Curriculum vitae

PERSONAL INFORMATION

DAL'MAZ SILVA, Walter

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www.linkedin.com/in/walter-dal-maz-silva/

Date of birth 25th May 1989 | Nationality Brazilian

CAREER

02/2022 – Present — Research Engineer at Imerys, Vaulx-Milieu – France

- CFD simulation of rotary kilns and fusion furnaces (heat transfer, combustion, flow patterns)
- Modeling of materials kinetics (JMKA approach, reaction kinetics, calcination, dehydration)
- Development of an in-house state of the art rotary kiln model with coupled materials kinetics

05/2017 – 01/2022 — Research Engineer at ArcelorMittal, Maizières-les-Metz – France

- Physics and data-based low-order modeling of gas-solid processes in galvanizing furnaces
- Leading digital transformation, Data Science, and machine learning in a team of 60+ people
- Organized and handled industrial trials for crises solution and deployment of new technologies

11/2013 – 11/2016 — Research Engineer at IRT M2P, Metz – France

- Studied a surface hardening route of gear steels for aerospace and automobile applications
- Materials characterization (microscopy, mechanical, chemical) and image analyses
- Modeling of transport phenomena at both process kinetics and diffusion in solids

01/2012 – 10/2013 — Product Engineer at Aker Solutions, Curitiba – Brazil

- Materials selection and specification, medium compatibility and failure analyses
- Support to welding documentation and specification, analysis of process deviations
- Metallic materials supplier audit for oil & gas standards compliance and customer requirements

COMPUTATIONAL SKILLS

- Scientific programming in Python, Julia, and C++
- Development of low-order process numerical models
- Materials thermodynamics with Thermo-Calc and OpenCALPHAD
- Data analysis, modeling, and computer vision
- Process CFD simulation with Ansys Fluent and OpenFOAM

INDUSTRY SKILLS

- Materials and process specification procedures
- International standards (ISO, ASTM, NACE, API, AWS, ASME, DNV)
- Project management, planning, and quality tools (FMEA, 5S)

MATERIALS SKILLS

- Thermal and thermochemical processing of materials
- Materials selection for mechanical design
- Materials chemical and microstructural analysis
- Mechanical characterization of metals and ceramics
- Thermal (DSC, DTA, TG) and x-ray diffraction analyses

ACADEMIC

2013 – 2017 **Materials Science and Engineering PhD**

Nancy, France Université de Lorraine (UL)

Advisor Belmonte, Thierry

2007 – 2011 **Materials Engineering**

Florianópolis, Brazil Universidade Federal de Santa Catarina (UFSC)

Advisor Maliska, Ana Maria

LANGUAGES

Mother tongue Brazilian Portuguese

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C1
French	C2	C2	C1	C1	C1
German	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages