

Transilvania University of Braşov

Faculty of Materials Science and Engineering

Department of Materials Science

Proposed topic for doctoral studies admission contest – September 2019

Doctoral field Industrial Engineering

Doctoral coordinator Assoc. Prof. Ph.D. eng. Stoicănescu Maria

Topic 1 – Research on special heat treatments applied to high alloyed steels

Recommended bibliography

- GIACOMELLI I., DRUGĂ L., SAMOILĂ C., BOT D-TRU. , Tehnologii neconvenţionale cu transfer de fază, Ed. Lux Libris 2000
- VIEWEG, A., RESSEL, G., PREVEDEL, P., RANINGER, P., & all. Mat. Sci. and Eng., 119, 2016, p. 1-8.
- RUDNEV, V., FETT, G.A., GRIEBEL, A., TARTAGLIA, J., ASM Handbook, Vol.4C, 2014, p. 58 66.
- SUN, Y., BELL, T., Mat. Sci. and Eng.(A), Vol. 140, 1991, p. 419-434
- DULAMITA T., & all., Tehnologia tratamentelor termice (Heat treatment's technology), E.D.P. Bucharest, 1982, p. 100-128.
- Baza de date a Universităţii Transilvania din Braşov

Topic 2 –Studies and research on the control of the secondary phases formation in aluminum alloys

#### Recommended bibliography

- CARCEA, I., ROMAN C.- Aliaje neferoase de turnătorie, Editura Performantica, Iași, 2009
- FELCZAK, G. DE MEY and B. WIĘCEK, Determination of the heat transfer coefficient distribution, Quantitative InfraRed Thermography, 2016, pp 236-241
- OTARAWANNA S., Casting of aluminium alloys, Fundamentals of Aluminium Metallurgy: Production, Processing and Applications, Edited -Roger Lumley in Oxford, U.K., 2012
- WEN, L.H., KOU H.C., LI, J.S., CHANG, H., XUE, X.Y., ZHOU, L., Intermetallics, 17 2009, p.266
- ZHANG, Y., MA, S.G., QIAO, J.W., Met. & Mat., Trans. A, 43A, 2012, p.2625
- SINGH, S., WANDERKA, N., MURTY, B.S., GLATZEL, U., BANHART, J., Acta Materialia, 59, 2011, p.182.
- SAMAEI, A.T., MIRSAYAR, M.M., ALIHA, M.R.M., Engineering Solid Mechanics, 3, 2015, p.1.
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Topic 3 – Research on optimizing the correlation between the characteristics of aluminum alloys and the parameters of technological processes

Recommended bibliography

- J.R. DAVIS, Corrosion of Aluminum and Aluminum Alloys, Ed., ASM International, 1999
- J.R. DAVIS, ASM Specialty Handbook: Aluminum and Aluminum Alloys, Ed., ASM International, 1993
- J.R. DAVIS, Aluminum and Aluminum Alloys, in Metals Handbook Desk Edition, 2nd ed., Ed., ASM International, 1998, p 417–505
- D.G. ALTENPOHL, Aluminum: Technology, Applications, and Environment, 6th ed., The Aluminum Association Inc. and TMS, 1998
- J.E. HATCH, Aluminum: Properties and Physical Metallurgy, Ed., American Society for Metals, 1984
- S.SINGH, WANDERKA, N., MURTY, B.S., GLATZEL, U., BANHART, J., Acta Materialia, 59, 2011, p.182.
- A.T.SAMAEI, MIRSAYAR, M.M., ALIHA, M.R.M., Engineering Solid Mechanics, 3, 2015, p.1.
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19.07.2019

Assoc. Prof. Ph.D. eng. Stoicănescu Maria

