3. How voestalpine defines sustainability

Steel plays an important role in all areas of human life: people are surrounded on a daily basis by products that are either made completely of steel or that have a steel core. Around 1,500 million tons of steel are produced and processed annually worldwide, with 7.5 million tons thereof produced by voestalpine.

The material steel not only has a wealth of applications but has high potential in the area of sustainability—with complete recyclability being its greatest strength. Steel production is resource-intensive, and its specific processes impact the environment: high levels of emissions, large amounts of waste, and sometimes high water consumption. voestalpine actively endeavors to prevent and minimize these environmental impacts by developing and using processes that conserve resources, implementing measures to manage waste, and adopting active climate protection policies.

Steel production is also very labor-intensive. As is the case in all areas of heavy industry, it is characterized by a great deal of shift work and a workforce that has a high percentage of male workers. voestalpine takes its social responsibility very seriously by implementing comprehensive safety measures, maintaining a Group-wide health management system, and offering diverse opportunities for training and continuing education; it also provides programs to stimulate the interest of women in technical professions. For years, voestalpine has had a generation management program that responds actively to the changing demographic situation in society.

voestalpine's products and services are needed in a host of applications in daily lives. The company is taking product responsibility seriously by expediting the development of products and solutions that further safe mobility and alternative energies. Within the scope of international bodies, voestalpine is actively working on standards for recycling and life cycle assessments. voestalpine is researching products that indirectly reduce CO₂; the material steel is definitively part of the solution to carbon issues.

All of the sustainability measures voestalpine implements must take the company’s economic success into consideration. Sustainable action begets business success, and voestalpine is prepared to bear short-term burdens to achieve its goal. What the company does not accept, however, are political policies—whether on the national, the EU, or the international level—that distort fair competition and dramatically threaten the competitiveness of the products manufactured at the Group’s main sites in Austria and Western Europe. It is because voestalpine takes its social responsibility seriously that it is actively fighting for good framework conditions that will help preserve jobs in those regions where people have been melting steel for 600 years.
Martin Lagler, Metal technology/Civil engineering technology, second-year apprentice
3.1 Steel cycle

Steel is 100 percent recyclable and can be recycled an infinite number of times, enabling it to have many lives instead of just one.
1 Steel works: steel
Roughly 250 kg of scrap are used in the production of one ton of crude steel.

2 Steel works: special steel
Single tapping in the steel mill contains 60 tons of tool steel.

3 Coils

4 Special steel block: tool steel
It takes 1,500 different tools to produce a new car model.

5 Pressing plant
About 30 kg of flat steel is needed for one tailgate.

6 Tailgate
One tailgate is split over about ten different pressed parts.

7 Spare part: tailgate
Production of components for the latest car models as well as spare parts for the next 10 to 15 years.

8 Recycling/crushing: tool steel
Those machines have 50 to 100 special steel knives depending on the product.

9 Scrap cube
3.2 Conservation of resources

Careful use of resources is an important issue for voestalpine both from an economic and an ecological standpoint.

First of all, the primary raw materials that are used (especially ore, metals, and fossil fuel) are finite and secondly, they are subject to major price fluctuations on the world market. Therefore, voestalpine aims to reduce raw materials use, using resources cyclically, or recycling by-products and waste. Additionally, steel has the great advantage that, after being used, it can be recycled back into the production process in the form of scrap: today, steel is the most recycled material worldwide.

Ongoing optimization of processes in the voestalpine production facilities increases material efficiency and helps to find new and better recycling opportunities for by-products and waste. In order to make these efforts to conserve resources economically sustainable, it is necessary to have proper statutory framework conditions. voestalpine is committed to ensuring that recyclable materials get preferential treatment, that recycling-friendly design of products is a basic requirement of admission to the market, that life cycle considerations are an important part of the selection process of products and materials, and that the use of secondary raw materials (by-products) is simplified.

Life cycle assessment (LCA)

Today, the assessment of the environmental impact of a material cannot be limited to its production. Rather, life cycle assessment focuses on the entire product life cycle—from production to the utilization phase, and finally, to disposal or recycling of the product. This approach shifts away from a selective assessment of the social, economic, and ecological impacts of a product to an objective one.

In the steel industry, the LCA approach has a particularly high priority as it is helpful in finding a holistic view and balanced, sustainable solutions. LCA contributes to the optimization of material flows, thus improving the conservation of raw materials and advancing recycling efforts. Finally, LCA supports the development and improvement of products and processes at all points of the value chain. voestalpine has nominated a team that is specifically targeting this topic in order to advance the Group's LCA strategy. For voestalpine, being active in the LCA approach means advancement of a sustainable, ecological process management, identification of optimization potential, optimum utilization of by-products in the material cycle in order to conserve valuable primary raw materials, and the development of products that are durable and recyclable.

Beyond the confines of the company, voestalpine is a competent partner for all customers with regard to all issues associated with LCA.

voestalpine has committed itself to the LCA Policy Statement of the World Steel Association. www.worldsteel.com
3.3 Climate protection

As an industrial group that operates worldwide, voestalpine is acutely aware of its responsibility regarding climate protection, an issue that the company is vigorously confronting.

Besides aiming to reduce emissions in its own production processes by recycling steel or undertaking measures to achieve greater energy efficiency, the company also sees possibilities for action by raising awareness regarding LCA throughout the entire product life cycle. The savings potential achieved through the use of steel is higher than the emissions resulting from steel production itself. Therefore, the availability of numerous highly developed steel qualities makes a major contribution to climate protection and the conservation of resources. Many examples from R&D activities can be found in the “Research and Development” chapter of this report.

voestalpine is critical of the central idea behind the European climate policy expressed in the “2050 Roadmaps,” namely pricing CO₂ by way of emission certificates. The company’s viewpoint is that the climate goals cannot be achieved with the measures that are currently being recommended. Instead of intervening in existing emissions trading as a way to monitor and control the price of CO₂, voestalpine recommends pursuing a political course that enables a technology-oriented climate policy for the material-producing industry after 2020.

Such a policy would regulate the industry as far as emissions are concerned by way of technology-based emission levels, support investments in and the development of technology, and spur the use of recyclable materials and recycling-friendly design.

### Decrease of greenhouse gas emissions in the EU by 80% (1990=100%)

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<th>Source: European Commission, Brussels 2011, COM (2011) 112 final Roadmap to a competitive low-carbon economy by 2050</th>
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<td>Current policies</td>
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![Graph showing decrease of greenhouse gas emissions in the EU by 80%](image)