



the electrochemical coating of aluminium

high abrasion resistant and stable

anodizing

Anodizing is an electro-chemical process to transform the surface of aluminium to aluminium oxide. The resulting oxide layer is permanently connected with the aluminium. The layer thickness can be selected in the μ -range.

hard-anodizing

Hard-anodized layers are generated by anodic oxidation processes in cold electrolytes. By means of an electric current, a hard, ceramic layer of aluminium oxide is formed on the surface of the part. This layer consists mainly of amorphous γ -aluminium oxide and forms of habitual, hexagonal cells perpendicular to the surface of the part.

advantages

- the anodized aluminium layer protects the aluminium against tribological and chemical impacts
- the hard-anodized layers protect paramount against attrition and corrosion



relevant criteria for anodizing and hard-anodizing











By using various electrolytes, temperatures and modulated current densities, anodized oxide layers get extraordinary characteristics. Hardness, Rz-value, corrosion resistance and wear resistance are significantly improved by the ceramic anodized layer.

Even selective coatings are technically feasible in mass production. However, only certain alloys can be coated, depending on their alloying elements.

The tribological and chemical properties of anodized layers can be even further improved with corresponding post-treatment.



technical data

-  **alloy:**
all aluminium alloys
with few exceptions
-  **dimensions:**
from few millimeters up to a length
of 1300 mm and width 1000 mm
-  **weight:**
up to a maximum of 25 kg
for each part
-  **layer thickness:**
1-100 µm – depending
on the base alloy
-  **layer hardness:**
up to 900 HV – depending on base
material and layer thickness
-  **preparatory treatment:**
chemical pre-treatment possible –
E0 or E6
-  **contact point:**
mandatory for power transmission
and fixation
-  **colorizing:**
colorizing black feasible – please be
aware: not all alloys can be colorized
-  **sealing:**
heat sealing – when required –
mandatory when colorizing
-  **products:**
- **Novatec 810** (B)
- **Novatec 850** (B)

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