

# Curriculum Vitae

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## Dr.ing. Mihail Reinhold Wächter

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Date of birth: 20.09.1982

Nationality: German

Marital status: Married, one daughter

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### Highlights of Qualifications

- Comprehensive understanding of engineering and design principles.
- Profound knowledge of design software i.e. 2D-3D CAD, CFD, PIPE STRESS ANALYSE.
- Design and site experience on energy industry.
- Able to work without supervision.

### Work Experience

08.2016 – present

#### District Heating Timișoara COLTERM S.A, Romania Design engineer

- Coordination & design of technical projects implemented on existing coal and gas fuel power plants, including the district heating network.
- Coordination & elaboration of EU funded projects on renewable energy and circular economy.
- Pipe stress and CFD calculations for district heating pipe network.
- Technical specifications for equipment acquisition, data sheets, P&ID, drawings, documents for authority approvals.
- Basic and detail design engineering in collaboration with other engineers of different technical departments.
- Build-up of 3D-models and prepare for BIM data exchange.
- Create documents and sketches for temporary work constructions.
- Preparing fabrication and installation documents.

11.2006 – 08.2016

#### Institute for Studies and Power Engineering - ISPE, Timișoara, România Design engineer /Group leader

- Providing design support at all stages of design process.
- Using computer-aided design to create detailed designs and specifications.
- Pipe stress analyses, CFD calculations, BOM lists.
- Checking drawings for accuracy and errors.
- Attend site meetings and take accurate measurements as required.
- Coordination and supervision of design group.
- Ensure all of corporate and project procedures which are applied on project specific work.
- Advising purchasing department on equipment & product purchase & cost control.
- Visiting clients to conduct trial installations & offer technical expertise / solutions.
- Communicating with customers and suppliers to resolve design issues.
- Accomplished with success activities of planning, organizing, and managing resources to bring about the successful completion of specific project goals.

## Technical Skills

- **Software:** AutoCAD 2D-3D, CADWorx Plant, ISOGEN, CFD, CAESAR II, Bentley Autopipe V8i, Mathcad, C++ (basic level), Visual C (basic level).
- **Design:** P&ID, CFD, 3D models, basic & detail design, isometrics, pipe stress analyses.
- **Site experience:** attending site meetings to solve problems during the project implementation, take accurate measurements onsite, find and implement new solutions if necessary. Good collaboration and information exchange with international design teams of developed projects.

## Education

10.2012–11.2015

### University Politehnica Timișoara, România

- **PhD** in Mechanical Engineering  
Thesis: “Theoretical and experimental research on methods of energy recovery from municipal solid wastes”, Summa cum laude.

10.2006–07.2008

### University Politehnica Timișoara, România

- **Master** in Mechanical Engineering  
Dissertation: “Determination of optimal transportation parameters for long distance piping systems for dense slurry – Application for CET Sud Timisoara Fired Coal Power Plant”.

10.2001–07.2006

### University Politehnica Timișoara, România

- **Engineer Diploma** in Mechanical Engineering  
Diploma: “**Generation of components and their user interfaces for simulation program of energy transformation processes**” at TU Braunschweig, Deutschland.

09.1997–07.2001

### George Barițiu Technical College, Baia Mare, România

- **Mathematics and Informatics Department**  
Analyst Programmer College Diploma.

## Languages

- Romanian (native language).
- English (negotiation level).
- German (basic).

## Computer skills

- 2D-3D CAD, ISOGEN, CFD, PIPE STRESS ANALYSES, MS-Office.

## Additional information

Patents

- Patent RO131486 (A0) – 16-11-2015, Technologic procedure for encapsulation of municipal solid waste incineration residue into coal fly ash rock matrix, BOPI no.11/2016, status: on pending.
- Patent RO131485 (A0) – 16-11-2015, Dry/semidry flue gas desulphurization by-products integration into ash coal dense slurry for pipe line hydraulic transport, BOPI no.11/2016, status: on pending.

Scientific & research  
EU Funded projects

- Inovative method for landfilling of municipal solid **Waste Incineration Residues** by **STAB**ilization/solidification into coal fly ash rock matrix resulted from dense slurry technology, acronym **WIR – STAB – 01**, registration no.: **PN-III-P1-1.1-PD-2016-1093.**, UEFISCDI, position held: Project Director, status: on roll.
- Resilient and autonomous energy islands, acronym: RAYS, registration no.: **H2020-LC-SC3-2018-2019-2020**, position held: Research Team Member, status: on pending.

#### Scholarship & research grants

- Award for the best PhD. Thesis on renewable energy resources issued by Romanian Academy & National Romanian Committee of world Energy Council, 14.06.2018.
- Doctoral research grant on program POSDRU/159/1.5/S/137070 „Increase the attractiveness and performance training programs doctoral and post-doctoral researcher in engineering sciences”, 15.05.2014 – 30.09.2015, *awarded for excellence*.
- Team leader on research project „Determination of ash coal dense slurry recipe for integration of dry/semidry flue gas desulphurization by-products and pipeline hydraulic characteristics” on contract research UPT-COLTERM no.01/218 from 28.04.2015.
- Intership as ERASMUS PhD student, at Municipal Solid Waste Incineration Plant - Kärntner Restmüllverwertungs GmbH, Arnoldstein Austria, 01.06-30.09.2014.
- Diploma project as SOCRATES/ERASUMUS student at Technische Universität Braunschweig, Institut für Wärme und Brennstofftechnik, Germania, 03-06.2006.

#### Publications

- A. Wächter, I. Ionel, T.Vintilă, M.R. Wächter – Energy recovery from pig farm and slaughterhouse organic wastes, *26 th European Biomass Conference and Exhibition – Proceedings, 2018*, ISBN 978-88-89407-18-9, 1617 – 1620, D.O.I 10.5071/26thEUBCE2018-IBV.1.14 (**ISI – Proceedings**).
- M.R. Wächter, I. Ionel, A. Negrea - New concept for landfill disposal of municipal solid waste incineration residues, *Journal of Environmental Protection and Ecology, 2013*, ISSN 1311-5065, vol. 14, No.3, 947-955, (**ISI Journal**).
- A. Wächter, I. Ionel, M.R. Wächter, L.A Varga, A. Negrea, V. Minzatu, C. Muntean, M. Ciopec - Encapsulation of municipal solid waste incineration residues into coal fly ash matrix, *Journal of Environmental Protection and Ecology, 2016*, ISSN 1311-5065, vol.17, No.3, 1037-1047, (**ISI Journal**).
- I. Neamț, M.R. Wächter, I. Ionel, I. Vlaicu - Energy recovery from sludge with organic loads resulted from waste water treatment plants, *Environmental Engineering and Management Journal, 2013*, ISSN 1582-9596, vol. 12, 883-889, (**ISI Journal**).

#### Intercultural experience

- 06–09.2014 Erasmus, Kärntner Restmüllverwertungs GmbH, Austria.
- 03–06.2006 Socrates/Erasmus, TU Braunschweig, IWBT, Deutschland.
- 06–09.2004 Work & Travel, Halls Crossing, Lake Powell, Utah, USA.

#### Hobbies

- Athletics, Travelling, Fishing.

## References

- Available on request.

Timișoara, 17.10.2018