

Where will you have your next challenging professional experience?

ArcelorMittal is the world's number one steel company, with **320,000 employees in more than 60 countries**. It has led the consolidation of the world steel industry and today ranks as the only truly global steelmaker with an industrial presence in 27 countries.

ArcelorMittal is the **leader in all major global markets**, including automotive, construction, household appliances and packaging.

We are visionary thinkers creating opportunities every day. This entrepreneurial spirit brought us to the forefront of the steel industry.

Join ArcelorMittal Global R&D and envision the steel of tomorrow!!

ArcelorMittal Global R&D is spanning the Globe with 14 research centers (operating in process, products, application and steel solutions) within 8 countries and more than 20 nationalities. Because quality outcomes and innovation spirit depend on quality people, we seek to attract and nurture the best people to deliver superior and innovative solutions to our customers.

Would you want to integrate a multicultural company with challenging missions and passionate people, ArcelorMittal is for YOU!

We are looking for Interns, VIE, apprentices willing to work in a multicultural environment in different domains.

English will be a plus.

Location		Contact			
Research center:	RDMP	Last name:	MARCHAND	E-mail:	elise.marchand@arcelormittal.com
Cluster:	DP	First name:	Elise	Phone number:	03.87.70.41.59
Department:	Rolling Processes	Job title:	R&D Engineer		

Training offer	
Mission title: Thermo-mechanical modelling of the hot rolling process to detect shape defects	
Start date: March 2024	Duration: 6 months
Work location : Maizières les Metz, France	
Areas	
<input type="checkbox"/> Purchasing <input type="checkbox"/> Commercial / Marketing <input type="checkbox"/> Finance / Audit <input type="checkbox"/> Legal / Communication <input type="checkbox"/> Supply Chain / Logistic <input type="checkbox"/> Maintenance	<input type="checkbox"/> Production / Process / Exploitation <input checked="" type="checkbox"/> Research & Development / Metallurgy Innovation <input type="checkbox"/> Recycling / Process and Product Development <input type="checkbox"/> Human resources / Health / Safety / Environment <input type="checkbox"/> Strategy & Business Development <input type="checkbox"/> Information System / Industrial Computer Science



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The purpose of the mission:

Hot rolling process is a forming process which aims at reducing the thickness and width of a steel product while ensuring its surface aspect and mechanical properties. In this process, a steel plate is deformed by rotating rolls through an adjusted roll gap to undergo plastic deformation. The process is influenced by many parameters: type of steel grade, dimensions of the product, rolls and product temperatures, friction between the roll and the product, geometry of the roll gap etc. Under realistic conditions, it is complex to master all those parameters and a small deviation may lead to shape defects like a curvature of the plate. A numerical model has been developed to quantify that curvature defect under the effect of various parameters. The objectives of this internship would be to assess the reliability of the model (domain of validity, precision vs. computing time), make a sensitive analysis of the defect regarding the different parameters and derive guidelines to avoid the defect.

The mission: accountabilities and activities

- Use and improve an existing Abaqus model to simulate hot rolling process
- Check the stability of the model and perform parametrical study
- Build simulation cases from real data
- Present the results in a written report and oral presentations

The environment

The R&D center of ArcelorMittal is located in Maizières-les-Metz (France). It is the largest ArcelorMittal R&D centre devoted to steel industry with about 600 researchers (roughly 28 nationalities). It usually hosts about 60 trainees per year. The trainee will be welcomed into the Hot Rolling team within the Downstream Processes department.

Trainee's profile

Studies level: Bac+5

Discipline: Mechanical engineering / Numerical Simulation

School/University: Engineering school, INSA, UT...

Required profile and competencies

- Background in mechanical engineering (solid mechanics, thermo-mechanics) with a knowledge about Finite Element Analysis
- Ability to use a finite element code (Abaqus and/or Ansys Workbench)
- Advanced English level (at least B2 level)
- Intermediate French level (at least B1 level)
- Analysis and synthesis mind
- Basic programming would be a plus
- Knowledge in material science would be a plus

To put back to appropriate trainee correspondent