

# LISTA DE LUCRĂRI

## prof. univ. dr. ing. Stelian Constantin STAN

### Lucrari selectate

- 1 S. Stan, M. Chisamera, I. Riposan, M. Barstow. **Applications of thermal analysis to monitor the quality of hypoeutectic cast irons during solidification in sand and metal moulds.** **Journal of Thermal Analysis and Calorimetry**, 2011, DOI: 10.1007/s10973-011-2128-y, Vol.110, No.3, Dec. 2012, pp.1185-1192, Accession Number: **WOS:000311510500021**.ISSN 1388-6150 [print version], 1572-8943 [electronic version]. [ISI-Web of Science/Science Citation Index Expanded], **Q2**
- 2 I. Riposan, S. Stan\*, V.Uta, I.Stefan; **Cast Iron Inoculation Enhanced by Supplementary Oxy-sulfides Forming Elements;** **JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE**, Vol 26 Issue: 9 Pages: 4217-4226; DOI: 10.1007/s11665-017-2869-2; **2017**; **WOS:000411202500007**; ISSN: 1059-9495, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded] **\*Corresponding Author**
- 3 S. Stan, M. Chisamera, I. Riposan, E. Stefan, L. Neacsu, A. M. Cojocaru &I. Stan; **Integrated System of Thermal/ Dimensional Analysis for Quality Control of Gray and Ductile Iron Castings Solidification,** **International Journal of Metalcasting**, DOI 10.1007/s40962-018-0285-5, ISSN 1939-5981, online, november 2018, **WOS:000471614400020**
- 4 S. Stan, M. Chisamera, I. Riposan, L. Neacsu, AM. Cojocaru, I.Stan, **Integrated System of Thermal/Dimensional Analysis for Quality Control of Metallic Melt and Ductile Iron Casting Solidification,** **Journal of Materials Engineering and Performances**, Volume: 27, **2018**, Issue: 10, Pages: 5187-5196, DOI: 10.1007/s11665-018-3303-0, **WOS:000450714400026**, ISSN: 1059-9495, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded]
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- 6 I. Riposan, M. Chisamera, S. Stan\*, **Application of cooling curve analysis in solidification pattern and structure control of grey cast irons;** **JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY**; Volume: 132 Issue: 2 Pages: 1017-1028; DOI: 10.1007/s10973-018-7023-3; **2018**; **WOS:000428957300020**; ISSN: 1388-6150, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded] **\*Corresponding Author**
- 7 Stan S., Chisamera M., Riposan I., Neacsu L., Cojocaru A.M., Stan I.; **Technique Incorporating Cooling & Contraction/Expansion Analysis to Illustrate Shrinkage Tendency in Cast Irons;** ICIR EUROINVENT **2017**; **IOP Conference Series-Mat. Science and Eng.**, Vol: 209; Art. No: UNSP 012017; DOI: 10.1088/1757-899X/209/1/01201; **WOS:000423732100017**; ISSN: 1757-8981
- 8 S. Stan, M. Chisamera, I. Riposan, E. Stefan, M. Barstow. **Solidification Pattern of Un-inoculated and Inoculated Gray Cast Irons in Wedge Test Samples.** AFS Casting Congress, Orlando, Florida, USA, March 2010, Paper 10-010, **Transactions of the American Foundry Association** (AFS), Vol. 118, pp 295-309, 2010 **WOS:000292750800028** [IDS Number: BMA20; ISBN: 978-0-87433-340-4];  
D. Anca, M. Chisamera, S. Stan\*, I. Riposan, **Graphite degeneration in the superficial layer of high Si-ductile iron casting as influence of inoculation and protective coating against sulphur diffusion into the iron melt,** **JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY-JMR&T**, Volume: 8 Issue: 6 Pages: 5160-5170, **WOS:000501576400011**, DOI: 10.1016/j.jmrt. 2019.08.039, 2019, [ISI-Web of Science /Scien. Cit.Index Exp.], ISSN: 2238-7854, **Q1**, **\*Corresponding Author**
- 10 S. Stan, M. Chisamera, I. Riposan, E.Stefan, L. Neacsu, AM. Cojocaru, I.Stan, **Simultaneous thermal and contraction/expansion analyses of cast iron solidification process,** **JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY**, Volume: 138 Issue: 4 Pages: 2529-2540, **WOS:000499703500016**, DOI: 10.1007/s10973-019-08595-w, 2019, [ISI-Web of Science /Scien. Cit.Index Exp.], ISSN: 1388-6150, **Q2**

## A.

### TEZA DE ABILITARE

**ROLUL ANALIZEI TERMO-DIMENSIONALE IN CONTROLUL TOPITURILOR METALICE SI AL SOLIDIFICARII PIESELOR TURNATE**, Universitatea POLITEHNICA din Bucuresti, 2019.

### TEZA DE DOCTORAT

**STUDII ȘI CERCETĂRI PRIVIND INFLUENȚA ALUMINIULUI REZIDUAL ASUPRA GRAFITIZĂRII FONTELOR CENUȘII**, Universitatea POLITEHNICA din Bucuresti, 2014.

## B. CARTI

### B.a. Carti tiparite in edituri centrale

- 1) **S.Stan**, „Notiuni privind controlul de calitate in ingineria procesarii materialelor metalice”, 2019, Editura PRINTECH, ISBN: 978-606-230-947-3, Cod CNC SIS 54, 140 pag.
- 2) I. Riposan, I. Chira, M. Chisamera, L. Sofroni, **S. Stan**. FONTE. In: Tratat de Stiinta si Ingineria Materialelor Metalice, Vol. 3, ASTR-Academia de Stiinte Tehnice din Romania, Ed. AGIR, 2009, ISBN: 978-973-720-261-1, pp. 463-580., Cod CNC SIS 140
- 3) M. Chisamera, I. Riposan, L. Sofroni, **S. Stan**. FABRICAREA PIESELOR DIN FONTA PRIN TURNARE. In: Tratat de Stiinta si Ingineria Materialelor Metalice, Vol. 4, ASTR-Academia de Stiinte Tehnice din Romania, Ed. AGIR, 2010, ISBN: 978-973-720-313-7, p. 534-717, Cod CNC SIS 140
- 4) M.Chisamera, **S.Stan**. s.a. Materiale metalice performante feroase si neferoase, Ed. AOSR, 2011, ISBN 978-606-8371-56-2, 82 pagini
- 5) D.Raducanu, M.Chisamera, P.Toboc, **S.Stan**, Tehnici performante de prelucrari la cald a materialelor metalice, Ed. AOSR, 2011, ISBN 978-606-8371-56-9, 76 pagini
- 6) **S.Stan**, M.Chisamera, F.Stefanescu, s.a Materii prime si materiale folosite in metalurgia extractiva si procesarea materialelor metalice, Ed. AOSR, 2011, ISBN 978-606-8371-56-6, 84 pagini
- 7) P.Toboc, M.Chisamera, **S.Stan** s.a Utilaje si echipamente moderne in metalurgia extractiva si prelucrarea la cald a materialelor metalice, Ed. AOSR, 2011, ISBN 978-606-8371-56-3, 96 pagini
- 8) F.Stefanescu, **S.Stan**, M.Chisamera, s.a Controlul de calitate in metalurgia extractiva si procesarea materialelor metalice, Ed. AOSR, 2011, ISBN 978-606-8371-32-0, 84 pagini
- 9) I.Riposan, **S.Stan**. ISTORIA TEHNICII ROMÂNĂNEȘTI, Vol. I, Istoria mecanicii, a tehnicilor de prelucrare si a constructiilor [Coordonator Dorel BANABIC], Editura Academiei Române, Bucuresti, 2019, Cap. 3, Istoria Metalurgiei, p. 60-110, ISBN 978-973-27-3054-6 [Civilizatia Romaniei Vol. 23]., Cod CNC SIS 164

