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Version: February 9, 2019

Summary

PUBLICATIONS AND PRESENTATIONS

Publications

A – Peer-reviewed scientific articles	24
B – Non-peer-reviewed scientific articles	16
D – Publications intended for professional communities	14
G – Theses	3
Abstracts in scientific conferences	1
Manuscripts and abstracts under review	6
Total	64

Presentations

Poster presentations	5
Seminar presentations and invited talks	23
Total	28
GRAND TOTAL	92

Publications

A – Peer-reviewed scientific articles

A1 – PEER-REVIEWED ARTICLES IN SCIENTIFIC JOURNALS

16. N. Alia, M. Pylvänäinen, V.-V. Visuri, V. John, and S. Ollila, "Investigation of the vibrations of a laboratory-scale gas-stirred ladle with two eccentric nozzles and multiple sensors", *Journal of Iron and Steel Research International*, forthcoming. FORTHCOMING
15. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, R. Mattila, and T. Fabritius, "Modelling of the Effect of the Gas Flow Rate on the Fluid Flow and Open-Eye Formation in a Water Model of a Steelmaking Ladle", *Steel Research International*, vol. 90, no. 2, article 1800365, 2019. 2019
14. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, and T. Fabritius, "A CFD and Experimental Investigation of Slag Eye in Gas Stirred Ladle", *Journal of Fluid Flow, Heat and Mass Transfer*, vol. 5, pp. 78–86, 2018. 2018
13. A. Kärnä, M. Järvinen, P. Sulasalmi, V.-V. Visuri, and T. Fabritius, "An Improved Model for the Heat-up Stage of the CAS-OB Process: Development and Validation", *Steel Research International*, vol. 89, no. 10, article 1800141, 2018. —"

12. T. Vuolio, V.-V. Visuri, S. Tuomikoski, T. Paananen, and T. Fabritius, "Data-Driven Mathematical Modeling of the Effect of Particle Size Distribution on the Transitory Reaction Kinetics of Hot Metal Desulfurization", *Metallurgical and Materials Transactions B*, vol. 49, no. 5, pp. 2692–2708, 2018. —"
11. A. Kruskopf and V.-V. Visuri, "A Gibbs Energy Minimization Approach for Modeling of Chemical Reactions in a Basic Oxygen Furnace", *Metallurgical and Materials Transactions B*, vol. 48, no. 6, pp. 3281–3300, 2017. 2017
10. V.-V. Visuri, M. Järvinen, A. Kärnä, P. Sulasalmi, E.-P. Heikkinen, P. Kupari, and T. Fabritius, "A Mathematical Model for Reactions During Top-Blowing in the AOD Process: Validation and Results", *Metallurgical and Materials Transactions B*, vol. 48, no. 3, pp. 1868–1884, 2017. —"
9. V.-V. Visuri, M. Järvinen, A. Kärnä, P. Sulasalmi, E.-P. Heikkinen, P. Kupari, and T. Fabritius, "A Mathematical Model for Reactions During Top-Blowing in the AOD Process: Derivation of the Model", *Metallurgical and Materials Transactions B*, vol. 48, no. 3, pp. 1850–1867, 2017. —"
8. P. Sulasalmi, V.-V. Visuri, A. Kärnä, M. Järvinen, S. Ollila, and T. Fabritius, "A Mathematical Model for the Reduction Stage of the CAS-OB Process", *Metallurgical and Materials Transactions B*, vol. 47, no. 6, pp. 3544–3556, 2016. 2016
7. M. Järvinen, V.-V. Visuri, E.-P. Heikkinen, A. Kärnä, P. Sulasalmi, C. De Blasio, and T. Fabritius, "Law of Mass Action Based Kinetic Approach for the Modeling of Parallel Mass Transfer Limited Reactions: Application to Metallurgical Systems", *ISIJ International*, vol. 56, no. 9, pp. 1543–1552, 2016. —"
6. C. De Blasio, C. Carletti, A. Lundell, V.-V. Visuri, T. Kokkonen, T. Westerglund, T. Fabritius, and M. Järvinen, "Employing a step-wise titration method under semi-slow reaction regime for evaluating the reactivity of limestone and dolomite in acidic environment", *Minerals Engineering*, vol. 86, no. 2, pp. 43–58, 2016. —"
5. P. Sulasalmi, V.-V. Visuri, A. Kärnä, and T. Fabritius, "Simulation of the effect of steel flow velocity on slag droplet distribution and interfacial area between steel and slag", *Steel Research International*, vol. 86, no. 3, pp. 212–222, 2015. 2015
4. M. Järvinen, A. Kärnä, V.-V. Visuri, P. Sulasalmi, E.-P. Heikkinen, K. Pääskylä, C. De Blasio, S. Ollila, and T. Fabritius, "A Novel Approach for Numerical Modeling of the CAS-OB Process: Process Model for the Heat-Up Stage", *ISIJ International*, vol. 54, no. 10, pp. 2263–2272, 2014. 2014
3. V.-V. Visuri, M. Järvinen, J. Savolainen, P. Sulasalmi, E.-P. Heikkinen, and T. Fabritius, "A Mathematical Model for the Reduction Stage of the AOD Process. Part II: Model Validation and Results", *ISIJ International*, vol. 53, no. 4, pp. 613–621, 2013. 2013
2. V.-V. Visuri, M. Järvinen, P. Sulasalmi, E.-P. Heikkinen, J. Savolainen, and T. Fabritius, "A Mathematical Model for the Reduction Stage of the AOD Process. Part I: Derivation of the Model", *ISIJ International*, vol. 53, no. 4, pp. 603–612, 2013. —"

