

TITANIUM IN ARCHITECTURE

Titanium is not only used in aircraft construction and medical technology, but as a high quality and environmentally friendly material, it also found its way into architectural designs as early as the 1970s. Initially titanium was used for museums and temples, but today the material is used for surfaces such as facades and roofs in stadiums, airports, hotels and general residential construction. The focus is not only on the excellent corrosion properties, but also on the excellent design characteristics of the material.

For facades, roofs, ceilings, claddings and interior panelling

Basic properties of titanium as a building material:

- **Excellent corrosion resistance**
Virtually non-existent corrosion over decades, no stress corrosion cracking, no crevice corrosion, no pitting; titanium is more resistant than copper and stainless steel.
- **Titanium is a light metal**
With approx. 4.5 g/cm³ titanium is 40% lighter than steel and 50% lighter than copper, so lighter structures and simpler substructures are required.
- **Minimum thermal expansion**
The coefficient of expansion of titanium is about half that of steel and copper and about one third of aluminium. Therefore, titanium is well suited in combination with glass and concrete.
- **Excellent aesthetic qualities**
Titanium has an excellent surface finish and a muted silver colour. By anodic oxidation of the surface many colours and an excellent colour reflection (play of colours) can be produced.
- **Environmentally friendly and sustainable**
Titanium is a harmless metal, compatible with the environment, extremely robust and very durable. It also retains its original colour for decades.
- **Workability**
Architectural titanium sheets can be processed using the same tools and machines as for stainless steel sheets; welding is also possible.



Kyushu National Museum,
Fukuoka, Japan / Kiyonori Kikutake



Hotel Marqués de Riscal,
Elciego, Spain / Frank O. Gehry



M6B2 Tower of Biodiversity,
Paris, France / Edouard François



Northern Lights Cathedral, Alta,
Norway / Schmidt Hammer Lassen
Architects & Kolbjörn Jenssen



Showa Hall, Tokyo,
Japan / Kikutake Architects

Product range

Rolled matt surface structure (TranTixxii™ – Roll Dull Finish)

- Sheets on coils: Thicknesses of 0.3mm up to 2.0mm
Widths up to max. 1219mm
- Sheets in panels: Thicknesses of 0.3mm up to 2.0mm
Widths up to max. 1219mm, Length up to max. 2400mm

**ROLL DULL FINISH**

Sandblasted surface structure (TranTixxii™ – Blasting Finish)

- Sheets on coils: Thicknesses of 0.3mm up to 1.2mm
Widths up to max. 1000mm
- Sheets in panels: Thicknesses of 0.3mm up to 2.0mm
Widths up to max. 1219mm, Length up to max. 2400mm

**BLASTING FINISH**

Coloured surfaces (TranTixxii™ – Anodized Color Finish)

- Sheets on coils: Thicknesses of 0.3mm up to 1.0mm
Widths up to max. 650mm
- Sheets in panels: Thicknesses of 0.3mm up to 2.0mm
Widths up to max. 1100mm, Length up to max. 2400mm

**COLOR FINISH**

Surfaces in gold (TranTixxii™ – IP Gold Titanium)

- Sheets in panels: Thicknesses of 0.3mm up to 1.5mm
Widths up to max. 1219mm, Length up to max. 3100mm

**IP GOLD TITANIUM**

Surfaces in crystal texture (TranTixxii™ – Hyperbeta Titanium)

- Sheets in panels: Thicknesses of 0.4mm up to 1.0mm
Widths up to max. 600mm, Length up to max. 1200mm

**HYPERBETA TITANIUM**

Sample brochures with surface structures and colours are available on request.

The higher price of titanium compared to other materials pays off in the long run in very low maintenance costs. After approx. 20 years in use, titanium materials have the best price-performance ratio.