## C. CULEGERI SI INDRUMARE

### C.1 Manuale didactice/monografii

- 1 **S.Stan**, „Noi aspecte privind inocularea fontelor cenusii”, 2015, UPB, ISBN 978-973-0-19076-2, suport curs, 106 pagini
- 2 I.Riposan, M.Chisamera, **S.Stan**, „Cast Irons”, For Academic Use Only, UPB, ISBN 978-973-0-19083-0, CD-ROM, 2200 pagini
- 3 I.Riposan, M.Chisamera, **S.Stan**, Fonte Modificate si Aliate, suport electronic de curs, <http://sim.curs.pub.ro/>, 112 pagini
- 4 I.Riposan, M.Chisamera, **S.Stan**, Elaborarea si Turnarea Fontelor, suport electronic de curs, <http://sim.curs.pub.ro/>, 175 pagini
- 5 Iuliana Stan, **S.Stan**, “Notiuni privind solidificarea aliajelor turnate”, 2016, UPB, ISBN 978-973-0-21377-5, 100 pag.

## C.2 Indrumare de laborator/aplicații

- S.Stan, Indrumar „Tehnologia Elaborarii Fontelor”, Indrumar pentru proiect, 2015, UPB, ISBN 978-973-0-19689-4, 150 pagini
- 1 Fl.Stefanescu, G.Neagu, I.Stan, S.Stan, “Bazele Teoretice ale Turnarii si Solidificarii aliajelor” Aspecte teoretice si practice, 2015, suport electronic, <http://sim.curs.pub.ro/>, 65 pagini

## D. ARTICOLE SI STUDII DE SPECIALITATE

### I. Articole/Studii publicate in Reviste si Volumele (Proceedings) unor conferinte

#### I.1 Reviste si Proceedings cotate si indexate ISI

##### I.1.1 Reviste cotate ISI [Web of Science/Science Citation Index Expanded].

- 1 I. Riposan, M. Chisamera, S. Stan, T. Skaland. **Graphite Nucleants (Microinclusions) Characterization in Ca/Sr Inoculated Grey Irons.** *Int. Journal of Cast Metal Research*, Vol. 16, No. 1-3, pp.105-111, 2003. **WOS:000186431800020** DOI: 10.1179/136404603225006756, ISSN 1364-0461 [ISI-Web of Science/ Science Citation Index Expanded]. Recenzii/Indexari: ISI, Current Contents Connect SCOPUS, Metals Abstracts CSA/METADEX 2004-51-0359
- 2 I. Riposan, M. Chisamera, S. Stan. **Factors influencing on the microstructure and mechanical properties of as-cast and heat treated 400-18 grade ductile cast iron.** *Int. Journal of Cast Metals Research*, 2007, Vol. 20, No. 2, pp. 64-67. Accession Number: **WOS:000250924600006** DOI: 10.1179/136404607X239717, ISSN 1364-0461 [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS;INSPEC.
- 3 I. Riposan, M. Chisamera, S. Stan, D. White. **Chilling properties of Ba/Ca/Sr inoculated grey cast irons.** *Int. Journal of Cast Metals Research*, 2007, Vol. 20, No.2, pp. 90-97. Accession Number: **WOS:000250924600010** DOI: 10.1179/136404607X239726, ISSN 1364-0461 [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS; INSPEC.
- 4 I. Riposan, M. Chisamera, S. Stan. **Influencing factors on as-cast and heat treated 400-18 grade characteristics.** *CHINA FOUNDRY*, ISSN 1672-6421 [ISI-Web of Science/Science Citation Index Expanded], Vol. 4, no. 4, pp. 300-303, 2007. Accession Number: **WOS:000255392200010** Recenzii/Indexari: SCOPUS
- 5 M. Chisamera, I. Riposan, S. Stan. **Morphological Characterization of SiC and Al<sub>2</sub>O<sub>3</sub> for Particulate Cast Metal Matrix Composites.** *Revista Romana de Materiale - Romanian Journal of Materials*, 2008, 38, (3), pp. 237-243, Accession Number: **WOS:000259098100008** ISSN 1583-3186 [ISI-Web of Science /Scien. Cit.Index Exp.].
- 6 I. Riposan, M. Chisamera, S. Stan. **SiC-Cast Iron Matrix Composite, a New Material for Wear Applications.** *Revista Romana de Materiale / Romanian Journal of Materials*, 2008, 38, (2), pp. 116-122, Accession Number: **WOS:000256898000005** ISSN 1583-3186, [ISI-Web of Science /Science Citation Index Expanded].
- 7 I. Riposan, M. Chisamera, S. Stan, P. Toboc, C. Ecob, D. White. **Al,Zr-FeSi Preconditioning of Grey Cast Irons.** *Materials Science and Technology*, 2008, Vol. 24, No. 5, pp. 578-584, Accession Number: **WOS:000257140000010** DOI: 10.1179/174328408X298842, ISSN 0267-0836, [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS; Compendex; INSPEC.
- 8 M. Chisamera, I. Riposan, S. Stan, D. White, G. Grasmio. **Graphite Nucleation Control in Grey Cast Iron.** *International Journal of Cast Metals Research*, December 2008, Vol. 21, No 1-4, pp. 39-44. Accession Number: **WOS:000261010000009** DOI: 10.1179/136404608X361639, ISSN 1364-0461, [ISI-Web of Science/Science Citation Index Expanded]. The 10th Asian Foundry Congress (AFC-10), Nagoya, Japan, May 2008, pp.180-185. Recenzii/Indexari: SCOPUS,
- 9 I. Riposan, M. Chisamera, S. Stan, C. Ecob, D. Wilkinson. **Role of Al, Ti, Zr in Grey Iron Preconditioning/Inoculation.** *Journal of Materials Engineering and Performances*, Vol. 18 (1), February 2009, pp. 83-87. Accession Number: **WOS:000263063400014** DOI: 10.1007/s11665-008-9260-2, ISSN 1059-9495, [ISI - Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
- 10 S. Stan, M. Chisamera, I. Riposan. **Solidification Pattern of Hypoeutectic Grey Irons in Wedge Test Samples.** *Metalurgia International*, Vol. XIV, 2009, Special Issue No. 2, pp. 27-30, Accession Number: **WOS:000265001400006** ISSN 1582-2214 [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
- 11 M. Chisamera, I. Riposan, S. Stan, D. White. **Influence of residual aluminium on solidification pattern of ductile iron.** *International Journal of Cast Metals Research*, Vol. 22, No. 6, 2009, pp. 401-410. **WOS: 000271254100001**, DOI: 10.1179/174313309X436619, ISSN 1364-0461, [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
- 12 M. Chisamera, I. Riposan, S. Stan, E. Stefan, G. Costache. **Thermal analysis control of in-mould and ladle inoculated grey cast irons.** *CHINA FOUNDRY*, Vol. 6, No. 2, pp. 145-151, 2009. Accession Number: **WOS:000266666800010** ISSN 1672-6421 [ISI-Web of Science/Science Citation Index]. Recenzii/Indexari: SCOPUS
- 13 I. Riposan, M. Chisamera, S. Stan, D. White. **Complex (Mn,X)S compounds - major sites for graphite nucleation in grey cast iron.** *CHINA FOUNDRY*, Vol. 6, No. 4, 2009, pp. 352-357. Accession Number: **WOS:000272457700011** ISSN 1672-6421, [ISI-Web of Science/Science Citation Index Expanded].
- 14 I. Riposan, M. Chisamera, S. Stan. **Performance of heavy ductile iron castings for windmills.** *CHINA FOUNDRY*, Vol. 7, No. 2, 2010, pp. 163-170. Accession Number: **WOS:000278107700012**, ISSN 1672-6421, [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
- 15 I. Riposan, M. Chisamera, S. Stan, C. Hartung, D. White. **Three-Stage Model for the Nucleation of Graphite in Grey Cast Iron.** *Materials Science and Technology*, Vol. 26, No. 12, pp. 1439-1447, 2010 Accession Number: **WOS:000284688000005** [published online July 28, 2010, DOI: 10.1179/026708309X12495548508626] ISSN 0267-0836, [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS; Compendex; INSPEC
- 16 I. Riposan, M. Chisamera, S. Stan, P.Toboc, G. Grasmio, D. White, C. Ecob, C. Hartung. **Benefits of Residual Aluminum in**

