BROLLY ALUMINIUM FINISHING LTD

WHAT IS PASSIVATING?

Stainless steel anti corrosion treatment at a glance

Stainless steel is a strong alloy that is naturally resistant to corrosion.
That is, until it is machined or engineered in a way that disturbs/removes the chromium oxide protective surface. This exposes the iron elements and makes the material more likely to rust. Passivation removes the free iron particles from the surface and restores the coating of chromium oxide restoring the finished part's anti-corrosive properties.

THE SCIENCE BIT

- There are many different grades of stainless steel. Each has a different % of compounds making up the alloy.
- The grade of stainless steel will determine the acid used to passivate:
  - Nitric acid
  - Citric acid
- There is no electrolytic process required unlike anodising

HOW TO PASSIVATE STAINLESS STEEL

JIGGING

Parts are jigged suitably depending on size, shape and weight.

HOT CLEAN

The parts are cleaned to remove any excess grease, oil, machining debris etc.

PASSIVATE

The parts are submerged into a tank of acid for a set time according to the customer requirements

RINSE

Warm water rinse to remove the chemicals used before being left to dry.

DRYING

The parts are dried, carefully packaged and dispatched to the customer

BENEFITS OF PASSIVATION

Fast Turn Around

Our passivation process is usually a same day turn around depending on part size and batch quantity

Anti-Corrosive Protection

Excellent corrosion protection with or without paint.

Aerospace & Military Industry

Passivated stainless steel is widely used in the aerospace and military industry due to it's anti corrosive nature and high-temperature oxidation resistance.

Environmentally Responsible

Stainless steel can be 100% recycled even after passivation treatment

Medical & Pharmaceutical Industry

Medical / Pharma equipment and machinery needs to be sterile, durable and reliable.
As well as providing anti corrosive properties, passivation ensures that:

- Equipment can withstand rigorous chemical cleaning.
- The non reactive surface of the passivated equipment ensures that it will not react with or contaminate products.
- Regular passivation treatment reduces the need for system shutdowns by reducing contamination risk.