1. M. Iljana, O. Mattila, T. Alatarvas, V.-V. Visuri, J. Kurikkala, T. Paananen, and T. Fabritius, "Dynamic and Isothermal Reduction Swelling Behaviour of Olivine and Acid Iron Ore Pellets under Simulated Blast Furnace Shaft Conditions", *ISIJ International*, vol. 52, no. 7, pp. 1257–1265, 2012.

A4 – PEER-REVIEWED ARTICLES IN CONFERENCE PROCEEDINGS

8. S. Louhenkilpi, J. Miettinen, J. Laine, R. Vesanen, I. Rentola, J. Moilanen, V.-V. Visuri, E.-P. Heikkinen, and A. Jokilaakso, "Online Modelling of Heat Transfer, Solidification and Microstructure in Continuous Casting of Steel", *Proceedings of the 5th International Conference on Advances in Solidification Processes and 5th International Symposium on Cutting Edge of Computer Simulation of Solidification, Casting and Refining*, The Austrian Society for Metallurgy and Materials, Salzburg, Austria, 2019. FORTHCOMING
7. J. Miettinen, S. Louhenkilpi, V.-V. Visuri, and T. Fabritius, "Advances in Modeling of Steel Solidification with IDS", *Proceedings of the 5th International Conference on Advances in Solidification Processes and 5th International Symposium on Cutting Edge of Computer Simulation of Solidification, Casting and Refining*, The Austrian Society for Metallurgy and Materials, Salzburg, Austria, 2019. —"—
6. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, and T. Fabritius, "Numerical Simulation of the Effect of Slag Thickness on Slag Eye Area in a Water Model Ladle", *Proceedings of the 21st Australasian Fluid Mechanics Conference*, Australasian Fluid Dynamics Society, Australia, 2018. 2018
5. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, and T. Fabritius, "A CFD and Experimental Investigation of Slag Eye in Gas Stirred Ladle", *Proceedings of the 5th International Conference on Fluid Flow, Heat and Mass Transfer*, Niagara Falls, Canada, no. 148, 2018. —"—
4. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, A. Kärnä, and T. Fabritius, "Numerical Study of Multiphase Flows in a Ladle for Different Closure Models", *Proceedings of the 11th Pacific Symposium on Flow Visualization and Image Processing*, Kumamoto University, Kumamoto, Japan, no. 19, 2017. 2017
3. T. Haas, V.-V. Visuri, A. Kärnä, E. Isohookana, P. Sulasalmi, R. H. Eriç, H. Pfeifer, and T. Fabritius, "Physical Modelling of the Effect of Slag and Top-Blowing on Mixing in the AOD Process", in R. G. Reddy, P. Chaubal, P. C. Pistorius, and U. Pal (eds.), *Advances in Molten Slags, Fluxes, and Salts: Proceedings of the 10th International Conference on Molten Slags, Fluxes, and Salts*, The Minerals, Metals and Materials Society, Seattle, WA, USA, pp. 999–1008, 2016. 2016
2. P. Sulasalmi, V.-V. Visuri, and T. Fabritius, "Effect of Interfacial Tension on the Emulsification – Considerations on the CFD Modelling of Dispersion", in L. P. Karjalainen, D. A. Porter, and S. A. Järvenpää (eds.), "Physical and Numerical Simulation of Materials Processing VII", *Materials Science Forum*, vol. 762, pp. 242–247, 2013. 2013
1. M. Järvinen, V.-V. Visuri, S. Pislä, A. Kärnä, P. Sulasalmi, E.-P. Heikkinen, and T. Fabritius, "Advanced Methods in Modelling of Metallurgical Unit Operations", in L. P. Karjalainen, D. A. Porter, and S. A. Järvenpää (eds.), "Physical and Numerical Simulation of Materials Processing VII", *Materials Science Forum*, vol. 762, pp. 236–241, 2013. —"—

