

Electron beam welding

Pronexos EB welds with a range of materials high accuracy, including reinforced steel, aluminium, copper and titanium.

pronexos



Pronexos has 50 years of experience in electron beam welding (EBW) — a welding process that produces fusion with a concentrated beam composed primarily of high-velocity electrons, hitting on the joint. The process is used without shielding gas and without the application of pressure.

The process

A high energy and extremely focused beam of electrons is used to join metals, with no filler metal required. This approach results in a small heat-affected zone with minimal distortion, while the bulk of the assembly remains cold and stable.

The welds produced are narrow (up to 30 mm) and as it takes place in a vacuum, we can achieve almost pore-free welds. Computer controls ensure minimal operator dependence and a high degree of reproducibility.

EBW lets us weld oxygen-greedy materials and materials with high thermal conductivity. Pronexos can weld a range of materials, including – but not limited to – reinforced steel, stainless steel, aluminium, copper, tantalium, titanium, zirconium, niobium, molybdeen, gold and silver.

Our capabilities

Licensed EB welding machines: EB1's chamber is 2800 x 1210 x 1000 mm EB2's chamber is 650 x 850 x 640 mm

- High volume production
- Metallurgical laboratory for quality inspections
- Functional (leak) testing
- Vacuum heat treatments that are NADCAP-accredited
- Materials laboratory, and engineering and R&D centers

Benefits

- Deep penetration
- Near parent metal strength
- Narrow fusion zone
- Minimum component distortion
- Precision repeatability
- High accuracy welding
- Automated



For further information please visit our website or scan the QR-Code:

www.pronexos.com

