

SUBMERSIBLE MOTORS

CORROSION OF SUBMERSIBLE MOTORS

To predict the corrosion of submersible motors in waters of various analyses is a complex and difficult task. However some rules of thumb that may be of value are as follows.

<u>CHLORIDES</u>	<u>pH</u>	<u>Fe³ and/or Mg²</u>	<u>CONSTRUCTION</u>
0-300ppm	>6	<25ppm	Standard
0-300ppm	>6	>25ppm	316, 304
300-1000ppm	>6		316, 904L
300-1000ppm	<6		Ni-Resist
>1000ppm	>6		Passivated 316, 904L
>1000ppm	<6		Passivated 316, 317, 904L

The oxygen content and velocity can create crevice corrosion. The greater the oxygen content and higher the velocity the greater the extent of the crevice attack. The treatment of crevices with petroleum jelly or sheath oil will reduce the severity of the crevice corrosion.

The presence of high concentrations of sulphates and nitrides can cause severe attack on iron and steel if the pH is below 7.0. Organic acids with pH below 7.0 require 316 construction.

If passivated or **904L**, the pH could be as low as 1.0 and the chlorides as high as 50,000ppm.

* 904L construction available in 6" Rewind design.