



## **Tips for the delivery conditions of your parts**

In order to guarantee the rapid and seamless throughput of your parts through our production department and to achieve the optimum quality of our coatings, we have put together a few tips here for the delivery condition of your parts.

### **1. Delivery condition of your parts**

- Inform us as to whether these are safety relevant parts, e.g. for the aerospace, automotive or defence technology sectors.
- Material faults, such as unevenness, pores, cavities, scratches, scores, cracks and structural faults, cannot be covered or levelled through hard chromium plating.
- Scale, traces of corrosion, paint, residual paint, adhesive tape residues, etc., must be removed without trace. We are able to perform any necessary mechanical or chemical preliminary works if required. We shall be happy to generate a corresponding quotation for you. Oils containing silicone are not permissible.
- Nitrated surfaces must be free of compound layers. This means that the surface must be metallically bright. This can be achieved through mechanical or chemical pretreatment. We must be informed of the precise heat treatment and tensile strengths.
- Weld seams that lie inside the chromium plating area must be free of cracks and pores. Furthermore, we require information regarding the weld metal material.
- Sharp edges should be rounded or chamfered. Radii and chamfers prevent breakout during the subsequent polishing or grinding of your parts. Radii and chamfers should be greater than 0.5 mm.
- With tensile strengths  $>950 \text{ N/mm}^2$ , hydrogen embrittlement may arise during coating. In accordance with DIN 50969, heat treatment may be necessary in this case (hydrogen embrittlement), which must be agreed separately.
- Magnetic parts may have an influence on the quality of the surface to be coated. For certain sizes, we have the option of demagnetising.

- In the case of parts that are to be precision hard chromium plated, the preliminary dimensional tolerance must be observed. These parts must be identical within a single batch. With parts that are not to be mechanically pre-processed by Betz-Chrom, it is essential to lie below the required end roughness in the delivery condition.
- Make sure the packaging is secure for transport. Parts must be secured against sliding. Sensitive surfaces must be specially protected against contact. If possible, the parts should be protected with the help of corrosion protection paper, such as Branorost. The formation of condensation, e.g. due to plastic packagings such as film, etc., may corrode parts while in transit. Damp corrugated cardboard can also cause extensive damage. The goods must be delivered dry, safely covered and in an enclosed transporter.

## **2. Order placement**

- If available, always enclose a technical drawing. If no drawing or sketch is available, mark the surfaces to be processed clearly and directly on the workpieces.
- It is essential to provide notification of the base material or material composition.
- Mark the surfaces to be processed on drawings in colour.
- Stipulate the desired coating thickness and surface quality. Also specify the tolerances for dimension, position and shape.
- Please quote the delivery addresses if these differ from the postal address.
- Enclose test plans or factory standards.
- Our quality assurance department shall be happy to generate acceptance test certificates. These must be ordered separately and are charged accordingly.

## **3. Recommended base material**

We recommend Ovako steel for hard chrome plating. For more information please click on the following link:

<https://www.ovako.com/en/sales-units/germany/>