



CARR'S UPDATE

Laser welding leaps ahead again.

Carr's have been laser welding tooling and metal parts now for nearly 5 years, and are welding up to 10 tools a day. The laser machines themselves have not progressed with any great new technology, but the materials available have. Carr's now have access to hundreds of wires from the USA and Germany. Wires to match every application and base metal.

The material the toolmaker chooses for the tool, has to be a compromise for durability, hardness, machinability, polishability etc. However, when looking at local areas of the tool, different properties can be added to enhance the tool's life. To reduce gassing damage, for example, areas can be welded with specific welding materials for the specific job. Hence higher chrome content steels can be used in gas eroded areas. Harder steels up to 60 RC, can be



used in high wear areas. H13 steels can be put on P20 tools. Also materials for matching steels are better. The photo shows how steels that have to be chrome-plated, can be welded and re-plated.

**For the latest, ring
Phil or Bob on
01536 412828.**

Tool-room Services at Carr's :-

1. Laser welding all metals.
2. Cold Pulse welding to steel tools.
3. Brush Plating to steel and copper metals.
4. Ali-weld brazing to aluminium alloys.
5. Polishing and texture repairs on local areas.
6. Hard Surfacing with Plasma Transfer Arc.

Plasma Transfer Arc Hard Surfacing.

Carr's Welding Techniks at Uplands Farm, have now been approved for PTA hard surfacing for Baker Hughes Inteq world wide, a leading oil field services company. After a year of trials and tests, the PTA (plasma transfer arc) machine has been commissioned and approved.

The hard surfacing material is a mix of spheroidal tungsten carbide with a nickel matrix binder. The round shape of the tungsten carbide crystals makes the surface even more resistant to wear, as the shape deflects impact and reduces the chance of the crystal being dislodged. The hard banding on the subs. for Inteq, have to be ground off first to allow room for the new ones to be put on and then Carr's add the spiral bands at various angles depending on the spec.

The photo shows a sub, with its old bands having been ground off. New bands of PTA tungsten carbide are about to be applied.



These wear bands can be added to other shapes and sizes.

***For more details, please contact
Phil Carr on 01536
412828.***

Application Stories.



Die Casters. Do you have problems with cracks and crazed die surfaces? The laser welding is good for keeping tools going while you make a new one. Carr's have kept some dies going for years.

ISO9002/2001 update.

Carr's successfully were re audited for ISO9002 in April 2003, with no non-conformances. This is a credit to the firm and its staff for following the regime, not just for the starting period, but now in everything they do. There is more accountability and traceability, not just back to jobs that Carr's have done, but towards the health and safety policy and work practices across the whole company's activities.

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Site-working at Carr's.



Carr's offer an on-site service for their cold pulse welding process. Large tooling usually too big to transport, can often be welded at our customer's factory and sometimes in the press, if the space allows. The skills of Alistair and Dean (pictured above) are so good, that complete tool repairs, including bedding and sometimes re-texturing can be carried out on site.

For more details ring Phil or Bob on 01536 412828