Tungsten-copper plasma spray electrodes and nozzles.

During plasma spraying, metal or ceramic powder is melted in a plasma arc and then propelled at high speed against the workpiece that is to be coated. In this way, it is possible to deposit impermeable, adherent layers on tools and various equipment components. When used in plasma spray guns, our nozzles and electrodes have to withstand temporary temperatures of more than 10 000 °C.

That is a challenge that our tungsten-copper plasma spray nozzles and electrodes can easily rise to. Using back-casting techniques, we are able to achieve particularly reliable tungsten-copper bonds. Our nozzles ensure optimum heat transfer and are able to withstand even the most extreme mechanical stresses.
Optimum materials properties. Long service life.

Thanks to its high melting point, tungsten ensures that even the high temperatures that occur at the particularly exposed tip cause no damage to the spray nozzle. The high level of thermal conductivity provided by tungsten and copper ensure optimum heat dissipation. As a result, our nozzles and electrodes offer excellent resistance to arc erosion. This guarantees a long service life.

- outstanding arc erosion resistance
- high temperature resistance
- optimum thermal conductivity

You want it. We'll supply it.

We have the following nozzles and electrodes for you on stock:
Nozzles

- PN-F4-6
- PN-F1-6
- PN-G-W / PN-GH-W

Electrodes

- PE-F4
- PE-F1-45 / PE-F1-90
- PE-3M63 / PE-7M63 / PE-9M63

We are also happy to supply tungsten-copper semi-finished products.

We rely on thorium-free plasma spray electrodes made of tungsten-lanthanum (WL10). These electrodes are not just environmentally friendly, they are also high performance.

The Institute for Physical Metallurgy and Materials Testing at the University of Leoben confirms: In comparison to electrodes containing thorium, tungsten-lanthanum electrodes excel through their

- excellent ignition properties
- improved deposition efficiency
- reduced wear
- constantly high quality of the coatings

Read all about the details in the scientific paper of the university Leoben.