B – Non-peer-reviewed scientific articles

B2 – NON-PEER-REVIEWED BOOK SECTIONS

4.

V.-V. Visuri, “Mathematical Modelling of Rate Phenomena in the AOD Process / Towards a comprehensive mathematical model of the AOD process”, in M. Ljung (ed.), *Graduate School in Chemical Engineering Yearbook 2015*, Åbo Akademi University, Åbo, Finland, pp. 305–314, 2015.

2015
3.

V.-V. Visuri, “Phenomena-based modelling of the AOD process / A model for reactions during top-blowing in the AOD process”, in M. Ljung (ed.), *Graduate School in Chemical Engineering Yearbook 2014*, Åbo Akademi University, Åbo, Finland, pp. 305–314, 2014.

2014
2.

V.-V. Visuri, “Phenomena-based modelling of the AOD process / A Mathematical Model for Reactions during Top-Blowing in the AOD Process”, in M. Ljung (ed.), *Graduate School in Chemical Engineering Yearbook 2013*, Åbo Akademi University, Åbo, Finland, pp. 383–392, 2013.

2013
1.

V.-V. Visuri, “Phenomena-based modelling of AOD process / Mathematical model for recovery of slag. Part I. Derivation of the model”, in M. Ljung (ed.), *Graduate School in Chemical Engineering Yearbook 2012*, Åbo Akademi University, Åbo, Finland, pp. 373–382, 2012.

2012

B3 – NON-PEER-REVIEWED ARTICLES IN CONFERENCE PROCEEDINGS

12.

E.-P. Heikkinen, V.-V. Visuri, and T. Fabritius, “On the heterogeneity of AOD slags in different stages of blowing”, *Proceedings of the 8th European Oxygen Steelmaking Conference*, Associazione Italiana di Metallurgia, Taranto, Italy, 2018.

2018
11.

T. Palovaara, V.-V. Visuri, and T. Fabritius, “Physical modelling of gas injection in a ladle”, *Proceedings of the 7th International Congress on Science and Technology of Steelmaking*, Associazione Italiana di Metallurgia, Venice, Italy, no. 55, 2018.

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10.

V.-V. Visuri, R. Mattila, P. Kupari, and T. Fabritius, “A comparative study on refractory wear associated with fluxes for AOD slags”, *Proceedings of the 7th International Congress on Science and Technology of Steelmaking*, Associazione Italiana di Metallurgia, Venice, Italy, no. 15, 2018.

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9.

H. Pesonen, V.-V. Visuri, T. Ikäheimonen, and T. Fabritius, “In Situ Measurement of Silicon Content in Molten Ferrochrome”, *Proceedings of the 3rd European Steel Technology and Application Days*, The Austrian Society for Metallurgy and Materials, Vienna, Austria, pp. 1218–1227, 2017.

2017
8.

E.-P. Heikkinen, V.-V. Visuri, H. Suopajarvi, A. Kemppainen, M. Aula, P. Sulasalmi, and T. Fabritius, “Selected research focus areas for energy and material improvements in reduction and refining metallurgy”, *Proceedings of the 2nd ISIJ-VDEh-Jernkontoret Joint Symposium*, Jernkontoret, Stockholm, Sweden, pp. 24–33, 2017.

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7.

