

Advantages of Electron Beam Technology

Our Locations

pro-beam Company Portrait

Fields of application

- **Welding**
Narrow, deep welding seams with minimal distortion as a result of small heat affected zone (ratio >10:1)
- **Hardening**
Surface treatment e.g. partial hardening of surfaces subject to heavy mechanical stress
- **Drilling**
Various bore and slot hole geometries in tough and/or thick materials (e.g. filters, centrifuges)

Treatment of various materials

- Steel, steel alloys
- Light metal, non-ferrous metal, e.g. aluminium, magnesium, titanium
- Reactive and refractory metals
- Dissimilar materials, e.g. bronze-steel

Process advantages by pro-beam

- Implementation of our job shop experience into the machine concepts
- 3D-multi-beam technology
- Multi-process technology
- Equipment designed for stability and automatic beam alignment accomplish excellent reproducibility of process results
- Comprehensive range of welding parameters recorded for quality control
- High performance of automatic seam tracking (EB-Vision)
- Brilliant process visualisation, e.g. suppressing of the process light (ELO-online)



pro-beam International Sales Office

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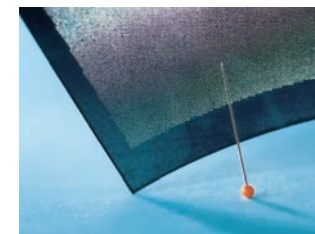
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Your contact

— Welding



— Drilling



— Hardening



— Systems Engineering



35 years of experience in Electron Beam and Laser Technology

Electron Beam Systems

Certifications

pro-beam portfolio

Process engineering

Process and technology development, consulting

Job shop

Prototypes, pre- and small series production, mass production, covering of production peaks in the production line of the customer

Equipment technology

Machinery and equipment engineering, retrofit, service and maintenance, training of operators

Benefits from our know-how and resources

Flexibility

More than 40 electron beam and laser machines for different applications

Productivity through minimized costs

Adapted use of chambers from small to large volumes (up to 700m³) suited to each size of construction parts

Highly innovative power

About 85 engineers and more than 35 years of experience stand for our engineering excellence

Experienced in almost all industrial sectors

- e.g. automotive industry, railway supply industry, aerospace industry, machine building, electrical industry, power plant industry, navy, steel construction



Chamber machine K6000



Load lock cycle machine



Load lock shuttle machine S20



Heating machine



Chamber machine K640



Electron beam generator

pro-beam group

- DIN EN ISO 9001
- ISO/TS 16949 automotive
- AS/EN 9100 aerospace industry
- DIN EN ISO 15085 railways supply industry
- DIN 2303 military engineering
- Navy authorisation
- Pressure vessel certification according to HP0, ASME, SELO, NB, 97/23/EG
- DIN EN ISO 3834
- DIN EN ISO 14744:2006

pro-beam inspection personnel

- DIN EN 473

pro-beam operators

- DIN EN 1418 for electron beam and laser installations