- Ductile Iron.** *Journal of Materials Engineering and Performances*, Vol. 20 (1), 2011, pp. 57- 64, **WOS:000286212500007** DOI: 10.1007/s11665-010-9640-2 ISSN 1059-9495, [published online April 16, 2010, JMEPEG \_ASM International DOI: 10.1007/s11665-010-9640-2] [ISI - Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
- 17 M. Chisamera, I. Riposan, **S. Stan**, P. Toboc, T. Skaland, D.White. **Shrinkage Evaluation in Ductile Iron as Mold / Inoculant Type Influence.** *International Journal of Cast Metals Research*, Vol. 24, No. 1, February 2011, pp. 28-36, Accession Number: **WOS:000287299700005** DOI: 10.1179/136404610X12816241546618, ISSN 1364-0461 [ISI-Web of Science/Science Citation Index Expanded].
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  - 19 M. Chisamera, I. Riposan, **S. Stan**, C. Militaru, I. Anton, M. Barstow. **Inoculated Slightly Hypereutectic Gray Cast Irons.** *Journal of Materials Engineering and Performances* [DOI: 10.1007/s11665-011-9907-2], On-line First, 30 March 2011; Vol. 21, No. 3, 2012, pp. 331-338, Accession Number: **WOS:000301798500006** ISSN 1059-9495, [ISI - Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS
  - 20 M. Chisamera, I. Riposan, **S. Stan**, M. Barstow. **Structure Characteristics of Iron Powder Treated Slightly Hypereutectic Grey Irons.** *International Journal of Cast Metals Research*, 2011, Vol. 24, No. 6, pp. 370-377. **WOS:000296972600008** [Publication date: 2011-10-01; Accepted 14.03.2011; On-line first 05.10.2011], DOI 10.1179/1743133611Y.0000000010, ISSN 1364-0461 [ISI-Web of Science/Science Citation Index Expanded].
  - 21 I. Riposan, M. Chisamera, **S. Stan**, M. Barstow. **Improving chill control in iron powder treated slightly hypereutectic grey cast irons.** *CHINA FOUNDRY*, Vol. 8, No. 2, pp. 228-234, 2011. Accession Number: **WOS:000291401200014** ISSN 1672-6421, [ISI-Web of Science/Science Citation Index Expanded].
  - 22 **S. Stan**, M. Chisamera, I. Riposan, N. Ivan, M. Barstow. **Iron Powder Treated Gray Irons - Critical Shape Characteristics for Graphite Nuclei.** *Journal of Materials Engineering and Performances* [Accepted 08.11.2011]; DOI: 10.1007/s11665-011-0081-3; Online First: 02.12.2011; Volume 21, Issue 8 (2012), Page 1793-1799 **WOS:000306549400028** ISSN 1059-9495 [ISI - Web of Science/Index].
  - 23 **S. Stan**, M. Chisamera, I. Riposan, M. Barstow. **Applications of thermal analysis to monitor the quality of hypoeutectic cast irons during solidification in sand and metal moulds.** *Journal of Thermal Analysis and Calorimetry*, 2011, DOI: 10.1007/s10973-011-2128-y, Vol.110, No.3, Dec. 2012, pp.1185-1192, Accession Number: **WOS:000311510500021** ISSN 1388-6150 [print version], 1572-8943 [electronic version]. [ISI-Web of Science/Science Citation Index Expanded].
  - 24 I. Riposan, M. Chisamera, **S. Stan**. **Control of Surface Graphite Degeneration in Ductile Iron for Windmill Applications.** *International Journal of Metalcasting*, Volume 7, Issue 1, 2013, pp.9-20, ISSN 1939-5981, **WOS:000314076400002** [ISI-Web of Science/Science Citation Index Expanded, Materials Science Citation Index, Current Contents/Engineering, Computing & Technology]. Recenzii/Indexari: Chemical Abstracts, ProQuest/CSA Cambridge Scientific, EBSCO, SCOPUS.
  - 25 I. Riposan, M. Chisamera, **S. Stan**, M. Barstow. **Identifying chill tendency of cast iron melts by thermal analysis.** *International Journal of Cast Metals Research*, accepted 21.11.2012, online 31 January 2013, VOL 26, NO 3, pp.152-159, 2013. DOI: 10.1179/1743133612Y.0000000048, ISSN 1364-0461, **WOS:000318683000005** [ISI-Web of Science/Science Citation Index Expanded].
  - 26 I. Riposan, M. Chisamera, **S. Stan**, **Enhanced quality in electric melt grey cast irons,** *ISIJ International*, Vol. 53, 2013, No. 10, pp.1683-1695, **WOS: 000326210900001**, DOI: <http://dx.Doi.org/10.2355/isijinternational.53.1683>, ONLINE ISSN: 1347-5460 PRINT ISSN: 0915-1559, [ISI-Web of Science/Science Citation Index Expanded]. Recenzii/Indexari: SCOPUS; Compendex; INSPEC
  - 27 I. Riposan, M. Chisamera, V. Uta and **S. Stan**, R. Naro and D. Williams, **The Importance of Rare Earth Contribution from Nodulizing Alloys and Their Subsequent Effect on the Inoculation of Ductile Iron,** *International Journal of Metalcasting*, Volume 8, Issue 2, 2014, pp.65-80; Accession Number: **WOS:000335609500008**; Document Type:Article; [ISI-Web of Science/Science Citation Index Expanded, Materials Science Citation Index, Current Contents/Engineering, Computing & Technology]. Recenzii/Indexari: Chemical Abstracts, EBSCO, SCOPUS.
  - 28 I. Riposan, M. Chisamera, **S. Stan**, **New Developments in High Quality Grey Cast Irons,** *CHINA FOUNDRY*, Vol. 11, No. 4, 2014, pp. 351 - 364. Accession Number: **WOS:000341768500015**, ISSN 1672-6421, [ISI-Web of Science/Science Citation Index Expanded].
  - 29 M. Chisamera, N. Ivan, I. Riposan, **S. Stan**. **Iron casting skin management in no-bake mould – Effects of magnesium residual level and mould coating.** *CHINA FOUNDRY*, Vol.12 No.3, 2015, pp. 222-230. **WOS: 000360204000010**, ISSN 1672-6421, [ISI-Web of Science/Science Citation Index Expanded]
  - 30 I. Riposan, V.Uta, **S\*. Stan**, **Inoculant enhancer to increase the potency of Ca-FeSi alloy in ductile cast iron;** *METALLURGICAL RESEARCH & TECHNOLOGY*, Volume: 114 Issue: 4 Article Number: 416 Published: 2017, DOI: 10.1051/metal/2017041 **WOS:000408697600016**, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded], **\*Corresponding Author**
  - 31 I.Stan, **S. Stan**. **INFLUENCE OF UNIDIRECTIONAL SOLIDIFICATION IN BRIDGMAN FURNACE ON THE MECHANICAL BEHAVIOR OF A CAST ALUMINUM ALLOY,** *Scientific Bulletin of University „Politehnica” of Bucharest , Series B: Chemistry and Materials Science*, 2017 ISSN 1454-2331, **WOS:000403090600014** Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded]
  - 32 I. Riposan, **S. Stan\***, V.Uta, I.Stefan; **Cast Iron Inoculation Enhanced by Supplementary Oxy-sulfides Forming Elements;** *JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE*, Vol 26 Issue: 9 Pages: 4217-4226; DOI: 10.1007/s11665-017-2869-2; 2017; **WOS:000411202500007**; ISSN: 1059-9495, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded] **\*Corresponding Author**
  - 33 I. Riposan, M. Chisamera, **S. Stan\***, **Application of cooling curve analysis in solidification pattern and structure control of grey cast irons;** *JOURNAL OF THERMAL ANALYSIS AND CALORIMETRY*; Volume: 132 Issue: 2 Pages: 1017-1028; DOI: 10.1007/s10973-018-7023-3; 2018; **WOS:000428957300020**; ISSN: 1388-6150, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded] **\*Corresponding Author**
  - 34 **S. Stan\***, M. Chisamera, I. Riposan, L. Neacsu, AM. Cojocar, I.Stan, **Integrated System of Thermal/Dimensional Analysis for**

