

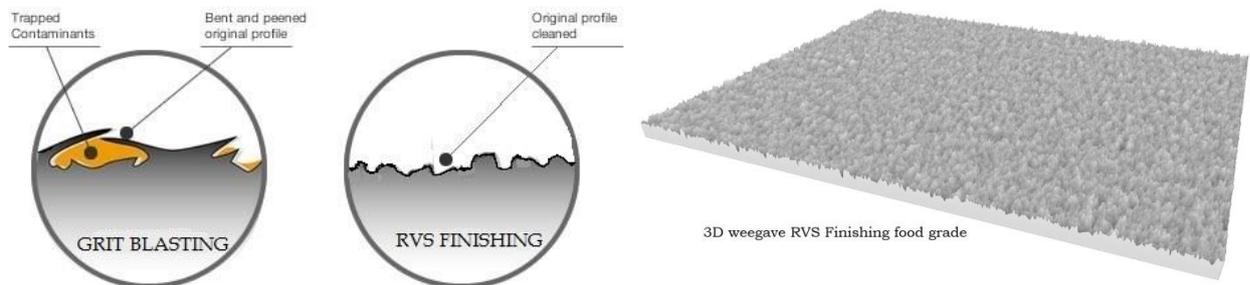
Stainless-Steel Food Grade Finishing

Surface cleanliness and cleanability for the food and pharmaceutical industries.

Within the food and pharmaceutical industry, high demands are imposed on the cleanliness and cleanability of the surface of the production equipment. Various studies done by the stainless steel knowledge department of the TNO (Dutch Organization for Applied Scientific Research in Delft, The Netherlands) have shown that through Stainless-Steel-Finishing, as an alternative to dry abrasive blasting (with the ceramic or glass beads), can be satisfied those requirements. Stainless-steel-Finishing is a treatment of the surface which is based on wet blasting and has been further developed and perfected by Kalfsvel Metaalcoating.

The principal of Stainless Steel Food Grade Finishing.

The cleanliness and cleanability of a surface is determined by the roughness and is measured and expressed in terms of the Ra-value (the average surface roughness). When the Ra-value is more than 0.6 micro-meter (23.62 micro-inch) impurities more easily adhere to the surface and even can be embedded.

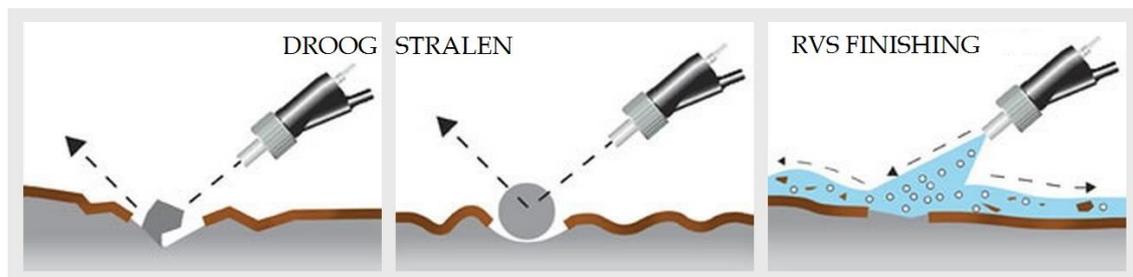


As schematically shown in the figure above.

However, the surface should also not be too smooth as it has been found that that certain micro-organisms with a Ra-value below 0.2 micro-meter (7.87 micro-inch) remain stuck to the surface and therefore are very difficult to remove (again). The most optimal Ra-value for a easy to clean surface for stainless steel is found to lie between 0.2 micro-meter (7.87 micro-inch) and 0.6 micro-meter (23.62 micro-inch). This is also determined by the size of micro-organisms; These can vary between 0.3 micro-meter (11.8 micro-inch) and 2 micro-meter (78.74 micro-inch). It has been experimentally established that with stainless-steel-Finishing Food-grade this value is reached.

The process of stainless steel Finishing

During the dry blasting process an impact will occur by a ceramic particle or a glass bead. At first sight the surface looks smooth after this treatment, but at micro level the impact shows relatively high peaks and valleys. But during the stainless-steel-Finishing process there is no impact, but provides a current which goes along the surface for the cleaning of it and also retrieves the higher peaks existing to ensure optimal results.



The treatment according to our new stainless steel finishing (RVS) process also has other major advantages:

- By pickling the parts in advance all oxides (annealing compete and skin discolorations) generated by the heat will be removed as possible contamination of carbon steel from the surface.
- The treated material is less susceptible to corrosion by the application of passivating after using stainless steel finishing (it creates a new chromium oxide skin). This treatment also removes any possible contamination of iron and other metals.
- The cleanability after our treatment is not only much better but the cleaning of production equipment is also much faster, reducing much valuable production time that is lost for the cleaning of your production equipment.



RVS Food Grade Finishing Ra 0.38



Logo whit RVS Food Grade Finishing on SS.