

# CRT for sea water

## ► Titanium does the job naturally

A reliable supply of water is essential for many marine operations and processes, including cooling, firefighting, washing/cleaning and salt removal. Huge quantities of water are available right nearby - but it is sea water, and it is extremely corrosive for all the installations through which it passes.

If you are responsible for marine and off-shore operations, you know that corrosion caused by sea water is always one of the major challenges. The presence of sea water severely reduces the working life of equipment such as pumps. Corrosion also means expensive down-time as well as costly, time-consuming maintenance and repairs.

## CRT makes a difference

There is, however, one structural metal that makes it possible to dispense with corrosion issues relating to the presence of sea water - and that metal is titanium. Titanium is the ideal solution because sea water has simply no effect whatsoever on its surfaces or properties.

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



## Naturally unaffected

Titanium has a strong chemical affinity for oxygen, and it forms a dense microscopic oxide film on freshly prepared surfaces. The oxide film makes titanium passive to further reactivity. This accounts in part for titanium's excellent corrosion resistance in aqueous salt.

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. sea water, wet chlorine, organic chlorides).

Pumps are used in sea water applications that include:

- Marine environments and offshore installations of all types, for:
  - ballast pumps
  - washing/cleaning
  - cooling
  - firefighting
- Fish farming
- Aquaria
- Water sports centres and fun parks
- Desalination

