

## PRESS RELEASE

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### Mechanical and Plant Engineering Is Still Lacking Female Engineers

The proportion of female engineers in mechanical and plant engineering is rising only slowly. A new study by the Machine Tool Laboratory WZL at RWTH Aachen University commissioned by the IMPULS Foundation shows what companies can do.

Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University

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Female engineers are significantly underrepresented in mechanical and plant engineering, even though the proportion of women among engineering employees has risen from around 9 percent (2019) to a good 11 percent most recently (2022). Attracting more women to technical professions and keeping them in the company is therefore an urgent task.

Against this background, the IMPULS Foundation of the VDMA has commissioned a study that for the first time analyzes the hinge of study - career entry and the first years of employment of female engineers. The core message of the study, which was conducted by the Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University, is that there is no single solution for increasing the proportion of female engineers. Rather, many adjusting screws must be turned along the educational and working life.

#### Communicating opportunities, showing role models

"We need more female students, skilled workers and engineers who want to produce the future in our industry," emphasizes Henrik Schunk, VDMA Vice President and Chairman of the Board of Trustees of the IMPULS Foundation, on the occasion of the publication of the IMPULS study. "In this context, it is important to communicate the diversity and meaningfulness of the engineering profession - because mechanical engineering develops solutions for the future, from renewable energies and climate-neutral production to sustainable nutrition for the world's population." For example, the study shows that companies that offer internships, field trips or thesis work for female students are more successful at recruiting them. Female students and engineers interviewed during the study also express the need for visible female role models. Companies can promote such role models by means of mentoring programs, female engineering networks or presentations at trade and career fairs and at universities.

#### Targeting female engineers in recruitment

The recommended adjusting screws also include the content and visual design of company websites and job postings. The study shows that women are often underrepresented on company websites. In fact, not a single woman was depicted on every tenth website studied. Also, actively addressing women in recruiting has hardly been used as a strategic tool so far. Prof. Dr. Ingrid Isenhardt, Academic Director at the WZL of RWTH Aachen University and one of the study authors, is nevertheless confident: "I know of impressive examples of companies that show that women can work in the industry with competence and a lot of pleasure.

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This works if it is wanted from the top and is accompanied by concrete measures. No one can afford to be hesitant in this field today."

### "Change" must also arrive in the corporate culture

According to the study, this includes ensuring that the necessary "change" takes place in the day-to-day operations of companies. This ranges from the welcoming culture when female engineers join the company, the mindset of employees and company management, to family friendliness and the promotion of female specialist and management careers. The study makes it clear that female engineers still face obstacles regarding equal recognition of professional competencies, career management, or work-life balance. "Politics, society, and business no longer have a recognition problem. In our own sphere of action, we are all called upon to implement it," says Hartmut Rauen, Deputy Managing Director of the VDMA. "Change will certainly not be a foregone conclusion, but continuing as before is not an option either - individual life chances, a shortage of skilled workers, the ability to innovate, and the major tasks facing us as a country and society define the pressure to act."

### Online check and recommendations available

For the study, the WZL team at RWTH Aachen University interviewed 49 female engineers from the mechanical and plant engineering sector. To identify potential fields of action, the websites of 90 companies and the working conditions in three exemplary companies were analyzed in a walk-through study. An online check was also developed in conjunction with the study, which is aimed at practitioners. At [www.womengineers.de](http://www.womengineers.de), companies can determine their need for action and call up a wide range of recommendations. "The results of the study pay into the activities of the VDMA," Rauen emphasizes with a view to further association activities. Planned activities include a public conference, experience-sharing events for companies with the VDMA's regional associations, the presentation of role models from the mechanical engineering sector, and the creation of contact points between companies and young female engineers.

### Shortage of skilled workers increasingly virulent

According to the latest VDMA engineering survey from November 2022, only one in three companies can fill engineering positions as planned. For the majority, this is not possible in a timely manner and/or with the planned qualifications. Overall, demand for engineers reached a record level last year. Never have there been more open positions advertised in the mechanical and plant engineering sector and across the economy as a whole. Meanwhile, shortages continue to worsen. Even at the beginning of the year, demand clearly exceeds supply. "But one good signal for the future is that mechanical engineering is the most popular among first-year students, with women accounting for around 25 percent of the core engineering subjects," says Rauen.

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Most recently, the proportion of women among engineering employees rose to 11 percent. Attracting more women to technical professions and retaining them in the company is therefore an urgent task.

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**Laboratory for Machine Tools and Production Engineering (WZL)**

The Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen University enhances the innovative strength and competitiveness of the industry with trend-setting basic research, applied research and the associated consulting and implementation projects in the field of production technology. In the research fields of manufacturing technology, machine tools, production engineering, gear technology as well as production metrology and quality management, practical solutions for rationalizing production are developed with industrial partners from a broad range of branches.