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*The precision company*

# Chromium / PTFE Coating

By incorporating PTFE into a structured hard chromium deposit, the advantageous properties of both materials are combined in an ideal manner. The anti-adhesive but soft PTFE is held in position by the wear and corrosion resistant hard chromium layer. A much lower co-efficient of friction is the result of its self-lubricating nature.

## **Method of Operation of the Chromium / PTFE Coating**

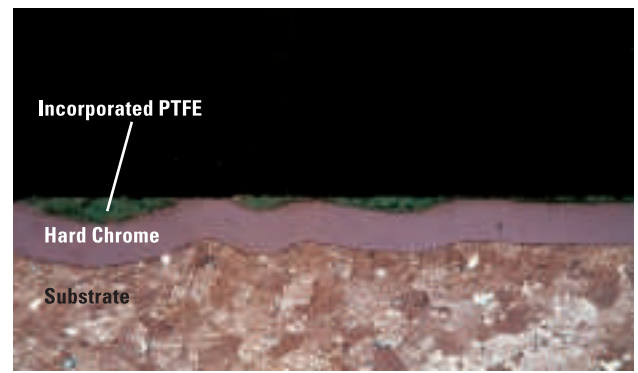
As can be seen in the drawing, the finished chromium / PTFE coating consists of hard chrome imbedded with PTFE in its recesses. In operation the wear resistant hard chrome protects the imbedded PTFE, thus reducing PTFE erosion to a minimum. Hence the favorable surface properties of the PTFE coating remain.

## **The Production of the Chromium / PTFE Coating**

The component to be treated is pre-ground to the necessary tolerance. During a subsequent operation, the base material is given the necessary surface topography. The application determines the former specification of this structure. On top of this pre-ground, structured base material, a hard chromium layer is electro-deposited. Because of the reduced throwing power of the chromium layer, the pre-machined surface structure is preserved. Thereafter pure PTFE is applied. A gentle, final heat treatment tempers the PTFE and therefore increases the resistance to mechanical load.

## **Applications**

- Heating and cooling cylinders in the paper industry



## **Surface Specifications**

<b>Chrome layer thickness:</b>	ca. 30–150 µm
<b>Teflon (PTFE) layer thickness:</b>	ca. 30–50 µm
<b>Co-efficient of friction:</b>	low co-efficient of friction due to the self-lubricating nature of the surface. No Slip-Stick-Effect
<b>Chemical resistance:</b>	good chemical resistance (details available on request)
<b>Operating conditions:</b>	temperature resistant up to 205 °C



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