- Quality Control of Metallic Melt and Ductile Iron Casting Solidification, Journal of Materials Engineering and Performances**, Volume: 27, 2018, Issue: 10, Pages: 5187-5196, DOI: 10.1007/s11665-018-3303-0, **WOS:000450714400026**, ISSN: 1059-9495, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded]
- 35 **S. Stan\***, M. Chisamera, I. Riposan, I.Stan, **Solidification Characteristics of Silicon-Alloyed Ductile Cast Irons, JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE**, Volume: 28 Issue: 1 Pages: 278-286, DOI: 10.1007/s11665-018-3828-2, JAN 2019, **WOS:000455266500027**, ISSN: 1059-9495, Recenzii/Indexari: [ISI-Web of Science/Science Citation Index Expanded]
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38. I. Riposan, M. Chisamera, **S. Stan**. Compacted Graphite Cast Iron. Caterpillar Meeting, Caterpillar Technical Center, Peoria, Illinois, USA, April 2009.
39. I. Riposan, M. Chisamera, **S. Stan**. Melt Chemistry and Controlled Graphite Growth in grey Cast Iron. Cast Iron European Network Meeting, February 25-26, 2010, Jonkoping, Sweden.
40. M. Chisamera, I. Riposan, **S. Stan**. Graphite Morphology Control and Properties of Compacted Graphite Cast Iron. Cast Iron European Network Meeting, February 25-26, 2010, Jonkoping, Sweden.
41. I. Riposan, M. Chisamera, **S. Stan**. Solutions for production of high performance heavy ductile iron castings for windmills in Romania. WEC Regional Energy Forum (FOREN 2010), June 13 to 17, 2010, Neptun-Olimp, Romania
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43. I. Riposan, M. Chisamera, **S. Stan**, D. White, C. Hartung. How to Control Graphite Nucleation and Type-A Graphite Formation in Gray Cast Iron. AFS Casting Congress, Schaumburg, IL, USA, April 2011, Panel Paper 11-131
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48. I. Riposan, M. Chisamera, **S. Stan**. 400 – 18 Ductile Iron Grade Production Optimization. 52<sup>nd</sup> INTERNATIONAL FOUNDRY CONFERENCE PORTOROŽ 2012, September 12-14, 2012, Portoroz, Slovenia, Paper 09, Plenary Lectures.
49. I. Riposan, **S. Stan**, V. Uta, M. Chisamera. World Rare Earth Crisis will Continue to Affect Cast Iron Industry. Cast Iron European Network Meeting, 17-18.04.2013, Kristiansand, Norway, Paper 08.
50. I. Riposan, M. Chisamera, **S. Stan**. ENHANCED QUALITY IN ELECTRIC MELT GREY IRONS, TYPICALLY FOR AUTOMOTIVE INDUSTRY CASTINGS. 13th INTERNATIONAL FOUNDRYMEN CONFERENCE – May, 16th – 17th, 2013, Opatija, Croatia, Paper Plenary-2.
51. I. Riposan, M. Chisamera, V. Uta, **S. Stan**, R.L. Naro, D.C. Williams. The Importance of Rare Earth Contribution from Nodulizing Alloys and their Subsequent Effect on the Inoculation of Ductile Iron. 2013 Keith Millis Symposium on Ductile Cast Iron, October 15 – 17, 2013 Nashville, Tennessee, USA. Paper #1715. Published by the American Foundry Society, Schaumburg, IL USA, pp. 256 – 275; ISBN 978-0-87433-419-7.
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53. I. Riposan, **S. Stan**, M. Chisamera. Solutions for Production of High Performance Heavy Ductile Iron Castings, Typically for Windmills. 14th INTERNATIONAL FOUNDRYMEN CONFERENCE – May, 15th – 16th, 2014, Opatija, Croatia, Invited paper No. 1.
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55. I. Riposan, V. Uta, **S. Stan**, M. Chisamera, M. Firican, R. Naro, D. Williams. Inoculant enhancer to increase the potency of Ca-FeSi alloy in ductile iron produced from the low rare earth containing master alloy. 10<sup>th</sup> International Symposium on the Science and Processing of the Cast iron - SPCI-10, 10-13 November 2014, Mar del Plata, Argentina, Paper P25.
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58. I. Riposan, M. Chisamera, **S. Stan**, V. Uta, I.C. Stefan, M.C. Firican, R.L. Naro, D.C. Williams Sulphur in cast irons – friend or enemy? AFS International Ferrous Melting Conference, October 7-9, 2015 NASHVILLE, TN, USA, Paper 03.[CD-Proceedings]
59. I. Riposan, M. Chisamera, **S. Stan**, V. Uta, I.C. Stefan, M.C. Firican, R.L. Naro, D.C. Williams. Increasing the Inoculant Potency of Commercial Inoculating Alloys in Induction Melted Grey Iron and Ductile Iron Produced from the low Rare Earth Containing Master Alloy. The Egyptian International Foundry Symposium [EGYCAST 2015], 23-26 October 2015, Sharm El-Sheikh, EGYPT, Invited Paper 01. [CD-Proceedings]
60. I. Riposan, M.Chisamera, **S. Stan**, I.C. Stefan, M.C. Firican, V. Uta. Sulphur – Key Role in Graphite Formation in Cast Irons-a review. 15<sup>th</sup> INTERNATIONAL FOUNDRYMEN CONFERENCE – May, 11th – 13th, 2016, Opatija, Croatia, Paper Plenary-1.[CD-Proceedings]
61. I. Riposan, M. Chisamera, **S. Stan**, I.C.Stefan, M.C. Firican, V.Uta. Control of Cast Iron Solidification by Thermal Analysis – Major Influencing Factors Review. 56<sup>th</sup> INTERNATIONAL FOUNDRY CONFERENCE PORTOROŽ 2016, 14-16 September 2016, Portoroz, Slovenia, Paper 09, Plenary Lectures [CD-Proceedings].
62. I. Riposan, I.C.Stefan, M.C. Firican, V.Uta, **S. Stan**, M. Chisamera. Thermal Analysis – an Efficient Possibility to Evaluate the Iron Castings Solidification Parameters. 57th International Scientific Conference”Solidification and Crystallization of Metals 2016”. 19 - 21 September, 2016, Kielce, Poland, Plenary Lecture [CD-Proceedings].
63. I. Riposan, M. Chisamera, **S. Stan**. Graphite nucleation in industrial cast irons – influence factors. CMRDI-Symposium, Central Metallurgical Research and Developments Institute, Febr. 2017, Cairo, Egypt, Invited Speaker [CMRDI – CS – Proceedings].
64. I. Riposan, **S. Stan**, V. Uta, I. Stefan. Cast Iron Inoculation Enhancing by Oxy – Sulphides Forming Elements Contribution. 2<sup>nd</sup> South African Metal Casting Conference & WFO [World Foundry Organization] Technical Forum, 14 – 17 March 2017 at Emperors Palace in Kempton Park, Gauteng, South Africa. [CD-Proceedings, Paper No. 7]
65. M. Chisamera, **S. C. Stan**, I. Riposan. Solidification Control by Simultaneous Cooling and Contraction / Expansion Curve Analysis in Cast Irons. 9<sup>th</sup> European Cast Iron Meeting 2017, Verona, Italia, Paper No. 10 [CD-Proceedings]
66. **S. Stan**, M. Chisamera, I. Riposan. From Thermal to Simultaneous Cooling / Contraction Curve Analysis in Ductile Iron Quality Control. 16<sup>th</sup> International Foundry Conference, May 2017, Opatija, Croatia, Plenary Lecture [CD-Proceedings]
67. **S.C. Stan**, M. Chisamera, I. Riposan. High Performance Cast Iron Matrix Composite – Solidification Pattern Control by Thermal Analysis. Proceedings of the 7<sup>th</sup> International Conference on Mechanics and Materials in Design, Albufeira/Portugal 11-15 June 2017. Editors J.F. Silva Gomes and S.A. Meguid. Publ. INEGI/FEUP (2017) -1263- PAPER REF: 6723 , pp. 1263-1264, ISBN 978-989-98832-6-0., SCOPUS
68. I. Riposan, M. Chisamera, **S. Stan**. Contribution on Graphite Formation in Cast Irons. International Symposium on the Science and Processing of Cast Iron [SPCI – XI], 4 – 7 September 2017, Jonkoping, Sweden. [CD-Proceedings, Session 2A, Paper No. 1]
69. **S. Stan**, M. Chisamera, I. Riposan. Solidification Control by a Dual Technique: Simultaneous Cooling and Contraction / Expansion Curves Analysis. International Symposium on the Science and Processing of Cast Iron [SPCI – XI], 4 – 7 September 2017, Jonkoping, Sweden. [CD-Proceedings, Session 12, Paper No. 4]
70. I. Riposan, M. Chisamera, **S. Stan**. Control of Graphite Formation in Commercial Cast Irons. 49<sup>th</sup> International October Conference on Mining and Metallurgy, 18 – 21 October, 2017, Bor Lake, SERBIA, Session 1, Section Lecture [CD-Proceedings]
71. I. Riposan, M. Chisamera, **S.C. Stan**. OVERVIEW ON MODIFICATION AND INOCULATION OF CAST IRON. EGYCAST 2017-Arabian Foundry Congress, Oct. 2017, Sharm El-Sheikh, EGYPT, Invited Speaker [CD-Proceedings, Paper No. 1]
72. I. Riposan, **S. C. Stan**, M. Chisamera, E.L. Neacsu, A.M. Cojocar. Solidification Control of High-Si Ductile Cast Irons. ICMSR-2017, International Conference on Materials Science and Research, Nov. 16 – 18, 2017, Dubai, UAE [CD-Proceedings]; Revista Madridge Journal of Nanotechnology and Nanoscience [open access journal], Volume 2, Issue 3, Doi: <http://dx.doi.org/10.18689/MJNN2017.A1.002>.
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74. Riposan, I., Chisamera, M., Stan, S., The role of compounds in graphite formation in cast iron - A review, Materials Science Forum, 925 MSF. 2018, pp. 3-11, SCOPUS
75. Stan, S., Riposan, I., Chisamera, M., Stan, I., Solidification characteristics of silicon alloyed ductile cast irons, Proceedings 73rd World Foundry Congress, 23-27 Spet. 2018, Krakow, Poland, Paper Polonia, Paper 0011, pp. 21-22, SCOPUS
76. I.Stan, **S.Stan**, M.Chisamera, I.Riposan, STRUCTURE CHARACTERISTICS OF SILICON ALLOYED DUCTILE CAST IRONS, 58th INTERNATIONAL FOUNDRY CONFERENCE, September 12 - 14, 2018, Portoroz, SLOVENIA, Plenary Lecture 7, BDI: SCOPUS
77. Iuliana Stan, Tiberiu Melencu, Iulian Riposan, **Stelian Stan**, AUTOMOTIVE CATALYST – PAST, PRESENT AND FUTURE, Proceedings 20th International Conference Materials, Methods & Technologies, 25.06-1.07.2018, Elenite, Bulgaria.