V.-V. Visuri, E. Isohookana, A. Kärnä, T. Haas, R. H. Eriç, and T. Fabritius, “A Physical Modelling Study of Mixing in an AOD Vessel”, *Proceedings of the 5th International Conference on Process Development in Iron and Steelmaking*, Swerea MEFOS, Luleå, Sweden, no. 88, 2016.

2016

6. M. Pylvänäinen, V.-V. Visuri, T. Liedes, J. Laurila, K. Karioja, S. Pikkupeura, S. Ollila, and T. Fabritius, “Vibration-based Assessment of Gas Stirring Intensity in Ladle Treatments”, *Proceedings of the 5th International Conference on Process Development in Iron and Steelmaking*, Swerea MEFOS, Luleå, Sweden, no. 14, 2016.

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5. V.-V. Visuri, M. Järvinen, K. Pääskylä, A. Kärnä, P. Sulasalmi, C. De Blasio, S. Ollila, and T. Fabritius, “Preliminary Validation of a Numerical Model for the CAS-OB Process”, *Proceedings of the 7th European Oxygen Steelmaking Conference*, Czech Metallurgical Society, Trinec, Czech Republic, 2014.

2014
4. V.-V. Visuri, E.-P. Heikkinen, M. Järvinen, J. Savolainen, and T. Fabritius, “Phenomena-based model in AOD process improvement”, *Proceedings of the 4th International Conference on Process Development in Iron and Steelmaking*, Swerea MEFOS, Luleå, Sweden, vol. 1, pp. 225–235, 2012.

2012
3. E.-P. Heikkinen, J. Savolainen, T. Ikäheimonen, V.-V. Visuri, and T. Fabritius, “A study on the Al-Ti-O-N inclusions in austenitic stainless steels – a comparison between CTD and process samples”, *Proceedings of the 8th International Conference on Clean Steel*, Hungarian Mining and Metallurgical Society, Budapest, Hungary, 2012.

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2. E.-P. Heikkinen, T. Ikäheimonen, O. Mattila, T. Fabritius, and V.-V. Visuri, “Behavior of Silicon, Carbon and Chromium in the Ferrochrome Converter – A Comparison Between the CTD and Process Samples”, *Proceedings of the 6th European Oxygen Steelmaking Conference*, Jernkontoret, Stockholm, Sweden, pp. 316–329, 2011.

2011
1. M. Järvinen, S. Pisilä, A. Kärnä, V.-V. Visuri, T. Fabritius, T. Ikäheimonen, and P. Kupari, “Fundamental Mathematical Modelling of AOD Process”, *Proceedings of the 4th International Conference on Modelling and Simulation of Metallurgical Processes in Steelmaking*, Stahlinstitut VDEh, Düsseldorf, Germany, no. 10, 2011.

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D – Publications intended for professional communities

D1 – ARTICLES IN TRADE JOURNALS

4. T. Fabritius, V.-V. Visuri, E.-P. Heikkinen, J. Kömi, J. Larkiola, O. Nousiainen, U. Lassi, and P. Tynjälä, “Metallurginen tutkimus Oulun yliopistossa”, *Materia*, vol. 77, no. 1, pp. 16–19, 2019.

FORTHCOMING
3. V.-V. Visuri, T. Fabritius, and I. Baarman, “SYMMET – Symbiosis of Metals Production and Nature”, *Materia*, vol. 76, no. 4, pp. 87, 2018.

2018
2. V.-V. Visuri and A. Bogdanoff, “FLEX WP3 – Adaptive Refining Metallurgy – Joustava metallien jalostus”, *Materia*, vol. 76, no. 1, pp. 74–75, 2018.

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1. M. Leinonen, V.-V. Visuri, and I. Baarman, “Dynamic multiphysics modelling as guidance in progressing steel making (DYNAMO)”, *Materia*, vol. 74, no. 1, pp. 46, 2016.

