

## Dissertation position for Metallurgy (m/f/d)



### Company description

K1-MET is the leading research and development centre for metallurgical topics of the future in Austria and combines the cooperation of the leading institutions in industry and science. Both the optimisation of processes currently in operation and the development and transition to ecological steel production represent our company philosophy. Our headquarters are located at the national pulse of metallurgy in Linz and Leoben. In this promising environment, we at K1-MET are engaged in the development and use of advanced technologies from the initial idea to industrial application. The close proximity as well as the intensive contact to industry and universities allows fast development loops from basic research to applied technologies.

### Job description

Are you motivated, committed and do you like to work independently as well as in a team? You don't just want to see a small detail, but the whole picture? Then we are looking for exactly you to strengthen our teams. In a young and motivated environment, you will help develop unique solutions for leading companies in the steel industry and other resource-intensive industrial sectors.

The main target of the research project is modelling secondary metallurgical treatment of steel employing computational thermodynamics (Chemapp, Factsage). Within the frame of the ongoing project, the models for tapping, ladle furnace treatment, and RH-degassing are finally developed and realized. The next step is the parametrization of the models based on production and quality data from the involved company partners. The mid-term objective is the availability of a verified offline model for the prediction of steel composition, slag composition and inclusion population at the end of ladle treatment. In future, the model will provide the further optimization of process parameters with respect to the demanded steel cleanliness even under the assumption of the possible reduction of CO<sub>2</sub> emissions. The feasibility study for the long-term development of an online-capable model is also part of the project.

### Skills and experience

Ideally, you have the following skills or experience:

- Completed studies (diploma/master) in a technical or scientific field (metallurgy, chemical process engineering).
- Very good expertise with Python software, experience with the use of thermodynamic database and (basic) knowledge about "Big Data" processing are of advantage.
- Passion and enthusiasm for metallurgical process development, decarbonisation, recycling/circular economy, simulation and modelling (digital transformation).
- Both, motivation to work independently, and in close cooperation with industrial and scientific partners.
- Good interpersonal skills, affable personality with the ability to solve problems constructively.
- Openness for strategic topics and European/global developments (e.g., European Green Deal) in the field of resource-intensive industries.
- MS Office expertise.
- Good knowledge of German and English.

<b>Start of employment:</b>	as soon as possible
<b>Duration of employment:</b>	Temporary for the duration of the dissertation with subsequent option to a permanent position (post-doc)
<b>Type of employment:</b>	Full-time (38.5 h/week), flexible working hours
<b>Place of work:</b>	Leoben, Styria (Cooperation with Montanuniversitaet Leoben)
<b>Compensation:</b>	The minimum gross salary for this position is EUR 3,184. (14 x p.a., full-time according to the collective labour agreement of mining and iron producing industries).

Does this position sound interesting to you? Then we look forward to receiving your application with CV, motivation letter and references by e-mail. The job advertisement starts immediately and ends as soon as a suitable candidate has been found.

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