

Skelmersdale Plant Profile

A metal joining centre of excellence, combined with a large vacuum heat treatment capability...

Total quality metal joining and heat treatment that ensures component reliability, efficiency and delivery to the customer.

Bodycote Skelmersdale has developed as a dedicated aerospace and power generation centre of excellence combining specialist metal joining and vacuum heat treatment processes. With a policy of continued improvement, the facility continues to develop its thirty years of expertise through close co-operation with major manufacturers and their supply chains.

Bodycote Skelmersdale has responded to growing requirements in the gas turbine market by development of its brazing and welding services, resulting in recognition as a 'centre of excellence' for, amongst other products, the electron beam welding of turbine and transmission components and vacuum brazing of nozzle guide vanes, turbine blades and honeycomb seal components, for both aerospace and power generation applications.

In the hands of our highly skilled project engineers and operators, this technology allows manufacturers in other market sectors to benefit from the facility's scope of metal joining and heat treatment techniques.

Quality Accreditations

To support their commitment to a completely reliable service, Bodycote Skelmersdale has attained specific quality accreditations, enabling world-class standards to be obtained. These include ISO 9001:2000 and Nadcap accreditation.

Environmental Accreditation

Bodycote Skelmersdale holds ISO 14001 accreditation.

Processes at Skelmersdale include:

- **Vacuum Heat Treatment**
Heat treatment from 500°C to 1350°C, under high vacuum conditions, in furnace loads of up to 3000 Kg. Pressure quench capabilities up to 2 bar, with nitrogen or argon. Secondary treatments - ageing, tempering, etc, under partial pressure, vacuum, inert gas, or forced air circulation.
- **Vacuum Brazing**
Assemblies from a few grammes up to 3000 Kg in weight can be brazed using nickel based, precious metal and activated braze alloys. Using TIG and resistance methods for positional fixing to assemble the most complex components and carry out multiple braze routines.
- **Electron Beam Welding**
This reliable, efficient and cost effective metal joining technique, with its extensive list of benefits, has become a formidable tool in today's competitive engineering.
- **Vacuum Homogenisation**
Vacuum homogenisation and solution heat treatments of investment castings.
- **Vacuum Precipitation**
Vacuum precipitation of aerospace components such as engine rings, discs and actuator gear shafts.
- **Stress Relieving**
Stress relieving of critical components in both vacuum and air atmospheres.





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Providing the competitive edge through our capacity and capability...

Five vacuum furnaces from 36"x24"x24" to 48"x36"x30" including a vertical bottom loading furnace at 60" dia with a maximum payload of 3000 Kg. All furnaces have a maximum temperature of 1350°C. Fully computerised furnace programmers control the temperature accuracy to better than +/- 5°C throughout the hot zone, backed up by full cycle data logging of all required parameters.

An air furnace up to 36"x36"x24" with load capacities up to 1000 Kg and a maximum temperature of 750°C.

6 low voltage / 5 high voltage Electron Beam Welders
Ancillary micro pulse TIG facilities

A HSD Electron Beam Welder (10' x 8' x 8') approx 3.0m x 2.4m x 2.4m, full vacuum with gun system rated at 25K/w.

Cryogenic facilities are available to complement conventional processing / assembly needs.

An ability to provide services on a 24/7 basis gives customers the option to have their welding, heat treatment or brazing carried out at their convenience. This cost-effective alternative to an in-house facility and a large capability gives Bodycote Skelmersdale and its customers the edge when meeting the ever-increasing demands of today's market place.



Bodycote also has heat treatment facilities at the following locations:

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<i>Cambridge</i>	T +44 (0)1223 860741	F +44 (0)1233 863498
<i>Chard</i>	T +44 (0)1460 67957	F +44 (0)1460 67962
<i>Cheltenham</i>	T +44 (0)1452 714440	F +44 (0)1452 856097
<i>Coventry</i>	T +44 (0)2476 367786	F +44 (0)2476 368158
<i>Derby</i>	T +44 (0)1332 275800	F +44 (0)1332 767785

<i>Gillingham</i>	T +44 (0)1634 376313	F +44 (0)1634 371969
<i>Macclesfield</i>	T +44 (0)1625 501888	F +44 (0)1625 505310
<i>Morden</i>	T +44 (0)208 337 7744	F +44 (0)208 330 2699
<i>Rotherham</i>	T +44 (0)1709 361047	F +44 (0)1709 828529
<i>Stillington</i>	T +44 (0)1740 630353	F +44 (0)1740 630075
<i>Stockport</i>	T +44 (0)161 483 0511	F +44 (0)161 483 5450
<i>Woodford</i>	T +44 (0)161 440 0288	F +44 (0)161 440 8017



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