

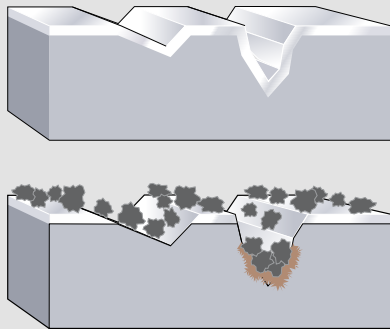
Lasting Connections

Cleaning of Stainless Steel



Stainless steel is not equal to maintenance free

Stainless steel is often chosen because of its beautiful finish, long life and minimal maintenance needs, but even stainless steel can be stained over time by dirt, oil, grease, paint and rust. With a regular maintenance program you can prevent discoloring and staining. This preserves the shine, feeling and overall impression of stainless steel.



The self-healing capacity of stainless steel

Stainless steel is protected from corrosion by its passive layer – a very thin surface layer that is primarily chromium oxide. The chromium in the steel reacts with the oxygen to which the steel surface is exposed and thus forms this invisible film. If the oxide film is damaged it will be spontaneously healed when the surface comes into contact with oxygen.

On a contaminated stainless steel surface, the de-posits will block the contact with the oxygen which is required to maintain the chromium oxide layer at an optimum level. Chlorides may penetrate under the deposits, leading to corrosion and rust.

Proper cleaning of the surface right down into its pores will considerably reduce the risk of corrosion.



Unrivalled experience and know-how

Böhler Welding is a leading producer of superior pickling products for stainless steels and special alloys. The company is also a part of the voestalpine Böhler Welding, one of the world's largest manufacturers of welding consumables.

For over 50 years Böhler Welding has worked closely with leading producers of stainless steel and knows how to keep steels stainless.

The products are applied and work in a way that introduces no mechanical damage that can weaken the protective layer of the stainless steel.

All Böhler Welding products are well-known, easy to use and have established an impeccable reputation. Start using them now and be absolutely confident that they will solve your problem and restore the surface and return your stainless steel to its original lustrous look, feel and finish.

Böhler Welding manufacture

The products are made in Malmö, Sweden, in Böhler Welding's own modern, automated process plant. All products have full traceability from raw material to finished product, which gives Böhler Welding total control of the product quality. The quality and environmental management systems are certified according to the ISO 9001 and ISO 14001 standards.



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Common causes of rust and spots on stainless steel

- If it is exposed to air that is polluted by chlorides and SOx in industrial zones, marine and coastal environments, road salt, traffic pollution.
- If the surface has a rough finish that provides a foothold for corrosive substances and corrosion products from the environment.
- If it has an inappropriate design that creates pockets and narrow grooves.
- If it is polluted by iron particles from the environment through the use of carbon steel tools and particles from vehicle brakes.
- If it has been mounted with fixtures of ordinary steel or are in direct contact with unalloyed steel.

Common uses

External	Buildings	Bridges	Vehicles	Trains	Ships	Tanks
Internal	Pipes	Tanks	Autoclaves	Process equipment	Food equipment	
Indoors	Lifts	Entrances	Kitchens	Doors	Wall panels	Sanitary installations

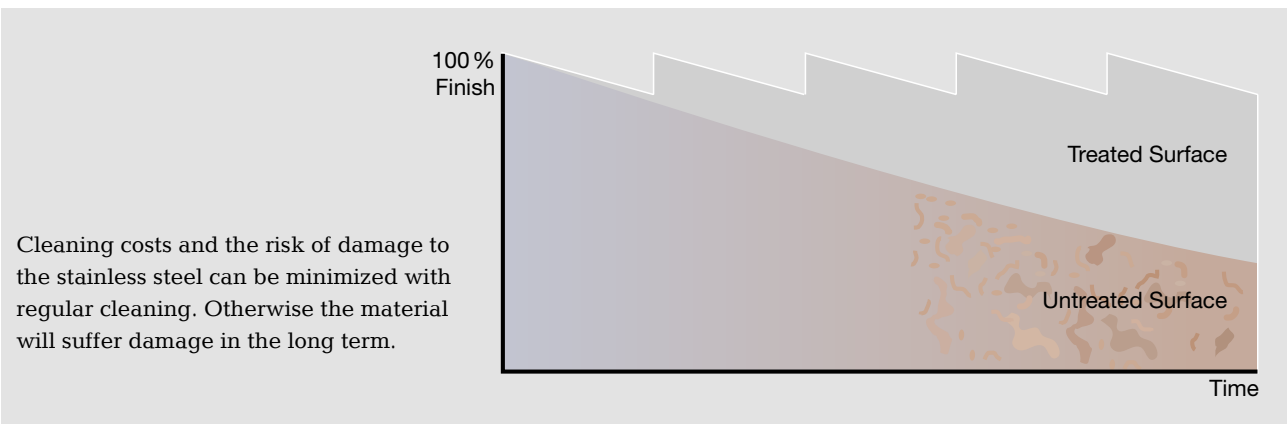
Preventive maintenance

Rain is usually enough to keep a stainless surface clean and free of dirt and deposits on building components of stainless steel. In places with little rain or for surfaces that the rain does not reach, however, regular maintenance cleaning is necessary.

