

# Strength in breadth

**Who and what is the surface finishing specialist group Wheelabrator? Andrew Allcock visited its Birmingham surface technology centre to find out more**

**L**ast year, seven individual surface finishing brands were brought under the umbrella of the Wheelabrator Group. So if you wondered what happened to those surface finishing firms previously sailing under the ISP, and before that the USF badge, as of last August, this is their new home.

Within the new-look group are: Impact Finishers, a sub-contract shot peening specialist; Vacu-Blast air blast cabinets and rooms; Spencer Halstead and Tilghman Wheelabrator wheel blast solutions; Abrasive Developments wet blast technology; Walter Trowal mass finishing and effluent treatment equipment; and Clean-Tek washing, degreasing and ultrasonic cleaning systems.

Altogether the UK operation employs 150 and has sites at Altrincham, Birmingham, Glasgow, Coventry, Slough and Ossett, near Wakefield.

## **EQUIPMENT SPANS EXTREMES**

The range of equipment and services spans the removal of scale from forgings, for example, via the Tilghman Wheelabrator equipment, through more gentle cleaning via mass finishing and drag finishing from the Walter Trowal stable through to cleaning and degreasing surfaces with the aqueous Clean-Tek range of degreasing equipment. And the company has "the largest stocks of abrasives in the UK", according to UK marketing manager Colin Ward (pictured), while its Wheelabrator Plus service offers maintenance and spares support for its own and others' equipment, taking in rebuilding of machinery, which even larger firms are interested in, he adds.

The Clean-Tek range is bought in and not a group company manufactured product, an example of Wheelabrator Group's total approach to surface finishing solutions. Equipment will be purchased from third parties and then badged Clean-Tek. Mr Ward explains: "It

*Customers increasingly want a complete solution from a single source, says Wheelabrator Group's UK marketing manager, Colin Ward*



*Wheelabrator's Birmingham surface technology centre can demonstrate all the processes that the Group offers. A four-spindle drag finishing machine is the latest addition*

is not something that we hide from the customer, we are open about this." The Group will also include paint finishing lines, for example, if this is a customer requirement, and these may be built in house or procured from third parties, but what ever the solution, all supplied equipment is totally supported by Wheelabrator, he underlines.

Just like other areas of industry, customers increasingly want a complete solution from a single source, says Mr Ward – and they also want reliable service and spares support which has led to the formation of Wheelabrator Plus. A recent single-source supply example is at turbocharger manufacturer and reconditioner Holset Engineering.

A new vibratory bowl machine, three table-type blasting machines, two basket-type washing machines and six ultrasonic cleaning systems allow Holset to carry out a complete cleaning, peening, washing and vibratory finishing process at its Huddersfield facility where the company reconditions a range of turbochargers for medium and heavy duty diesel engines for highway applications, as well as for power generation and marine use.

"Combined with an extension in our operating hours, these machines have allowed us to increase throughput from 120 to around 220 units a week," says Simon Brierley, Holset remanufacturing team leader.

#### **MORE EFFICIENT PROCESS**

"The machines have helped us to achieve a more efficient production line with parts now only taking four days from strip to rebuild. In particular, the six ultrasonic machines are extremely effective at removing oil and carbon residues from the aluminium components, leaving them in an optimum condition ready for shot blasting, so reducing the blasting time."

Once stripped, turbocharger components are cleaned. The aluminium parts are placed in the six S6090 ultrasonic systems from Clean-Tek and delicate nozzles processed in the CD 200 vibratory finishing machine, part of Wheelabrator's Walter Trowal product range, to remove carbon deposits and improve the surface finish.

Following this, cast iron and aluminium components are shot blasted in one of two MT1000 and one RT1000

table-type machines from Spencer Halstead and Tilghman Wheelabrator.

Finally, Holset uses the two B100 basket-type aqueous wash machines from Clean-Tek to clean the components before reassembly and despatch.

But high-quality surface finish demands are growing for high-value, low-volume parts for medical and motorsport, where the process of choice is drag rather than mass finishing.

Drag finishing has the advantage of higher speed as well as the elimination of metal-to-metal contact and the potential for damage arising in processes where parts can impinge on one another. Drag finishing is also appropriate for components with many contours and complex geometry, or for extremely hard materials. In drag finishing machines, parts are held on individual spindles or multiple parts are held on fixtures held on the spindles and are dragged/driven through stationary media. Walter Trowal reckons the process is up to 40 times faster than vibratory mass finishing.

Not a new process, drag finishing has been given a boost by new Walter Trowal intermediate size machines. Previously, the choice was either a single-spindle unit or one with 12 or more. The 12-and-over spindle machines are very large, while the single spindle machine is not really a production solution. With the arrival of the new four-spindle Mini TMD, the Birmingham technology centre is pushing the process harder.

Another area of expansion for Wheelabrator Group is at its sub-contract finishing operation, Impact Finishers. Aerospace and medical sectors are particularly interested in shot peening, says Mr Ward, and the company recently invested £500,000 in extra equipment and in a move to new premises in Slough and expansion in Cork, Ireland. Sites at Slough and Coventry are expecting NADCAP-approval imminently.□

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