

CASE FILE

Helping save precious water with Belzona® 1111!

The Customer

Desalination Plant, Western Australia, AUSTRALIA

The Application

High pressure valve baskets



Corroded valve basket



Pre-machined surface



Post-machined basket



Casting of the bolt holes

Belzona applied to the basket



The Outcome

The initial successful repair has led to repeat business and increased customer confidence. This can be attributed to the fact the the repair saved the customer time, money and inconvenience!

The Problem

High pressure valves constructed of exotic Monel suffered from crevice/galvanic corrosion on the sealing faces under the gasket areas due to contact with a more noble graphite gasket material and efficient electrolyte. Due to the crevice corrosion compromising the sealing areas underneath the gaskets, the HP valves would leak when operating at full pressure of around 70 bar.

The Products Used

Belzona® 1111 Super Metal
Belzona® 9411 Release Agent

The Substrate

A Monel steel which was machined to produce a very rough finish with burrs.

The Application Method

The valve baskets were repaired in order to ensure that at least one of the sealing faces had a machined finish. The repair was undertaken as per VPF-01 and VPF-13, but using the machining technique. The valve baskets were pre-machined in order to create a rough surface which promotes adhesion and allows for the minimum 2mm of rebuild per face. Belzona® 1111 was mixed and applied to the substrate by short bristled brush before being contoured using a pre-cut plastic template. Once cured, the oversized repair was machined to the correct dimensions. The pre-existing bolt holes were re-cast using Belzona® 9411 so as to negate the need for any further drilling and tapping.