78. I. Riposan, M. Chisamera, S. Stan, The Role of Compounds in Graphite Formation in Cast Iron-a Review, Materials Science Forum, 2018, Volume 925, pp. 3-11, ISSN 0255-5476, DOI 10.4028/www.scientific.net/MSF.925.3, Edited by A. Dioszegi, VL Diaconu, A.E.W. Jarfors, 11th Science and Processing of Cast Iron - XI Conference, Sept. 2017, Jonkoping Sweden, BDI: SCOPUS, El Compendex, Inspec, SCImago, Chemical Abstracts Services, ProQuest, Index Copernicus Journal Master List
79. Iulian Riposan, Stelian Stan, Mihai Chisamera; HIGH Si / Si-Mo DUCTILE CAST IRONS; PROCEEDINGS BOOK 17th INTERNATIONAL FOUNDRYMEN CONFERENCE, Hi-tech casting solution and knowledge based engineering; Opatija, May 16th – 18th, 2018, Croatia; [CD-Proceedings Book, ISBN 978-953-7082-31, Paper. No. 3] Special Plenary Lecture Section, BDI: SCOPUS
80. Tiberiu Melencu, Iulian Riposan, Stelian Stan, Iuliana Stan, AUTOMOTIVE CATALYST – RECYCLING OF RARE EARTH ELEMENTS, Proceedings Circular Materials Conference, 6.03-9.03.2018, Goteborg, Suedia

