HENKEL-Steri Protect

Professional surface treatment of steam sterilisers

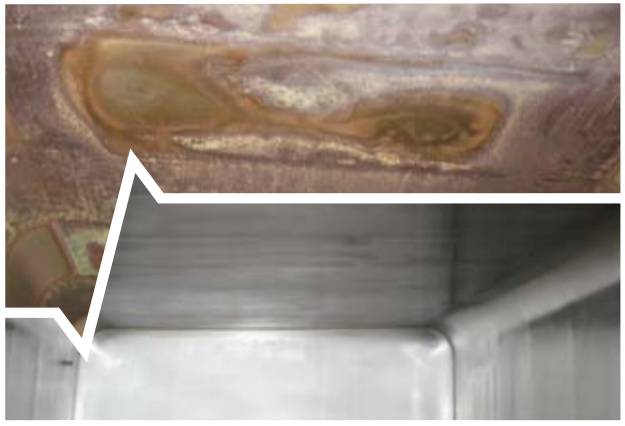
Formation of Coatings in the Sterile Chamber.

Steam sterilisers in the pharmaceutical and biotechnological industries and in hospital and clinic environments are subject to high loads on a daily basis. Conventional sterilisation chambers are lined on the inside with high alloyed austenitic stainless steels such as 1.4301, 1.4404, 1.4571 or similar.
After operating periods of 6- 12 months, the surfaces of these chambers often have a reddish brown coating, which can be detected with a white test cloth. These are usually heavy metal particles resulting from a change in the stainless steel surface, so-called rouging.

Coating Removal On-Site.

Steri-Protect operations are carried out by our on-site teams with special training in good manufacturing practice. Only state-of-the-art equipment and safety technologies are used. The cleaning chemicals have been specially developed for use on sensitive facilities. All work is thoroughly documented, and the rinse water produced is processed in an environmentally responsible, professional and certificated manner.
For removing coatings and scratches, surfaces can be chemically derouged as well as anodically or electro-

Stainless steel steam steriliser before and after Steri-Protect treatment.



Housing for protection during operation

Mechanical pre-grinding for removing extreme coatings

Anodic cleaning

Quality inspection of surface roughness

chemically cleaned. Both processes are effective, but differ in terms of treatment and final result. The anodic process (similar to electropolishing) usually improves the surface considerably, as not only the coatings but also material in the micrometre range are removed from the surface (5-10 µm). This leads to a so-called micro-smoothing of the surface which, among other things, greatly reduces the tendency to form coatings. The minimal material removal also makes it easier to remove stubborn adhesive labels.

For further information, ask for our electropolishing flyer!

Our Service Range.

- On-site and factory service
- Electrochemical polishing
- Anodic cleaning
- Chemical polishing / deburring
- Chemical pickling and passivation
- Professional cleaning (also in clean room)
- Derouging and repassivation
- Process- and cleaning chemicals
- Documentation
- Construction

HENKEL Beiz- und Elektropoliertechnik
Waidhofen-Thaya (AT) | Györ (HU) | Neustadt-Glewe (DE)
info@henkel-epol.com | henkel-epol.com

Wet-Chemical Passivation.

The corrosion resistance of stainless steel is based on the formation of a very thin chromium oxide-rich passive layer, which is formed only on metallically pure stainless steel surfaces. Thermal, chemical or mechanical processing affects the formation of the passive layer.

Passivation of the stainless steel surface is therefore highly recommended after any chemical or electrochemical surface treatment, such as derouging, as a final processing step.

Passivation supports the stainless steel surface in the renewal of the chromium oxide layer. With wet-chemical passivation, the layer structure is also more homogeneous. After professional passivation treatment, the surface is completely renewed and ready for use again.

Treatment of System Accessories.

We also treat other chamber equipment as part of our factory service. This includes:

- Loading trolleys
- Slide-in racks
- Loading and unloading ramps
- Equipment

Implementation in Accordance With GMP.

To ensure a high quality standard, we always work according to **g**ood **m**anufacturing **p**ractices:

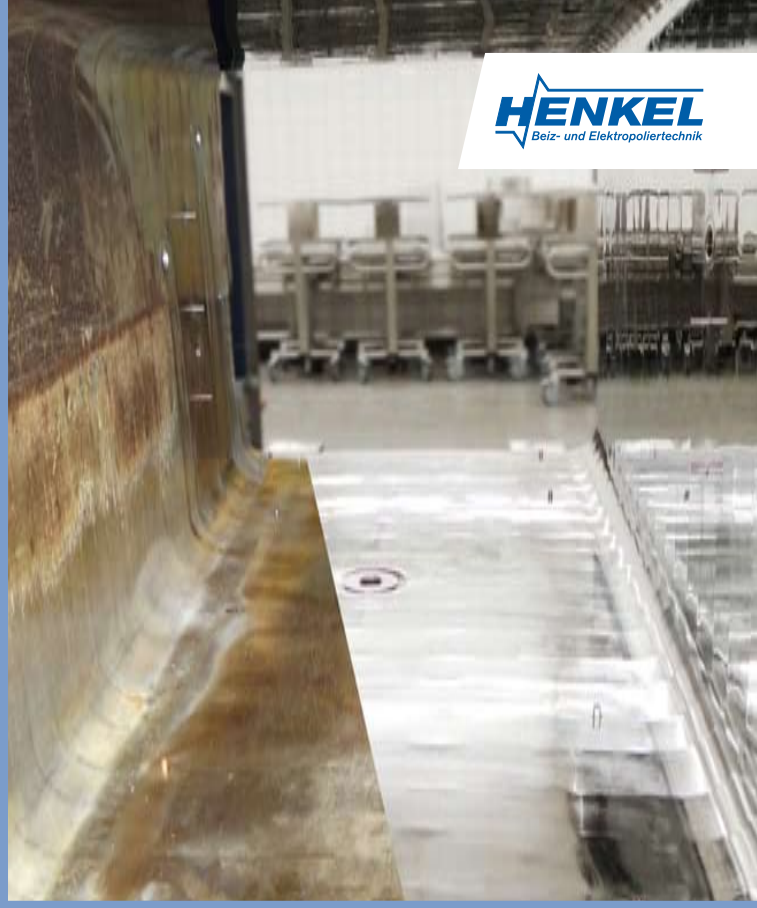
- Permanent on-site team for maximum reliability
- GMP-trained staff for the pharmaceutical and bio-technology industries, GMP-compliant documentation
- Full traceability of the chemical batches
- Our chemicals and additives are soluble in water and have an effect on the pH value and conductivity
- All the documentation we provide is approved jointly with the customer

At a Glance.

In addition to the HENKEL proven quality, Steri-Protect offers a range of additional extensive benefits:

- Optimisation of wetted surface areas
- Removal of coatings and discolouration, label residues
- On-site treatment without major restrictions to ongoing production and CSSD operations
- Safety and risk management
- State-of-the-art equipment and safety technology
- Use of process chemicals manufactured according to GMP guidelines
- GMP-compliant process and processing documentation for system requalification
- Expert processing of waste water

Further comprehensive information on Steri treatment can be found in the **Infobroschure Rouge-Effect** at **henkel-epol.com/en/industries/medical-technology**



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