2016

D4 – PUBLISHED DEVELOPMENT OR RESEARCH REPORTS

10. S. Louhenkilpi, A. Jokilaakso, J. Laine, R. Vesänen, P. Kupari, J. Moilanen, M. Petäjäjärvi, A. Bogdanoff, S. Ollila, I. Rentola, T. Antola, T. Alatarvas, T. Fabritius, T. Liedes, M. Pylvänäinen, S. Tamminen, V.-V. Visuri, and A.-M. Warttinen, “Adaptive Refining Metallurgy”, in *FLEX – Flexible and Adaptive Operations in Metal Production (DIMECC Final Report 1/2018)*, DIMECC Oy, Tampere, Finland, pp. 34–55, 2018. 2018
9. A. Kemppainen, O. Mattila, T. Paananen, J. Kunelius, E. Puukko, H. Ervasti, P. Mäkelä, P. Palovaara, M. Jokinen, J. Roininen, H. Suopajarvi, A. Hietaava, M. Iljana, M. Omran, V.-V. Visuri, A. Vuokila, T. Vuolio, J. Heimo, and A. Jokilaakso, “Proactive Metal Production”, in *FLEX – Flexible and Adaptive Operations in Metal Production (DIMECC Final Report 1/2018)*, DIMECC Oy, Tampere, Finland, pp. 11–34, 2018. —”—
8. M. Saqlain, M. Owais, M. Järvinen, V.-V. Visuri, and T. Fabritius, “Dephosphorization in ironmaking and oxygen steelmaking”, Aalto University, Espoo, Finland, 2018. —”—
7. A. Bogdanoff, S. Ollila, S. Kaukonen, J. Savolainen, K. Välimaa, A. Kruskopf, S. Louhenkilpi, T. Alatarvas, M. Aula, A. Kärnä, T. Liedes, M. Pylvänäinen, P. Sulasalmi, S. Tamminen, H. Tervo, V.-V. Visuri, and A.-M. Warttinen, “Dynamic Multiphysics Modeling for Steel Production”, in *SIMP – System Integrated Metals Processing (DIMECC Final Report 4/2017)*, DIMECC Oy, Tampere, Finland, pp. 54–90, 2017. 2017
6. J. Lilja, O. Mattila, J. Pelttari, L. Halonen, J. Kunelius, E. Puukko, S. Rannantie, M. Iljana, A. Kemppainen, J. Ruuska, V.-V. Visuri, A. Vuokila, H. Saxén, M. Helle, and K. Penttilä, “Decision support of metallurgical processes”, in *SIMP – System Integrated Metals Processing (DIMECC Final Report 4/2017)*, DIMECC Oy, Tampere, Finland, pp. 145–187, 2017. —”—
5. M. Pylvänäinen, V.-V. Visuri, T. Liedes, J. Laurila, K. Karioja, T. Fabritius, and S. Ollila, “Vibration-based assessment of gas-stirring efficiency in ladle treatments”, *DIMECC SIMP Result of the Month*, September, 2016. 2016
4. P. Sulasalmi, A. Kärnä, V.-V. Visuri, M. Järvinen, and T. Fabritius, “The CAS-OB Process Simulator”, *FIMECC SIMP Result of the Month*, February, 2016. —”—
3. V.-V. Visuri, M. Järvinen, and T. Fabritius, “A new simulation tool for improving top-blowing practice in the AOD process”, *FIMECC SIMP Result of the Month*, September, 2015. 2015
2. V.-V. Visuri, “Basic Oxygen Furnace”, in M. Aula, A. Heikkilä, M. Iljana, T. Sipola, and V.-V. Visuri (eds.), “Steel industry – what they measure and how?”, *Department of Process and Environmental Engineering Report 345*, University of Oulu, Oulu, Finland, pp. 67–79, 2014. 2014
1. P. Sulasalmi and V.-V. Visuri, “Environmental aspects of BOF slag and dust”, in M. Aula, J. Haapakangas, A. Heikkilä, M. Iljana, A. Kemppainen, J. Roininen, P. Sulasalmi, and V.-V. Visuri (eds.), “Some environmental aspects of BF, EAF and BOF”, *Department of Process and Environmental Engineering Report 343*, University of Oulu, Oulu, Finland, pp. 61–76, 2012. 2012

G – Theses

3. V.-V. Visuri, “Mathematical Modelling of Chemical Kinetics and Rate Phenomena in the AOD Process”, *Acta Universitatis Ouluensis*, C Technica, no. 625, *Doctoral thesis*, University of Oulu, Finland. 2017
2. V.-V. Visuri, “Kuonanmuodostuksen termodynamiikka AOD-prosessimallissa”, *Master’s thesis*, University of Oulu, Finland, 2011. 2011
1. V.-V. Visuri, “Laatukustannukset: mallit ja mittaaminen”, *Bachelor’s thesis*, University of Oulu, Finland, 2008. 2008

