

**Tungum® Tubing is utilised in non-process salt water corrosion resisting applications in the Hunterson B Nuclear Power Station.**

**The Challenge**

Tungum Alloy is a material that excels in harsh environments. It is ideal for the applications where the material has to withstand pitting and crevice corrosion. The main applications are for the use in non-process salt water.

In salt-laden marine atmospheres, '316' stainless steel for example, is highly susceptible to crevice corrosion and chloride pitting. After just a few years of salt spray exposure, it may still look bright from a distance, but closer inspection reveals telltale signs of imminent failure to hold pressure.



Tungum tubing installed in the Hunterson B

**The Tungum Solution**

Tungum Alloy Tubing combines excellent corrosion resistance, unusually high strength to weight ratio, ductility and first class fatigue properties. Highly resistant to salt water and its atmosphere, Tungum resists both stress and crevice corrosion to offer outstanding serviceability.

Tungum alloy, possesses a natural protection mechanism whereby, on exposure to salt spray, a very thin oxide coating is generated over the exposed surface, no more than two thousandths of an inch thick, when complete. The tube becomes discoloured, it may even have a verdigris coating, but under the oxide layer the tube material is perfect and will remain so for the lifetime of the installation.

**The Result**

Tungum Alloys non-magnetic and non-sparking properties make Tungum invaluable in piping high pressure gases, particularly oxygen where its thermal conductivity/diffusivity characteristics virtually eliminate the potential dangers present when materials are employed.

Tungum alloy is also a cryogenic material, suitable for chemical engineering and low temperature processes. Its corrosion resistance often enables its use in conveying fluids and gasses containing corrosive elements.

Tungum tube is being used for non-process applications in Nuclear power plants to resist pitting and crevice corrosion. It is utilized on sea water systems such as impulse lines.

Tungum Alloy is approved by Westinghouse, Babcock & EDF Energy.