

SIMCRAFT PRODUCTS

LOOKING AFTER YOUR STAINLESS STEEL

Background

The attractive and hygienic surface appearance of stainless steel products cannot be regarded as completely maintenance free. All grades and finishes of stainless steel may in fact stain, discolour or attain an adhering layer of grime in normal service. To achieve maximum corrosion resistance the surface of the stainless steel must be kept clean. Provided the grade, condition and surface finish were correctly selected for the particular service environment, fabrication and installation procedures were correct and that cleaning schedules are carried out regularly, good performance and long life will be achieved. Frequency and cost of cleaning of stainless steel is lower than for many other materials and this will often out-weigh higher acquisition costs.

Why Maintenance is Necessary

Surface contamination and the formation of deposits are critical factors which may lead to drastically reduced life. These contaminants may be minute particles of iron or rust from other non-stainless steels used in nearby construction and not subsequently removed. Industrial, commercial and even domestic and naturally occurring atmospheric conditions can result in deposits which can be quite corrosive. An example is salt deposits from marine conditions.

Working environments can also create more aggressive conditions, such as the warm, high humidity atmosphere above indoor swimming pools. These environments can increase the speed of corrosion and therefore require more frequent maintenance. Modern processes use many cleaners, sterilisers and bleaches for hygienic purposes. All these proprietary solutions, when used in accordance with their makers' instructions are safe, but if used incorrectly (e.g. warm or concentrated) can cause discolouration and corrosion on the surface of stainless steels. Strong acid solutions (e.g. hydrochloric acid or "spirits of salts") are sometimes used to clean masonry and tiling of buildings but they should never be permitted to come into contact with metals, including stainless steel. If this should happen the acid solution must be removed immediately by copious water flushing.

Maintenance During Installation

Cleaning of new Stainless Steel products should present no special problems, although more attention may be required if the installation period has been prolonged. Where surface contamination is suspected, immediate attention to cleaning will promote a trouble-free service life. Food handling, pharmaceutical and aerospace applications may require extremely high levels of cleanliness.

On Going Maintenance

Advice is often sought concerning the frequency of cleaning of products made of stainless steel, and the answer is quite simply "clean the metal when it is dirty in order to restore its original appearance". This may vary from once to four times a year for external applications or it may be once a day for an item in hygienic or aggressive situations. In many applications the cleaning frequency is after each use.

Cleaning Methods

When using propriety cleaners it is essential that very low or zero chlorine contents are present. Stainless steel is easy to clean. Washing with soap or a mild detergent and warm water followed by a clean water rinse is usually quite adequate for domestic and architectural equipment. An enhanced appearance will be achieved if the cleaned surface is finally wiped dry.