#### **I.4.2. Manifestari stiintifice internationale organizate in Romania**

1. M. Chisamera, I. Riposan, **S. Stan**, T. Skaland. Cooling Curves Analysis of the Ca/Sr Overinoculated Grey Irons, at Lower Initial Silicon Content. SoCaS-The Science of Casting and Solidification International Conference, Brasov, Romania, 28-31.05.2001, pp. 330-335.
2. I. Riposan, M. Chisamera, **S. Stan**, D. White. Chill Tendency of Ba/Ca/Sr Inoculated Hypoeutectic Grey Cast Irons. Bramat 2007, Int. Conference on Mat. Science & Eng., Febr. 2007, Brasov, Romania, (ISSN 1223-9631).
3. M. Chisamera, **S. Stan**, I. Riposan, E. Stefan, G. Costache. Thermal Analysis of Inoculated Grey Cast Iron. UGALMAT 2007, Galati, Romania, Oct. 2007, Tehnologii si Materiale Avansate, Galati University Press, Vol.1, pp. 17-23 (ISSN 1843-5807).
4. I. Riposan, M. Chisamera, **S. Stan**. Active Elements in Graphite Nucleation in Grey Cast Iron. International Conference "Advanced Technologies and Materials, UGALMAT-2009, 22-23.10.2009, Galati, Romania.
5. I. Riposan, M. Chisamera, **S. Stan**. New Developments in High Quality Grey Cast Irons-a Review. International Conference "ARTCAST2010" May 14-15, 2010, Galati, Romania.
6. M. Chisamera, I. Riposan, **S. Stan**, C. Militaru, I. Anton, M. Barstow. Structural Characteristics of Inoculated Slightly Hypereutectic Grey Cast irons. 1<sup>st</sup> International Conference on Advances in Engineering and Management, ADEM 2010, Drobeta-Turnu Severin, May 19-21, 2010.
7. I. Riposan, M. Chisamera, **S. Stan**. Graphite Nucleation in Grey Cast Iron– a Review. International Symposium on Advanced Engineering & Applied Management – 40<sup>th</sup> Anniversary in Higher Education (1970-2010), Hunedoara, November 4-5, 2010.
8. I. Riposan, M. Chisamera, **S. Stan**, M. Barstow. Chill characteristics of iron powder treated slightly hypereutectic grey cast iron. BRAMAT 2011, Int. Conference on Mat. Science & Eng., February 24-26, 2011, Poiana Brasov, Romania, (ISSN 1223-9631).
9. I. Riposan, M. Chisamera, **S. Stan**, M. Barstow. Structure Characteristics of Eutectic – Slightly Hypereutectic Commercial Grey Cast Irons. The 8<sup>th</sup> International Congress in Materials Science and Engineering, ISSIM 2011, May 26-29, 2011, Iasi, Romania.
10. D. White, I. Riposan, M. Chisamera, **S. Stan**. HETEROGENEOUS GRAPHITE NUCLEATION SITES IN DUCTILE IRON. International Conference "Advanced Technologies and Materials, UGALMAT-2011, 21-22.10.2011, Galati, Romania
11. I. Riposan, **S. Stan**, V. Uta. Evoluția producției mondiale de piese turnate – Realități și previziuni / World Metalcasting Production Evolution - Facts & Forecast. CNT21-International Foundry Conference, June 2012, Iasi, Romania, Paper 01.
12. I. RIPOSAN, V. UTA, M. FIRICAN, **S. STAN**, M. CHISAMERA, R. NARO, D. WILLIAMS. **WORLD CRISIS OF RARE EARTH – IMPACT ON DUCTILE IRON PRODUCTION**, The VI<sup>th</sup> International Conference UgalMat2014, MAY 29 - 31, 2014, Galati – Romania, Invited Paper No. 2.
13. I. Riposan, **S. Stan**. Evoluția producției mondiale de piese turnate – Realități și previziuni [World Metalcasting Production Evolution - Facts & Forecast], The 22<sup>nd</sup> International Foundry Conference, June, 4<sup>th</sup> to 6<sup>th</sup>, 2014, Cluj-Napoca, Romania, Invited Paper No. 1.
14. **S.Stan**. Fierul Vechi – trecut, prezent si viitor, Conferinta Societății Române de Metalurgie (SRM) ediția a VIII-a / 2000, Premiul I al Societății Române de Metalurgie (SRM) la Concursul național de creație științifico-tehnică ediția a VIII-a / 2000
15. **S C Stan**, M Chisamera, I Riposan, E L Neacsu and A M Cojocaru. Structure characteristics of silicon alloyed ductile cast iron. Advanced Materials and Structures (AMS'18) Conference, March 28-31, 2018, Timisoara, ROMANIA. IOP Publishing, IOP Conf. Series: Materials Science and Engineering 2018 Recenzii/Indexari: Conference Proceedings Citation Index – Science (CPCI-S) (Thomson Reuters, Web of Science), Scopus, Compendex, Inspec, INIS (International Nuclear Information System), Chemical Abstracts, NASA Astrophysics Data System, Polymer Library.
16. **S. Stan**, M. Chisamera, I. Riposan, E. Stefan, L. Neacsu, A. M. Cojocaru, I. Stan; Control of Inoculation Effects in Ductile Cast Irons by Thermal Analysis; Proceeding 12th European Symposium on Thermal Analysis and Calorimetry (ESTAC12), Brasov, Romania, August 2018, Paper OP1.27, BDI: SCOPUS
17. E.L. Neacsu, I. Riposan, **S. Stan**; Control of Carbides to Graphite Transition in Grey Cast Irons by Thermal Analysis; Proceeding 12th European Symposium on Thermal Analysis and Calorimetry (ESTAC12), Brasov, Romania, August 2018, Paper PS1.162, BDI: SCOPUS

