare si simulare a proceselor de deformare, Ed. Mega, ISBN 978-606-543-808-8, 2016.
3. **Adriana NEAG**, Noțiuni de procesare în stare semisolidă a materialelor, UTPress Cluj-Napoca, ISBN 978-606-737-263-2, 2017.

**Curs în format electronic**

1. **A.Neag**, Conceptie și fabricație asistată de calculator, (14 cursuri+14 lucrari de laborator+video prezentari), peste 200 de pagini, verificat și publicat pe <http://www.didatec.ro/MyCourses.aspx>., 2013.

**C. Lucrări științifice publicate în reviste cotate ISI și ISI Proceedings (conform <http://apps.webofknowledge.com>.)**

1. **A. Neag**, V. Favier, R. Bigot, T. Canta, D. Frunza, Experimental investigation and numerical simulation during backward extrusion of a semi-solid Al-Si hypoeutectic alloy, Prezentata la: 10<sup>th</sup> ESAFORM Conference on Material Forming, Book Series: AIP Conference Proceedings Vol: 907 (2007), pp. 620-625, ISBN: 978-0-7354-0414-4.
2. **A. Neag**, V. Favier, R. Bigot, D. Frunza, Study on Thixo-extrusion of Semi-solid aluminium, Solid State Phenomena Vols.141-143 (2008) pp. 659-664, ISBN 3-908451-59-0, ISBN-13 978-3-908451-59-4, DOI: 10.4028/www.scientific.net/SSP.141-143.659, Prezentata la: 10<sup>th</sup> International Conference on Semi-Solid Processing of Alloys and Composites Location: Aachen, GERMANY(2008).

3. M.Pop, **A.Neag**, Dimensional precision in non-conventional processes of plastic deformation, Metalurgia Int. vol xiv, no.7 (2009), p.24, ISSN 1582-2214.
4. **A. Neag**, V. Favier, R. Bigot, M. Pop, Microstructure and flow behavior during backward extrusion of semi-solid 7075 aluminium alloy, Journal of Materials Processing Technology, no. 212 (2012), p.1472-1480, DOI: 10.1016/j.jmatprotec.2012.02.003.
5. **A. Neag**, V. Favier, M. Pop, E. Becker, R. Bigot, Effect of Experimental Conditions on 7075 Aluminium Response During Thixoextrusion, Key Engineering Materials Vols 504–506 (2012), pp.345-350, DOI: 10.4028/www.scientific.net/KEM.504-506.345, Prezentata la: 15<sup>th</sup> Conference of the European Scientific Association on Material Forming, ESAFORM(2012), Erlangen, GERMANY.
6. **A. Neag**, V. Favier, M. Pop, R. Bigot, Experimental investigation on 7075 aluminium response during thixoextrusion, Solid State Phenomena Vols. 192-193, pp. 149-154, (2013) Trans Tech Publications, Switzerland, DOI:10.4028/www.scientific.net/SSP.192-193.149, Prezentata la: 12<sup>th</sup> International Conference on Semi-Solid Processing of Alloys and Composites (S2P 2012) Cape Town, SOUTH AFRICA, Oct. 08-11, 2012.
7. **A. Neag**, V. Favier, L. Nistor, R. Bigot, Numerical Simulation and Experimental Investigation on Thixo-Backward Extrusion of 7075 Aluminium Alloy, Advanced Engineering Forum (Vol.8-9), june 2013, pp 269-276, DOI: 10.4028/www.scientific.net/AEF.8-9.269, Prezentata la: Conference on Interdisciplinary Research in Engineering Steps towards Breakthrough Innovation for Sustainable Development (INTERIN 2013).
8. M. Pop, D. Frunza, F. Popa, **A. Neag**, Experimental and numerical analysis of 7075 aluminum alloy fracture behavior, JOAM, 2015, Vol. 17 ISS 11-12\_2015, p. 1761-1766.
9. **Neag, A.**, Favier, V., Bigot, R., Atkinson, H.V., Comparison between numerical simulation of semisolid flow into a die using FORGE© and in situ visualization using a transparent sided die, Journal of Materials Processing Technology, 2016, Vol. 229, Pages 338–348, DOI: 10.1016/j.jmatprotec.2015.09.035.
10. L. Nistor, **A.Neag**, I. Marian, D.Frunza, Experimental and Numerical Simulation Study of Simultaneous Tooothing of Spur Gears by Press-Rolling Process, J. Manuf. Sci. Eng. 2016;138(12): DOI: 10.1115/1.4034493.
11. Dincu, PP, Achimas, G, Noveanu, D, **Neag, A.**, Numerical analysis of the friction conditions influence on the metal tubes extrusion process, Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering Vol: 59 (3) Pages: 309-314, 2016.
12. M. Pop, D. Frunza, F. Popa, **A. Neag**, Aspects Regarding the Hot Fracture Behavior of 42CrMo4 Alloy, Roumanian Journal of Phisycs, Vol.62, Nr 5-6, 2017.
13. PP.Dincu, G. Ahimas, **A. Neag**, Numerical simulation of tool wearing in reverse cold extrusion processes, ACTA TECHNICA NAPOCENSIS SERIES-APPLIED MATHEMATICS MECHANICS AND ENGINEERING, Vol: 60(2) Pp: 263-268 (2017).