Abstracts in scientific conferences

1. E. K. Ramasetti, V.-V. Visuri, P. Sulasalmi, and T. Fabritius, “Modelling of Effect of Gas Flow rate on Open-eye Formation and Mixing Time of Nickel Alloy in Argon Stirred Industrial Ladle”, *Proceedings of the 2nd International Symposium on Computational Particle Technology & 13th International Conference on CFD in the Minerals and Process Industries*, Monash University, Melbourne, Australia, p. 251, 2018. 2018

Manuscripts and abstracts under review

6. J. Miettinen, V.-V. Visuri, and Timo Fabritius, “Thermodynamic description of the Fe–Al–Mn–Si–C system for modelling solidification of steels”, manuscript. 2019
5. T. Vuolio, V.-V. Visuri, T. Paananen, and T. Fabritius, “Identification of rate, extent and mechanisms of hot metal resulfurization with CaO–SiO₂–Na₂O slag systems”, manuscript. 2018
4. A. Kärnä, P. Sulasalmi, V.-V. Visuri, and T. Fabritius, “Numerical modelling of slag cooling”, abstract. —”—
3. T. Vuolio, V.-V. Visuri, E.-P. Heikkinen, and T. Fabritius, “Predicting dynamic behavior of experimental metallurgical systems with artificial neural network”, abstract. —”—
2. V.-V. Visuri, P. Sulasalmi, T. Vuolio, and T. Fabritius, “Mathematical Modelling of the Effect of Reagent Particle Size Distribution on the Efficiency of Hot Metal Desulphurisation”, abstract. —”—
1. T. Veijola, M. Aula, N. Hyttinen, V.-V. Visuri, M. Jokinen, and T. Fabritius, “Modifying the EAF voltage tap profile for lower electrode tip consumption and increased energy efficiency”, abstract. —”—

Presentations

Poster presentations

5. V.-V. Visuri and P. Sulasalmi, “Hot metal desulphurisation simulator”, *DIMECC 9th Annual Seminar*, DIMECC Oy, Helsinki, Finland, November 14, 2016. 2016
4. V.-V. Visuri, P. Sulasalmi, and A. Kärnä, “Simulators for the AOD and CAS-OB processes”, *DIMECC 9th Annual Seminar*, DIMECC Oy, Helsinki, Finland, November 14, 2016. —”—

3. M. Pylvänäinen, V.-V. Visuri, T. Liedes, J. Laurila, K. Karioja, T. Fabritius, and S. Ollila, "Vibration-based assessment of gas-stirring efficiency in ladle treatments", *DIMECC 9th Annual Seminar*, DIMECC Oy, Helsinki, Finland, November 14, 2016. —
2. A. Kärnä, V.-V. Visuri, P. Sulasalmi, M. Järvinen, and T. Fabritius, "Mathematical Modelling of Converter and Ladle Processes", *FIMECC SIMP 1st Annual Seminar*, FIMECC Oy, Oulu, Finland, November 19, 2015. 2015
1. T. Fabritius, V.-V. Visuri, A. Kärnä, P. Sulasalmi, E. Muurinen, T. Kulju, M. Järvinen, S. Louhenkilpi, J. Laine, P. Koukkari, R. Pajarre, S. Ollila, M. Leinonen, K. Helelä, P. Hooli, and J. Savolainen, "Virtual Steel Plant", *SHOK Summit*, Strategic Centres for Science, Technology and Innovation, Helsinki, Finland, May 14, 2014. 2014

