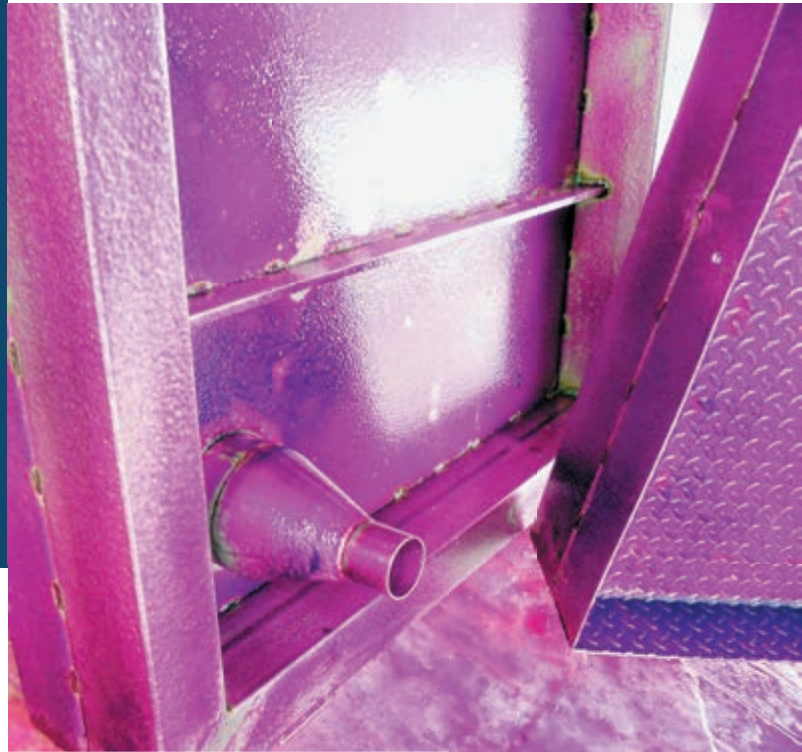


## Pickling, passivation

KASAG Swiss AG has many years of experience in the pickling and passivation of stainless steel and aluminium alloys. The pickling of stainless steel surfaces is a stripping process, and a precondition for the creation of a new homogeneous passive layer (approx. 10 nm) to prevent corrosion. The passivation of stainless steel surfaces is a non-stripping process and serves to accelerate the formation of a passive layer after pickling or to remove light surface contaminants. Oxygen cleaning is a specific pickling/passivation process to build up the passive layer and to ensure the absence of fat on the surfaces which come in contact with hydrogen.



### Pickling/passivation of stainless steel

Stainless steels must be pickled in the event of:

- The formation of oxide layer during heat treatments
- The formation of tempering colours due to welding, grinding, etc.
- Residue from welding splatter
- Metal oxide deposits (e.g. abrasive dust) or extraneous rust
- Iron abrasion during machining with steel tools
- The formation of chromium carbide due to turning/drilling without cooling lubricants
- The formation of forming martensite during cold forming

### Pickling of aluminium

The natural oxide layer which coats aluminium is extremely thin and prone to damage and has only a very limited resistance to corrosion. This can lead to corrosion beneath the oxide layer, particularly in humid environments. Pickling the aluminium cleans its surfaces and creates a complete passive layer. The surface then appears evenly matt.

### Pickling/passivation process

Pickling:	Cleaning, pickling, rinsing with water, (passivation)
Passivation:	(preliminary cleaning), passivation, rinsing with water

### KASAG pickling processes

Immersion pickling	for parts and components which fit in the immersion basin
Max. dimensions	1900 x 900 x 800 mm
Spray pickling	for containers, equipment, moulds and welded structures whose dimensions are too large for immersion pickling
Max. dimensions	6000 x 3000 x 2500 mm