#### **D. Lucrări stiintifice publicate in reviste B+, BDI recunoscute CNCSIS**

1. **A.Neag**, T.Canta, Some consideration regarding thixoforming of metal alloys, Revista METALURGIA International, Romanian Metallurgical Foundation, vol.VIII(2003) no.5, pp. 36, ISSN1582-2214

2. **A. Neag**, T. Canta - Some consideration regarding thixoforming of metal alloys, The Annals of "Dunarea de Jos" University of Galati Fascicle IX Metallurgy and Materials Science, ISSN 1453 – 083X NR. II – 2003, pp.33
3. **A. Neag**, I.M.Sas-Boca - Aspecte ale deformării în stare semisolidă, Revista METALURGIA, nr.11, sept., 2004, pag.22, ISSN 0461-9579.
4. M. Pop, **A. Neag**, Theoretical considerations on kinematics parameters during dieless drawing, Rev.Metalurgia nr.5 (2009), p.42,
5. **A. Neag**, M.Pop, Aspects regarding numerical simulation of C35 steel billet during hot upsetting process, Rev.Metalurgia nr.5, p.5, 2010, ISSN 0461-9579
6. M. Pop, **A. Neag**, Numerical study on deformation behavior in dieless drawing process, Rev.Metalurgia nr.5, p.13, 2010, ISSN 0461-9579.
7. M. Pop, **A. Neag**, Aspects regarding implementation of concurrent engineering principles in plastic deformation processes, Rev.Metalurgia nr.5, p.29, 2010, ISSN 0461-9579.
8. **A. Neag**, E. Becker, M. Pop, E. Henrion, R. Bigot, Influence of Experimental Conditions on Material Response During Thixoextrusion Process, ACTA TECHNICA NAPOCENSIS - Series: Applied Mathematics and Mechanics No.54, Vol. II, 2011.
9. M. Pop, **A. Neag**, Implementation of concurrent engineering techniques in hot metal forming, METALURGIA, No.2, 2011, Vol.63, pp.55-59, ISSN: 0461-9579.
10. M. Pop, D. Frunza, **A. Neag**, C. Pavel, Researches on forward extrusion of lead alloy, METALURGIA, No.1, 2012, pp.10-15, ISSN: 0461-9579.
11. M. Pop, **A. Neag**, Dieless drawing – A nonconventional plastic deformation process, METALURGIA, No.2, 2012, pp.5-10 ISSN: 0461-9579.
12. M. Pop, D. Frunza, **A. Neag**, Experimental and numerical aspects regarding lead alloy plastic deformation, Revue Roumaine des Sciences Technique-Série de mécanique appliquée, vol.57, nr.1, 2012.
13. M. Pop, D. Frunza, **A. Neag**, Application of numerical simulation in metal forming processes, METALURGIA, No.3, 2013, pp 14-23, ISSN 0461-9579.
14. **A. Neag**, L. Nistor, Numerical simulation in the design of the forging technology for revolution geometry products, Metalurgia, No.4, 2013, pp 40-47, ISSN 0461-9579.
15. **A. Neag**, V. Favier, R. Bigot, H.V. Atkinson, Analysis by Micromechanical Modeling on Material Flow under Rapid Compression in the Semi-Solid State, Solid State Phenomena (Vol.217 – 218), pp 182-187, DOI: 10.4028/www.scientific.net/SSP.217-218.182, 2015, Prezentata la: 13<sup>th</sup> International Conference on Semi-Solid Processing of Alloys and Composites (S2P 2014), Muscat, Oman, Sep. 15th- 17th, 2014.
16. P. P. Dincu, Ghe. Achimaş, **A. Neag**, A. Trif, Analysis distribution of the equivalent plastic strain, contact pressure and temperature during the metal tubes extrusion, Academic Journal of Manufacturing Engineering, 16(1), pp. 27-32

#### **E. Lucrări științifice prezentate la conferinte internationale**

1. **A. Neag**, T. Canta, N. Cioica, Thixoforming - Consideration about a new solution from the future, 3<sup>rd</sup> Third International Conference on Materials and Manufacturing Technologies: Matehn'02. Cluj-Napoca, 12-14 September 2002.

