

KRAFTONWEG OY are combining research and experimental production. We are focused on developing new functional metal coatings and new methods of their deposition, including the development of coating materials which meet specific customer's requirements.

Our new technology PVD Droplets - original vacuum technology for depositing functional thick (>20 microns) metallic coatings based on Ta, Nb, Zr, Cr, C, its combinations, multilayered, doped or not by nitrogen, resulted in high deposition rate in 1-5 microns per minute.

## Excellence and opportunities:

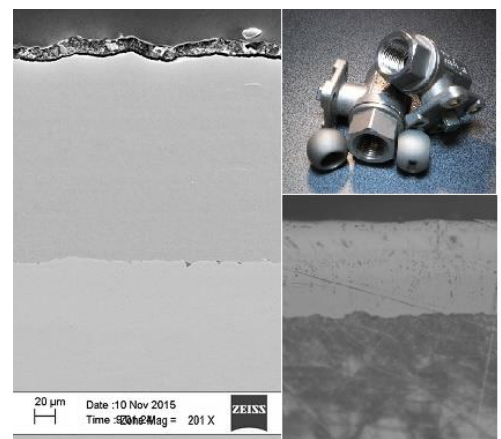
1. Uniform fine-grain structure of coating material. Absence of column structuring.
2. Coatings from 20 to 100 microns in thickness.
3. Detached films of 20-300 microns.
4. Possibility to predetermine and control material structure of the coating / film.
5. Improvement parameters of material through material structuring.
6. Facility to utilize component cathodes in 2 and more metals enabling to produce intermetallic coating materials of required composition.
7. Easy to install our evaporator into existing vacuum equipment.
8. Low power consumption.
9. Clean and environment friendly technology.

## Possible applications:

1. Coating of machinery components, also including cases when coating itself is subjected to mechanical loads.
2. Coating on external surfaces.
3. Extra corrosion resistant Zr, ZrTa coatings on sheet metal for further production of reactors, fittings, tubing with coated internal surface, heat exchangers, etc. for chemical industry equipment.
4. Manufacturing of detached film of certain composition.
5. Possibility to put coatings on ceramic materials.

## Limitations:

1. Melting point of substrate is to be above 700 Celsius degrees, otherwise additional cooling of the substrate required during the process.



TiCu (substrate AISI 316),  
β Ta (substrate AISI 316)

α-β Ta coated valve parts,