

# CRT for industry

## ► Titanium at work for industry

There are many industrial pump applications where stainless steel simply cannot do the job due to the aggressiveness of the liquid involved.

Titanium takes over where stainless steel gives up, as the ideal metal for use in pumps in industrial environments involving highly corrosive substances. Due to a highly stable oxide film that protects the surface against all forms of corrosion, titanium is virtually unaffected by saline liquids, oxidising acids, chlorides and other highly aggressive substances.

Corrosion means expensive down-time as well as costly, time-consuming maintenance and repairs. Completely corrosion-free titanium pumps therefore represent significant benefits in demanding industrial applications.

In Grundfos CRT pumps, all components in contact with the pumped liquid are made of titanium.



## Naturally unaffected

The excellent corrosion resistance of titanium results from the formation of very stable, continuous, highly adherent and protective oxide films on metal surfaces. Because titanium is highly reactive and has an extremely high affinity for oxygen, these beneficial surface oxide films form spontaneously and instantly when fresh metal surfaces are exposed to air and/or moisture. In fact, a damaged oxide film can generally heal itself instantaneously if traces of oxygen or water are present in the environment.

The oxide film formed on titanium is more protective than that on stainless steel, and it often performs well in media that cause pitting and crevice corrosion in the latter (e.g. seawater, wet chlorine, organic chlorides).

Grundfos CRT pumps therefore take over where stainless steel pumps can no longer meet the requirements.

## Demanding applications

Examples of industries where Grundfos CRT pumps provide operational benefits include:

### Bleaching

- Sodium hypochlorite
- Chlorine dioxide

### Metal finishing, metal plating, PCB manufacture

- Copper chloride
- Ammonium chloride
- Ferric chloride

### Power generation plants

- FGD (Flue Gas Desulphurization)

### Process industry

- Oxidizing acids