This also applies to building facades, shop entrances and signs, so that the steel will retain its luster and durability. It is also the best way to good overall economy.

Cleaning should always be done before the surface becomes extremely dirty. The appropriate cleaning interval depends on the environment.

A rule of thumb is that the steel should be cleaned as often as the windows. This could mean 3–6 months when slightly dirty and 1–3 months when very dirty and in aggressive environments.



Product program

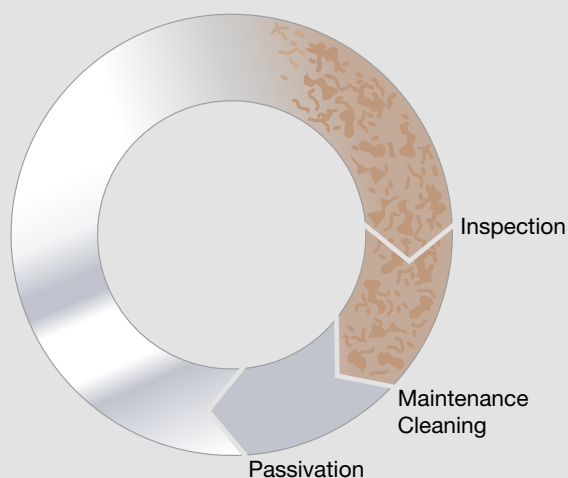
Böhler Welding has a complete range of products designed to restore the corrosion resistance of stainless steel, whether it concerns light, medium or heavy cleaning, pickling and subsequent passivation Böhler Welding has a product to suit your operation. For very harsh attacks the wide range of pickling pastes, pickling sprays and pickling baths is recommended.

- **Avesta 401**, stainless steel cleaner
Strong cleaning of dirtier surfaces, removal of surface rust, oil, grease and calcium stains.
- **Avesta 130**, pickling paste
Cleaning of rustier surfaces, removal of coarse surface rust caused by pitting.
- **Avesta 630**, acid free passivator
Passivates surfaces after cleaning and restores the rust protection. Gives no hazardous waste.

In safe hands

A well balanced and implemented maintenance cleaning program minimizes maintenance costs, so that the surface of the steel, which is often a major reason for choosing stainless steel in the first place, comes into its own.

In general, all types of cleaning operations must always be carried out in accordance with local regulations. Böhler Welding can help you to arrive at a maintenance program with the best possible method to suit your conditions and to ensure minimal environmental impact.



Böhler Welding is environmentally certified according to ISO 14001 and is constantly working with these matters. Contact Böhler Welding. The specialists are ready to help you.



Avesta Cleaner 401 is a heavy-duty stainless steel cleaner.



Avesta Pickling Paste 130 is a unique low-fuming and safer-to-use pickling paste



Avesta FinishOne Passivator 630 is an acid-free passivator

voestalpine Böhler Welding

Welding know-how joins steel

With over 100 years of experience, voestalpine Böhler Welding is the global top company for the daily challenges in the areas of joint welding, repair, hardfacing and cladding as well as brazing. Customer proximity is guaranteed by more than 40 subsidiaries in 25 countries, with the support of 2,200 employees, and through more than 1,000 distribution partners worldwide. With individual consultation by our application technicians and welding engineers, we make sure that our customers master the most demanding welding challenges. voestalpine Böhler Welding offers three specialized and dedicated brands to cater our customers' and partners' requirements.



Lasting Connections – As a pioneer in innovative welding consumables, Böhler Welding offers a unique product portfolio for joint welding worldwide. More than 2000 products are adapted continuously to the current industry specifications and customer requirements, certified by well-respected institutes and thus approved for the most demanding welding applications. As a reliable partner for customers, „lasting connections“ are the brand's philosophy in terms of both welding and people.



Tailor-Made Protectivity™ – UTP Maintenance ensures an optimum combination of protection and productivity with innovative and tailor-made solutions. Everything revolves around the customer and their individual requirements. That is expressed in the central performance promise: Tailor-Made Protectivity™.



In-Depth Know-How – As a leading manufacturer of soldering and brazing consumables, Fontargen Brazing offers proven solutions based on 50 years of industrial experience, tried and tested processes and methods. This In-Depth Know-How has made Fontargen Brazing an internationally preferred partner for every soldering and brazing task.