2. N.Cioica, A. Dragoste, F.Gnandt, T. Canta, **A.Neag**, Considerations on forming of non-ferrous metallic materials by semi-solid injection moulding, 3<sup>rd</sup> Third International Conference on Materials and Manufacturing Technologies: Matehn'02. Cluj-Napoca, 12-14 September 2002.
3. I.M.Sas-Boca, T.Canta, D.Frunza, **A.Neag**, Simularea cu frecare asistata a compactizării pieselor din pulberi metalice, International Conf. ROMAT 2004, Bucureşti (ISBN 973-718-081-X)
4. I. Marian, M. Sas-Boca, **A. Neag**, L. Nistor, FEM analysis in the construction of successive sections in the rhomb-square rolling profiles, Int. Conf. TEME 2011, Univ."Dunărea de Jos" Galați, May 2011.
5. M. Pop, **A. Neag**, Aspects regarding the constitutive equations for FEM analysis of advanced metal forming processes, Int. Conf. TEME 2011, Univ."Dunărea de Jos" Galați, May 2011, Analele Univ. Dunărea de Jos din Galați, Fascicola IX ISSN:1453-083X, No.2, pp. 45-52.
6. M. Pop, D. Frunza, **A. Neag**, F. Popa, Thermomechanical analysis of deformation behaviour in dieless drawing of metallic materials, 5<sup>th</sup> Int.Conf RoPM Advanced Materials, Cluj-Napoca, septembrie 2017, Book of abstract, UTPRESS Cluj-Napoca, ISBN-978-606-737-260-1, pag. 36.

#### **F. Lucrări stiintifice prezentate la conferinte nationale**

1. T. Canta, **A. Neag**, Considerații privind procedeul THIXOFORMING, Conferința Națională de Metalurgie și Știința Materialelor, București, Sept.2001.
2. **A.Neag**, T.Canta, Prelucrarea în stare semisolidă a aliajelor metalice, In: Știință și Inginerie. Lucrările celei de a 2-a Conferințe Naționale "Profesorul Dorin Pavel fondatorul hidroenergeticii românești": Sebeș, 2002. București: Editura Agir, 2002, vol.1, p. 287-292.
3. **A.Neag** – Deformarea aliajelor în stare semisolida, Conferința tehnico-științifică "Profesorul Dorin Pavel – fondatorul hidroenergeticii românești", Sebeș 2004 (ISBN 973-8466-68-7, ISBN 973-8130-82-4, pag.317)
4. **A. Neag** – Aspecte reologice ale deformării în stare semisolidă, Conferința științifică națională "Turnarea și solidificarea metalelor și aliajelor" TSMA 2004, Cluj-Napoca (ISSN 1453-9756)
5. N.Cioica, T.Cătuneanu, R.Vasiu, F.Gnandt, **A.Neag**, Aliaje metalice usoare pentru industria aeronaumatică și spatială, cu structură thixotropică, realizate prin extrudare continuă, Conferința tehnico-științifică "Profesorul Dorin Pavel – fondatorul hidroenergeticii românești", Sebeș 2005.

#### **G. Rapoarte prezentate la seminarile derulate in cadrul proiectelor de cercetare**

- **Adriana Neag**, Raport tehnic de activitate - Modelarea efectelor termice la tixoforjare, prezentat la încheierea contractului bilateral PAI-Brancusi, în cadrul seminarului organizat la Universitatea Tehnică din Cluj, oct.2009.

■ **Adriana Neag**, Influence of Experimental Conditions on Material Response During Thixoextrusion Process, Seminar 4D-POSTDOC - Technological Development in a Sustainable Economy, Universitatea Tehnică „Gheorghe Asachi” din Iași, 2011.

■ **Adriana Neag**, Experimental studies and numerical simulation on thixoextrusion of 7075 aluminium alloy at high solid fraction, Seminar 4D-POSTDOC - Research challenges for sustainable development - Universitatea „Politehnica” din Timisoara, 19-23 martie 2012.

**Cluj-Napoca**

**10.05.2018**

