Grinding out a result

An outdated method of weld dressing gun safe cabinets has been replaced with a twin-belt grinding machine. The result has been a transformation of both the process itself and the working environment.

Gun safe manufacturer Brattonsound Engineering has seen a previously noisy, dirty, expensive and labor-intensive method of weld dressing its fabricated gun cabinets transformed thanks to a Kuhlmeyer twin-belt grinding machine. Safety and working conditions have been drastically improved.

Previously, Sutton, Surrey-based Brattonsound had used angle grinders and sanding discs to remove excess weld and to dress the six faces of the cabinets prior to painting. This method was labor-intensive, with each cabinet manually positioned five times to complete the process. It was also dirty, noisy and expensive, with each sanding disc having to be replaced after just two cabinets had been dressed.

The solution, installed by UK agent, Ellesco, Christchurch, Dorset, is a Kuhlmeyer ZBS twin-belt grinding machine which has not only partially automated the process, but has also, as Gerald Tagg, Brattonsound’s managing director says, “brought this particular process into the 21st century.” Key benefits include:

- Easier cabinet handling: “The physical side of the work was a big concern, with the safe cabinets weighing up to 50 kg,” confirms Mr Tagg. Now, “you only have one lift onto the table, where the component is held in place by suction cups. Pneumatics then assist in positioning the part, after that the machine does all the hard work.”
- Improved set-up times: the machine’s ‘universal-jointed’ table means the component can be ground on five sides in a single set-up.
- Health and safety: in the working area the two belts run parallel to each other before travelling around a ‘triangular’ pulley system, providing the operator with an open and safe working environment.
- The obvious by-product of weld dressing, namely grit and dust, used to be a serious concern. Even though masks were provided – with operators instructed to wear them – they were disliked by their wearers. The inclusion of a Carter-Thorne dust extraction unit has eliminated that particular issue.
- Better quality and tracking: the component can be presented to either belt with pressure applied using shaped pressure tools to achieve metal removal or the finish required. Use of a clever drive and idle wheel system, along with pneumatic belt tensioning, allows the belts to be flexed in any direction and up to 90° from its axis without loss of tracking.
- Keeping ahead of the competition: According to Mr Tagg, Brattonsound Engineering operates in a market that is populated by low-cost, low-quality products both from within the UK and from mainland Europe, hence his desire to differentiate products in functionality and quality, charging a higher price accordingly. And the strategy is successful. “It is helping us, as a UK manufacturer, compete against low-cost imports.”

Gunning for success

Brattonsound Engineering, founded in 1982 as a sub-contract sheet metalworking company, became a maker of gun safes as a consequence of managing director, Gerald Tagg’s interest in clay pigeon shooting and his desire to keep his guns stored securely away from his children. All gun safe products are manufactured to exceed the requirements of BS 7558/92 and are widely used by UK and overseas police authorities, as well as by the Ministry of Defence. The company currently produces 60 safes a day.