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Insights \_Polysius



Let's talk:

Chemical engineer Isabella

Franco Ramirez: "Innovation and

analytical thinking inspire me!"

Chemical engineer Isabella Franco Ramirez has been working as a process engineer in the Research & Development department at thyssenkrupp Polysius since 2022. Prior to this, she had already gotten to know the company and the cement industry as a working student and Master's



student. Born in Colombia, she can look back on an impressive academic and professional career. An honorary scholarship from the Colombian Universidad Pontificia Bolivariana was followed by a Germany scholarship from Münster University of Applied Sciences, awarded in cooperation with the German government and private sponsors. And finally, Isabella Franco Ramirez was awarded the sponsorship prize of the Association of German Engineers in 2023 for her outstanding engineering thesis at Münster UAS. In the Insights interview, the 29-year-old explains why she is passionate about engineering, what her main areas of responsibility are today and why the visibility of successful women in leading positions is so important to her.

**Ms. Franco Ramirez, what sparked your interest in engineering?**

My enthusiasm for engineering was largely sparked by my inclination for analytical thinking, mathematics, physics and chemistry. In this discipline, I find the opportunity not only to overcome real challenges, but also to shape them through creative solutions. I am particularly fascinated by the constantly innovative nature of engineering, be it through the continuous improvement of existing technologies or the creation of completely new solutions that can have a lasting impact on our everyday lives.

**Are women still in the minority when studying chemical engineering?**

I was lucky that both in Colombia and in Germany the proportion of women in engineering was high. In fact, in Colombia, women were even in the majority on this course.

**Do you believe that as a woman you have to work harder for similar or the same grades?**

I believe that women unfortunately have to work harder to achieve recognition and success. But I feel that better progress has been made in this area in Germany than in Latin America. That was one of the reasons why I dreamed of working here.

**How did you hear about thyssenkrupp and "Polysius"?**

After a year in Germany, it was time to write my final thesis and I wanted to write it in a company. During a meeting with friends, one of them told me about a person who works as a chemical engineer in an elevator company. At first I was unsure how I, as a chemical engineer, could do my thesis in an elevator company. However, it later turned out that the company not only had elevators in its portfolio, but was also active in other areas, such as large-scale plant engineering. Despite my initial reservations, the person helped me to make a connection with Polysius.

**And today? Can you describe what a typical working day looks like for you? What are your specific tasks?**

My work at Polysius is exceptionally varied and this is something I really enjoy. I often carry out experiments in the preheater or rotary kiln, which often involves sweat and the occasional hammering, and I end up covered in materials down to my hair.

On these days, the activity is intense and the ability to solve problems quickly is crucial. After the hustle and bustle comes the quiet time when I analyze the results of the experiments and create reports for our customers.

In addition, I prepare offers for customers and hold discussions with them about ongoing experiments or projects. I also take part in meetings aimed at adapting our systems in the technical center or developing new projects. From time to time, I enjoy a piece of cake with colleagues during the breakfast break.

**What experience have you already gained in the cement industry?**

Since starting as a student, I have focused on research and development. I have worked on various projects including concrete recycling, the carbonation of cement paste, the development of a design test for cement grinding simulation and the activation of clay. During this time, I was able to operate various plants, both in the field of grinding technology and currently in the field of heat technology. I also had the opportunity to participate in the commissioning of a plant in Mexico.

**What needs to happen to get more women interested in Polysius and the engineering sciences?**

“The visibility of successful women in senior engineering positions within the company is important. This could encourage women to recognize and strive for their own prospects of success in this environment and can help to break down the stereotypes that are unfortunately still present in many cases about the role of women in the work environment.”

Isabella Franco Ramirez, Chemical Engineer thyssenkrupp Polysius



**A number of students from Münster University of Applied Sciences have found their way to thyssenkrupp Polysius. They are not entirely uninvolved in this pleasing development. Is that true?**

Yes, you could say that (laughs). When I joined the company, there were very few students, all of them were dual students; I was the only "external" one. From the beginning, I was fascinated by the working environment and I wanted to stay at thyssenkrupp Polysius after completing my Bachelor's thesis to continue contributing to the project while I completed my Master's degree. I was unsure if it was possible to combine work and study, but I kept encouraging myself to ask. Eventually the opportunity arose as a working student, although the contract was initially only for six months. Each time it was extended, I was worried whether an extension would be possible, but the constant asking was totally worth it and opened a door for my professional development.

In a conversation, I pointed out to the Head of Research and Development the advantages of extending the contract to one year, especially with regard to my residence permit - and so it was implemented. My career attracted many students and I became a role model for other students at FH Münster who wanted to gain valuable work experience during their studies and increase their chances of getting a good first job. My university professor often turned to me when students wanted to do internships, which resulted in most of them coming from FH Münster recently. I have also encouraged friends to work in the company. This close cooperation between Münster University of Applied Sciences and thyssenkrupp Polysius has led to a valuable exchange. Today, the students make an important contribution to various company projects.

**Finally, something private. How do you spend your free time?**

I enjoy doing lots of activities in my free time. I like going to the gym, reading, listening to music, dancing and spending time with my husband and friends. I am a big fan of traveling. I'm constantly making plans for my next trip and even if it's already set, I'm already thinking about what could be next. I enjoy meeting new people, different cultures and discovering new landscapes.



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Isabella Franco Ramirez and Dr. Franziska Schröder (center, from left) received the sponsorship award from the VDI Münsterland District Association for their final thesis at the Department of Chemical Engineering at Münster University of Applied Sciences in the presence of the VDI Executive Board and their supervisors. From the left: Prof. Dr. Dieter Scholz, Prof. Dr. Volkmar Jordan (both FH Münster), Christian Wohlgemuth-Kalb (thyssenkrupp Polysius), Prof. Dr. Thomas Jüstel (FH Münster) and Dr. Lothar Jandel (VDI).  
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