

Increase your productivity with IN electrodes



We have built on 12 years of experience in the manufacture of more than 200,000 electrodes for EDT machines to widen our expertise to another system type with the development of IN electrodes. The unsatisfactory purity and homogeneity of traditional powder metallurgical electrodes on the market often cause problems in texturing.

We have identified and solved this problem!

IN electrodes are made from high-purity copper of grades E, SE or OF-CU. Casting blocks are hot extruded and the precise copper profile is produced through subsequent drawing. This creates a homogeneous structure that is free of air pockets, gas bubbles, slag inclusions and other inhomogeneities.

Electrodes produced in powder metallurgical processes are made by pouring copper powder of a particular grain size into a mould and then sintering it at high pressure and high temperature under a protective gas. This is known as HIP (Hot Isostatic Pressing).

	IN electrodes	Powder metallurgical electrodes
Material	High-purity copper E-CU, SE-CU or OF-CU	Sintered copper powder
Structure	Homogeneous Free of air and slag inclusions, gas bubbles and other inhomogeneities	Inhomogeneous
Specific weight (in kg/dm ³)	8.93	6.5-7.1 Different compression of the electrodes results in different combustion in EDT processes
Weight per electrode (in g)	721	511
Conductivity (in m/Ω mm ²)	min. 57	35

Conclusion:

The homogenous structure of IN electrodes reduces the risk of “banding” on the rollers. Uniform combustion is always guaranteed, unlike with traditional powder metallurgical electrodes.

5 GOOD REASONS

why you should use IN electrodes instead of electrodes produced in powder metallurgical processes:

- ▶ **Longer service life**
- ▶ **Fewer electrode changes**
- ▶ **Much better conductivity** 62% higher
- ▶ **Homogeneous material** with no inclusions (bandings)
- ▶ **Uniform combustion** of all IN electrodes