Seminar presentations and invited talks

23. V.-V. Visuri, "Introduction to activities on primary and secondary metallurgy", *Guest lecture*, Institute of Metallurgy Multiphase Transfer and Reaction Engineering, Northeastern University, Shenyang, China, January 11, 2019. 2019
22. V.-V. Visuri, "Pyrometallurgisten prosessien mallinnus", *Mallinnus ja simulointi teräksen tuotantoprosesseissa*, POHTO, Oulu, Finland, November 20, 2018. 2018
21. V.-V. Visuri, "Adaptive Refining Metallurgy – An overview of recent research and guidelines for further research", *DIMECC FLEX Final Seminar*, DIMECC Oy, Helsinki, Finland, October 23, 2018. —
20. V.-V. Visuri, "Formation and behaviour of non-metallic inclusions during primary and secondary steelmaking", *Genome of Steel Scientific Advisory Board Meeting*, University of Oulu, Oulu, Finland, February 21, 2018. —
19. V.-V. Visuri, "Digitalisaation mahdollisuudet teräksenvalmistuksessa: Teollisuus 4.0 –ajattelu sulatolla", *Guest lecture at the Industry 2026 board meeting*, SSAB Europe Oy, Raahe, Finland, February 15, 2018. —
18. V.-V. Visuri, "Digitalisaation mahdollisuudet teräksenvalmistuksessa: Teollisuus 4.0 –ajattelu sulatolla", *Guest lecture*, SSAB Europe Oy, Raahe, Finland, February 9, 2018. —
17. V.-V. Visuri, "Digitalisaation mahdollisuudet teräksenvalmistuksessa: Teollisuus 4.0 –ajattelu sulatolla", *Tekniikan torstai*, University of Oulu, Oulu, Finland, January 18, 2018. —
16. V.-V. Visuri, "Possibilities of converter process modelling", *DIMECC 10th Annual Seminar*, DIMECC Oy, Turku, Finland, October 30, 2017. 2017
15. T. Fabritius, V.-V. Visuri, M. Järvinen, P. Sulasalmi, and A. Kärnä "Modeling of Rate Phenomena in the AOD and CAS-OB Processes", *The 4th International Symposium on Cutting Edge of Computer Simulation of Solidification, Casting and Refining*, Northeastern University, Xi'an, China, May 12, 2016. 2016
14. V.-V. Visuri, "Rate Phenomena in the AOD Process", *Thermodynamical calculations as support for control, development and understanding of pyrometallurgical processes*, Jernkontoret, Stockholm, Sweden, April 19, 2016. 2016

13. V.-V. Visuri, “Experiences from research exchange at RWTH Aachen University”, *Terästudkimuskeskuksen tutkijaseminaari*, University of Oulu, Oulu, Finland, June 8, 2015. 2015
12. V.-V. Visuri, “Advanced Melt Metallurgy – Production of advanced steels and ferroalloys with secondary metallurgy units”, *FIMECC ELEMET Program’s Final Seminar*, FIMECC Oy, Espoo, Finland, October 23, 2014. 2014
11. T. Fabritius and V.-V. Visuri, “Metallurgisten prosessien mallinnus – energiatehokkaampia ja ympäristö-ystävällisempiä prosesseja”, *Terästeollisuus haasteiden edessä – Niilo Suutalan juhlaseminaari*, POHTO, Oulu, Finland, October 15, 2014. —”—
10. V.-V. Visuri, “Modelling of reactions during top-blowing in the AOD process”, *FIMECC SIMP PhD student seminar*, FIMECC Oy, Tornio, Finland, August 20, 2014. —”—
9. T. Fabritius, V.-V. Visuri and P. Kupari, “Konvertteriprosessin kehitystyö ruostumattomien terästen valmistuksessa”, *Prosessipraktikat – Ongelmat ja onnistumiset teräksen valmistuksessa*, POHTO, Oulu, Finland, May 7, 2014. —”—
8. V.-V. Visuri, “Modellierung von Reaktionen während des Aufblasens durch die Sauerstofflanze im AOD-Verfahren”, *Guest lecture*, SMS Siemag AG, Düsseldorf, Germany, March 27, 2014. —”—
7. V.-V. Visuri, “Advanced Melt Metallurgy – Production of advanced steels and ferroalloys with secondary metallurgy units”, *FIMECC 5th Annual Seminar*, FIMECC Oy, Tampere, Finland, November 20, 2013. 2013
6. V.-V. Visuri, “Advanced methods in modelling of metallurgical unit operations”, *Research seminar of CASR*, University of Oulu, Oulu, Finland, June 3, 2013. —”—
5. V.-V. Visuri, “Fundamental model for recovery of slag in the AOD process”, *Seminar on steel research within CASR*, University of Oulu, Oulu, Finland, December 12, 2012. 2012
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