

Green Steel - The way to more sustainability

Deutsche Edelstahlwerke manufactures innovative and recyclable steel products from scrap. Steel is one of the few materials that is 100% recyclable - which means that fewer primary raw materials are used and resources are protected. The use of steel is therefore particularly suitable for green technologies and sustainable products, for the protection of our environment.

Contributing together to a cleaner world

DEW has been working for years to reduce CO₂ emissions in its own production. In recent years, energy consumption in the company has been reduced by almost 100 million KWh/a and thus CO₂ emissions by around 30,000 t/a. Various projects, processes and products contribute to this:

- ▶ The future is electric - we already are! The steel production takes place in our electric arc furnace
- ▶ Use of renewable energies = saving CO₂ emissions
- ▶ Optimal recycling and individual scrap concepts, together with our customers
- ▶ Resource efficiency in our processes
- ▶ Innovative products for CO₂ avoidance
- ▶ Continuous improvement processes

We, Deutsche Edelstahlwerke,

- ▶ are constantly working on sustainability issues
- ▶ take care of the recycling of our products
- ▶ have environmentally compatible, resource-saving steel production facilities and processes
- ▶ bear product responsibility
- ▶ provide information in all openness on the subject of Green Steel

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Member of Swiss Steel Group

Green Steel
The way to more
sustainability



The future is electric - we already are!

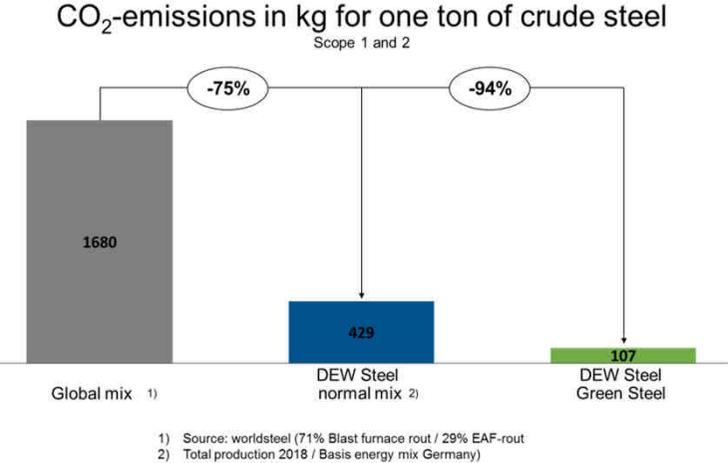
There are different routes of steel production. We exclusively use the electric steel process (melting in an electric arc furnace). Compared to the blast furnace route, the production in the electric arc furnace is more flexible, specialized and environmentally friendly. Our furnaces can be started up or shut down, depending on capacity utilization.

The CO₂ emissions from crude steel production in the electric arc furnace are significantly lower than those of the "classic" blast furnace route. In 2018, global steel production emitted an average of 1,680 kg CO₂ per ton of crude steel. In the same period, CO₂ emissions for one ton of crude steel at Deutsche Edelstahlwerke amounted to 429 kg - this is based on the complete mix of all steel grades produced, from unalloyed to high alloy.

Green Steel: By using 100% green electricity at DEW's crude steel production, CO₂ emissions are reduced to 107 kg per ton of crude steel.



More simply said, the CO₂ emission of one tonne of green steel from Deutsche Edelstahlwerke corresponds to a car journey of about 750 km.



How to turn scrap into quality again

The basis for steel production at DEW is scrap metal. A nationwide scrap collection system available in Germany is used to collect steel products that are no longer fit for use, thereby avoiding long journeys. This also contributes to the avoidance of CO₂ emissions during the transport of the input materials for steel production. It is not only in the procurement of our main raw material that we pay attention to keeping our ecological footprint as small as possible. It is also our products, which are made from 90% scrap: No material is as sustainable as steel, because it can be 100% recycled and thus contributes to the conservation of resources and the protection of the environment.

Raw materials management as a key for Green Steel

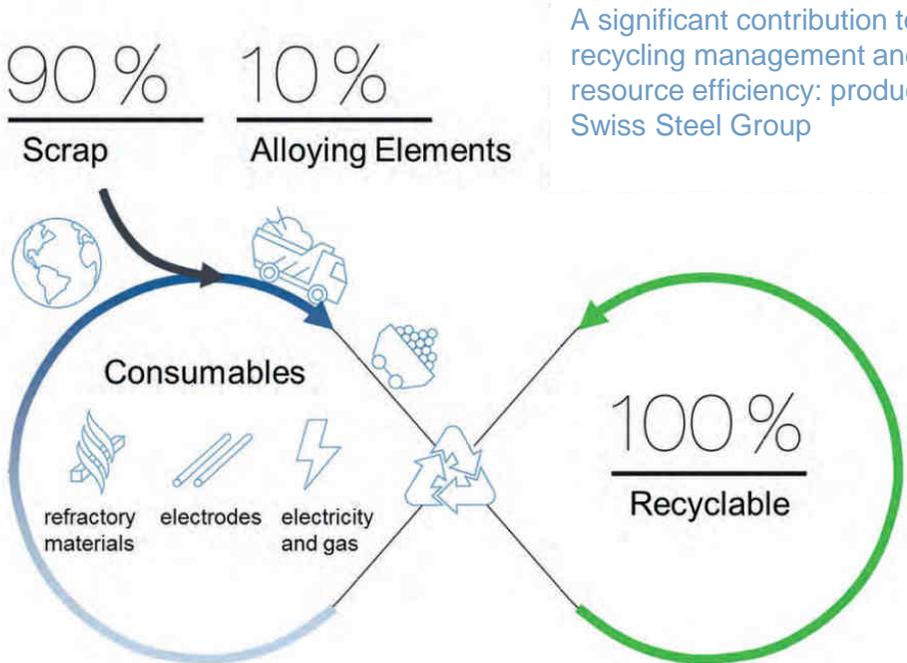
Together with its raw materials company dhi, DEW is constantly improving its scrap procurement concept. The concept is based on an intensive exchange between the steelworks and the raw

materials company with the aim of constantly optimizing the use of scrap for the steelworks. The more precisely the scrap is presorted, the less energy is required for refining. This is far more complex than with conventional glass or plastic sorting.

Over 100 defined scrap groups lead to an optimization of the alloying elements in the steel melts. And this in turn saves resources and protects the environment because fewer metals have to be mined. A positive cycle.

Further optimizations are achieved through the denomination and „cleanliness“ of the scrap. Using these parameters, the energy requirement in the steel mill for a steel melt has been continuously reduced. How one piece of the puzzle fits into another to permanently reduce CO₂ emissions.

DEW works closely with customers and helps to return scrap directly from the customer to the scrap cycle with individual scrap concepts.



A significant contribution to recycling management and resource efficiency: products of Swiss Steel Group