18. A. M. Cojocaru, S. Stan, I. Riposan; Control of Inoculation Effects in Ductile Cast Irons by Thermal Analysis; Proceeding 12th European Symposium on Thermal Analysis and Calorimetry (ESTAC12), Brasov, Romania, August 2018, Paper PS1.161, BDI: SCOPUS
19. I. Riposan, V. Uta, I. Stefan, M. Firican, M. Chisamera, S. Stan, Politehnica University of Bucharest, ROMANIA; R.L. Naro, D.C. Williams, ASI International, LTD, Cleveland, Ohio, USA. Cast iron inoculation enhancing by oxy – sulphides forming elements contribution. BRAMAT 2015, 9<sup>th</sup> International Conference on Materials Science and Engineering. March 5-7, 2015, Brasov, Romania, Plenary Paper No. 12.
20. I. Riposan, M. Chisamera, S. Stan, V. Uta, I.C. Stefan, M.C. Firican, R.L. Naro, D.C. Williams. Demystifying the Effects of Sulphur in Cast Irons. ROMANIAN FOUNDRY CONFERENCE AND EXHIBITION WITH INTERNATIONAL PARTICIPATION, 23<sup>rd</sup> EDITION, 22 – 24 June 2016, Alba Iulia, Romania, Plenary Paper No. 1.
21. I. Riposan, M. Chisamera, S. Stan. Contribution to the Graphite Formation Mechanism in Cast Irons Melted and Solidified in Industrial Conditions. 6<sup>th</sup> International Conference on Materials Science and Technologies – RoMat 2016, November 09 - 12, 2016, Bucharest, Romania, Keynote Paper, No. 1, Keynote Session K1.

## **F. CONTRACTE CERCETARE/MOBILITATI**

### **Director/Responsabil proiecte naționale, Contracte mobilitati UEFISCDI**

- 1 “Sistem Integrat de Analiză termică / Dimensională (ISTAQ) destinat controlului topiturilor metalice și solidificării pieselor turnate” ” (cod PN-III-P2-2.1-PED-2016-1793, acronim ISTAQ), 18 luni, Director
- 2 Cercetari privind realizarea prin turnare a materialelor compozite cu matrice metalica particulare cu adaosuri ceramice de fabricatie indigena. Contract nr. 58-92-14/1992. IPB-Min.Invat. si Stiintei, 1992 -1994, 3 ani, Director
- 3 Recuperarea elementelor utile din materialele compozite cu matrice metalica, Contract 619/96-831/1997, Tema B3; 591/98/I, Tema A5; 273/99/II, Tema A2, MCT/ANSTI – UPB, 1997-1999, 3 ani, Director
- 4 Cercetari privind obtinerea materialelor compozite cu matrice metalica si posibilitati de reciclare a acestora, Contract 619/96-273/99/II, Tema B4; 130/I/2000, Tema A4; MCT/ANSTI – UPB, 1999 - 2000, 2 ani, Director
- 5 Cercetari privind recuperarea si re folosirea zgurelor de la prelucrarea cuprului la obtinerea de amestecuri folosite la sudarea aluminotermica a cuprului. Contract 619/96, Tema B3; 460/I/1997, Tema A3; 591/98/I, Tema A1, MCT/ANSTI – UPB, 1996 - 1998., 3 ani, Director
- 6 Cercetari privind recuperarea si re folosirea spanului din aliaje feroase la modificarea si alierea fontelor; Contract 619/96, Tema B5; 460/1997, Tema A5; MCT/ANSTI – UPB, 1996 – 1997, 2 ani, Director
- 7 Analize structuri de solidificare – Contract colaborare nr.308/2007 la contractul CEEX300/2006, 2007, Responsabil
- 8 Grant Mobilitati, MC UEFISCDI, nr. 172, 6 luni, Director
- 9 Grant Mobilitati, MC UEFISCDI, nr. 173, 6 luni, Director
- 10 Grant Mobilitati, MC UEFISCDI, nr. 207, 6 luni, Director
- 11 Grant Mobilitati, MC UEFISCDI, nr. 227, 6 luni, Director

### **Membru în echipă la proiecte internaționale**

- 1 Graphite Nucleation in Grey Cast Irons. Contract international, 1998-1999, UPB/CEMS-ELKEM ASA Research, Norvegia
- 2 Grey Iron Inoculation Mechanisms. Contract international, 2000, UPB/CEMS-ELKEM ASA Research, Norvegia.
- 3 Shrinkage Evaluation in Ductile Iron. Contract international, 2001-2002, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia
- 4 Effects of Al, Zr, and Ti in the nucleation process for grey iron. Contract international Nr. 1, 2003, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 5 Principal nucleation sites for ductile iron. Contract international Nr. 2, 2003, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 6 Principal differences in microparticles for Mg vs. MgFeSi treated ductile irons. Contract international Nr. 3, 2003, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 7 Investigation of the optimum Al-content in grey iron as graphitizing influence. Contract international Nr. 1, 2004, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 8 Investigation of the fundamental nucleation effects of Zr in grey iron. Contract international Nr. 2, 2004, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 9 Effects of Ba in comparison to Ca and Sr in grey iron. Contract international Nr. 3, 2004, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
- 10 Role of Aluminium in ductile iron. Contract international Nr. 1, 2005, UPB/CEMS-ELKEM ASA

- Foundry Products/Research, Norvegia.
- 11 Effects of rare earth's in nucleation of (low sulphur) grey iron. Contract international Nr. 2, 2005, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
  - 12 Calcium-Barium interactions in inoculants. Contract international Nr. 3, 2005, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia
  - 13 RE Inoculants in Low Sulphur Grey Iron. Contract international, Project ELKEM 52155, 2006-2007, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia
  - 14 (Ca + Ba) Inoculants in Low Sulphur Grey Iron. Contract international, Project ELKEM 52157, 2006-2007, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.
  - 15 SiSiCAR80 Application in Cast Iron Industry. Contract international Nr. 807, 2007, UPB/CEMS-Metalkraft AS, Norvegia.
  - 16 Representative Inoculants Comparison in Low and Medium Sulphur Grey Irons. Contract international, Project ELKEM 52155-52157/2008-1, 2008-2010, UPB/CEMS-ELKEM ASA Foundry Products/Research, Norvegia.

