

BÖLLINGHAUS STEEL

# THE USE OF STAINLESS STEEL IN THE SOLAR ENERGY SECTOR



SPECIAL WEEK

**ENERGY TECHNOLOGY**

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# STAINLESS STEEL IN THE SOLAR ENERGY SECTOR

One of the outcomes of fast economic growth and rising living standards in many parts of the world is that the energy demand is growing faster than ever. Stainless steel plays a role in many of these emerging technologies, including power generation.

The application of stainless steel avoids repair work due to the material's corrosion-resistant properties, even in extremely severe operating conditions. Solar panels, for example, are subject to a broad range of surrounding conditions during their lifetime and the corrosion behaviour of stainless steel is therefore a critical element in the selection of the right materials for building solar panels.

For example, concentrated solar power plants are often encountered in harsh environments with high temperatures, extreme temperature changes, enormous vibrations, intense characteristics and volatile environmental conditions. Solar installations, particularly solar panel components, must be able to function accurately in these aggressive surroundings, and the materials from which these parts are made play an important role in their overall success. Stainless steel is corrosion resistant from start to finish. Even if the material is impaired, its inherent self-healing ability ensures that the surface will not discolour or corrode. Therefore, protection against aggressive environments, including seawater corrosion and abrasion, makes stainless steel a great choice for many power generation systems.

In addition, to provide durable and maintenance-free solutions, stainless steel is extensively used in the field of solar energy due to the material's good strength, heat resistance, ductility, toughness and sustainability. Corrosion-resistant stainless steel long products offer a combination of great precision, fire resistance, hygienic properties, recyclability and long service life. Stainless steel is also suitable for photovoltaic constructions since it offers good visual and architectural integration on roofs and façades.

For example, stainless steel structures withstand the harsh conditions of a construction site and, due to their good mechanical properties, they can be very thin. Stainless steel frames are also resistant to strong winds and snow loads, an advantage in areas of the world where the panels are exposed to these conditions.

## ABOUT BÖLLINGHAUS STEEL

Böllinghaus Steel is a producer of high-quality stainless steel profiles. Whether standard profile or custom-made, Böllinghaus Steel manufactures stainless steel profiles of proven quality for the highest customer satisfaction.