transforming tomorrow

ArcelorMittal

Where will you have your next challenging professional experience?

*ArcelorMittal is the world's number one steel company, with **222,000 employees in more than 60 countries**.*
*In a global business mode, ArcelorMittal is the **leader in all major global markets**, including automotive, construction, household appliances and packaging.*

We are visionary thinkers creating opportunities everyday. 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 12 sites dedicated to research (operating in process, products, application and steel solutions) within 8 countries and more than 25 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.

Location		Contact			
Research center:	Maizières	**Last name:**	Teaca		
Cluster :	Automotive center	**First name:**	Mihaela	**E-mail :**	mihaela.teaca@arcelormittal.com
Department:	AUP²	**Job title:**	Research Engineer	**Phone number:**	03 87 70 43 23

Training offer	
Mission title: Detection of cracks during Hole Expansion Tests by using Infrared Thermography	
Start date: 1st quarter 2022	**Duration:** 6 months
Worklocation: Maizières-Lès-Metz	

Areas

☐ Purchasing	☐ Production / Process / Exploitation
☐ Commercial / Marketing	☑ Research & Development / Metallurgy Innovation
☐ Finance / Audit	☐ Recycling / Process and Product Development
☐ Legal / Communication	☐ Human resources / Health / Safety / Environment
☐ Supply Chain / Logistic	☐ Strategy & Business Development

The mission : accountabilities and activities
The trainee will have the possibility to perform experimental tests.
The environment
The trainee will work within Products Research Center in Maizières-les-Metz where many trainees are recruited every year. This research center is located in the greatest ArcelorMittal's research campus. ArcelorMittal can help the trainee to find housing in Metz.

☐ Maintenance	☐ Information System / Industrial Computer Science

The purpose of e mission:
Edge formability is necessary to successfully manufacture some auto-components. It can be described as the ability of steel sheet to be stamped without failure at a sheared edge or the hole. It has been evalued using Hole Expansion tests (HER) where a conical punch is forced through a pre-drilled hole of 10mm until they start the formation of a crack. The edge formability measurement is known as hole expansion ratio (HER) In Automotive Center, at least 10 000 tests are performed on various grades and thickness of steel sheets per year. However, the crack apparition is observed visually by an operator. As a consequence HER values suffers scattering because the test must be stopped manually after visual crack detection. In order to tackle this problem Infrared Thermography has recently used to accurately assess. The next step consist to fully automate the process including the automatically stop and the measure of diameter to obtained hole expansion rate value. The trainee will be in charge with ▪ To do HER according to the ISO16630 methods using camera IR ▪ to find solution to fully automate the process ▪ to obtained hole expansion rate value by using image from camera IR

Trainee's profile	
Studies level: Bac +4	**Discipline: Materials science, Mechanics, IT and Computing**
School/University :	
Required profile and competencies	
Skills required in mechanics - Good knowledge in physical and computer measurement - Autonomy, Initiative spirit - Synthesis Capacity	

To put back to appropriate trainee correspondent