#### **Membru în echipă la proiecte naționale**

- 1 Cercetari privind realizarea prin turnare a materialelor compozite cu matrice metalica particulata cu adaosuri ceramice de fabricatie indigena. Contract nr. 58-92-14/1992. IPB-Min.Invat. si Stiintei, 1992-1994
- 2 Fonte bainitice (ausferitice) aliate economic sub influenta morfologiei grafitului si in conditiile ridicarii nivelului de prelucrabilitate, 511B – A4; 719/1996, 1995-1996 UPB – CNCSU ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1995.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1995.pdf)) cod CNCSU: 630/1995, ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1996.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1996.pdf)) cod CNCSU: 1120/1996
- 3 Materiale compozite cu matrice feroasa procesate prin turnare, Grant UPB - CNCSU, 5001/96, A 71, 1995 - 1996 ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1995.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1995.pdf)) ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1996.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1996.pdf)), cod CNCSU: 628/1995; 1121/1996
- 4 Cercetari privind recuperarea si valorificarea in turnatoriile de fonta a deseurilor pulverulente rezultate din concasarea feroaliajelor si modificatorilor pe baza de siliciu. Contract UPB-MI/CNRM, 58-94-10; 258-12-60/B2, 518B-TA4, 1994-1996.
- 5 Cercetari privind recuperarea elementelor de aliene din zgura la elaborarea fontelor in cuptoare cu inductie. Contract UPB-MCT, 511/B7/1995-1997.
- 6 Cercetari pentru obtinerea unui agent desulfurant pe baza de carbura de calciu si a tehnicilor de desulfurare performante pentru turnatoriile de fonta. Proiect RELANSIN 749/4728/4728/2000; 2000-2002
- 7 Cercetari privind defosforarea in afara agregatului de elaborare in vederea extinderii recuperarii deseurilor feroase pentru producerea fontelor. Contract UPB-MCT, 511B-B5; 619/1995; 1995-1997
- 8 Cercetari privind recuperarea si valorificarea eficienta in turnatorii a deseurilor marunte rezultate de la prelucrarea alamei. Contract 619B/96; 831/97; 591/98/I, Tema A1, B1, UPB-MCT/CNRM , 1996-1999
- 9 Strategii metalurgice mondiale in reciclarea automobilelor. Contract 619/96, Additional 273/99/II, Tema B2, 1999-2001, UPB-MI/CNRM
- 10 Cercetari privind recuperarea si valorificarea deseurilor de aliaje neferoase cu grad ridicat de impurificare. Contract UPB-Mi/CNRM, 619B/96, 1996.
- 11 N-II-IN-CI-2012-1-0067, Optimizarea procesului de prelevare a probelor de fonta in vederea analizei spectrale, SC SPECTRO SERVICE ROMANIA SRL / UPB-CEMS
- 12 Influenta conditiilor de elaborare asupra caracteristicilor fizico-mecanice ale fontelor speciale cu diferite forme de grafit (Fonte speciale de inalta performanta). Contract nr. 58-91-8A/1992, IPB-Min.Inv.si Stiintei., 1992-1994
- 13 Fonte cu grafit coral. Contract B37-629, Min. Inv.-CNCSU, 1995 – 1996, cod CNCSU 629
- 14 CERCETARI PRIVIND OBTINEREA FONTELOR CU GRAFIT NODULAR DE INALTA PLASTICITATE SI TENACITATE PENTRU DESTINATII SPECIALE , Grant UPB – CNCSU 7001-27; [http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1997.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1997.pdf)), cod CNCSU: 1090/1997 ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1998.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1998.pdf)), cod CNCSU: 239/1998 ([http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez\\_1999.pdf](http://uefiscdi.gov.ro/UserFiles/File/Competitii%20derulate/Rez_1999.pdf)), cod CNCSU: 571/1999
- 15 Studii si cercetari privind retopirea ultrarapida in strat superficial a pieselor turnate din fonte. Contract UPB-Min. Inv., 58-93-20, 1993-1995.
- 16 Cercetari privind demanganizarea fontelor in vederea largirii bazei de fier vechi posibil de utilizat la producerea fontelor cu grafit nodular. Contract UPB-MI/CNRM, 258-12-60/5; 58-94-9; 511B-A3, 1994-1996

- 17 Valorificarea superioara a deseurilor de tabla de otel cositorita la producerea fontelor de inalta rezistenta. Contract 619/96, Aditonal 273/99/II, Tema B1, 1999 – 2001, UPB- MCT/CNRM
- 18 Cercetari privind recuperarea si refolosirea spanului din aliaje feroase la modificarea si alierea fontelor.  
UPB- MI/CNRM, A1-619/1996, 1997-1999
- 19 Valorificarea superioara a deseurilor de aluminiu pentru realizarea pulberilor necesare sudurilor aluminotermice. Contract 619/96, 273/99/II, Tema B3, MCT-UPB, 1999 - 2001.
- 20 Valorificarea superioara a deseurilor de materiale carbonice indigene la elaborarea fontelor de calitate. Proiect RELANSIN, 1436/2001, 2001-2003.

#### **Director/Responsabil proiecte naționale -Terti**

- 1 Cercetari privind elaborarea si turnarea aliajelor de aluminiu secundare, contract UPB-SC ATLANTIC SRL, 1993
- 2 Cercetari privind obtinerea prin turnare a lingotierelor, contract UPB-SC ATLANTIC SRL, 1994
- 3 Cercetari privind obtinerea aliajelor Al-Ti elaborate in cuptor electric cu inductie, contract 15/99, CEMS UPB – SC EDICOM SRL,
- 4 Cercetari privind obtinere bare turnate Fc A2, contract 12/99, CEMS UPB – SC KOYO SA, 1999
- 5 Cercetari privind obtinerea prin turnare a reperului “Plita”, CEMS – Univ.Constructii Bucuresti, 2005

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