Brushing on Stainless Steel

LESSMANN®
THE GERMAN BRUSH COMPANY

Tips for the right handling of brushes on stainless steel:

- Be sure that the brush filament is made of stainless steel wire (usually the LESSMANN brushes with stainless steel wires are marked with green colour. If applicable test the filament).
- Be sure that there is no grinding operation on ignoble metals is the closer environment.
- Do not use too hard brushes to avoid destruction of the surface and corrosion of cracks.
- The working pressure should not be too high. In no case the wire is allowed to glow while brushing.
- If possible cool while brushing.
- After finishing the brushing operation, brush once more over the whole surface to planish the surface.

The right handling when grinding on stainless steel

Why is formation of rust possible while brushing on stainless steel?

1. Using the wrong brush (steel wire instead of stainless steel wire)

When using a brush with steel wire filament, little steel wire parts brush on the surface of the working part. Those little parts start rusting.
Generally when brushing on surfaces out of stainless steel, a brush with stainless steel wire has to be used. While brushing, it is necessary to pay attention that the metal holder of the brush does not contact the surface of the working part, because the holder of the brush usually is out of steel.
Can this not be prevented, a stainless steel brush with stainless steel mountings should be used (or e.g. a plastic cup with cup brushes with shank).

LESSMANN brushes with stainless steel wires usually have a green marking.
Is the marking not clear, before using the brush you should proof, if the filament is stainless steel wire.

Possible reasons for using steel wire filament (instead of stainless steel):
- The wrong brush was delivered by the manufacturer or by the reseller
- Several brushes, which are not marked clearly are on the workplace of the consumer.

2. Grinding operation of steel in the closer environment

When grinding ignoble metals in the closer environment of the working part out of stainless steel, it is possible that grinding dust sets on this part. While brushing, it is possible that the ginding dust is brushed in the surface and causes the formation of rust.

3. Working under high pressure

When brushing under high pressure there are two effects:
- The surface is hurt and grooves are generated. Grooves favour the corrosion of cracks.
- Due to the high pressure, the temperature increases on the working part. This might cause chromium depletion, this means elimination of chromium carbide (CrC). Hence formation of corrosion is possible. This occurs at the working part as well at the wire which is brushing on the working part (look at document 823 of the association stainless steel).