Accuracy and flexibility drives robot investment at Certwood

Investment in two new six axes robots has helped Certwood Limited to become a competitive option to offshore trade moulders. Increased accuracy, flexibility and the innovative application of two FANUC M-10iA robots are retaining large contracts in the UK.

Certwood, based in Luton, is a busy trade moulder producing 500,000 components per month for three core sectors; automotive – a tier one supplier of technically complex interior mouldings, stadium seating and its own storage tray system used by schools and laboratories.

All 20 moulding machines at Certwood are equipped with robots to unload mouldings so process automation is second nature to the organisation. The new FANUC M-10iA robots are six axes arms providing increased flexibility over conventional 'Beam' three axis robots commonly used by the plastics industry.

Steve Dennis, Managing Director of Certwood, explains, "An automotive customer asked us to look at a process improvement on a current product with a view to introducing it later into a proposed new product. The original process involved manually applying a label to a moulding which we first had to cool down to allow gases to fully disperse. Time taken to accurately position the label and the risk of it bubbling were two key areas to address.

"We worked with plastics automation specialists Hi-Tech Automation to identify solutions and focused on In Mould Labelling (IML) which is more common in the food packaging sector. The process offers a neat solution as the label is positioned in the mould tool and the part is moulded around it making it non removable, an essential requirement for a safety critical component, and the need to cool down the moulding is eliminated."

The six axes FANUC robot is equipped with end of arm tooling to handle a label, a moulding and a static discharge device. The robot vacuum grips a label from a dispenser cassette and waits for the mould tool to open. When it opens the robot tooling grips the ejected product and moves the label to within 5.0mm of its position on the tool. A static charge is then applied which allows the label to be held accurately in place once the robot has positioned it. The robot moves out of the mould tool and the moulding cycle continues.

Automating the process has provided an aesthetically improved moulding with a more accurately positioned label that cannot be peeled away. Production time has been reduced and storage issues removed with the elimination of the need to cool prior to labelling.

"We met our customer's request to research improvements in this labelling process delivering both quality and economic advantage," continued Steve Dennis, "IML is now an established part of our service offering, it illustrates that manufacturing innovation gives added value to our customers and also gives Certwood a process that takes it up a level and supports customer retention."

Image 01 Additional images - see thumbnail links below

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Video and images:

Contact David Wickham davidw@jonoliver.com for digital images or URL link at bottom of e-mail.

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Notes to editors:

FANUC UK provides industrial automation solutions from the supply of CNC controllers, robots, drilling machines, EDM and injection moulding machines through to the complete integration of factory automation systems.
Providing a single customer support portal for its three core businesses, FANUC UK comprises FA – CNC Controllers, motors and drives, Robotics – industrial robots and systems, Robomachines – EDM, Injection Moulding, drilling machines.

FANUC Corporation is a world leading manufacturer of Factory Automation (FA), robots and Robomachines. Since its inception in 1956, FANUC has contributed to the automation of machine tools as a pioneer in the development of computer numerical control equipment. FANUC technology has contributed to a worldwide manufacturing revolution, which evolved from the automation of a single piece of machinery to the automation of entire production lines.

FANUC employs 6,500 people world-wide. Based at the foot of Mt Fuji, near Lake Yamanaka, FANUC's factory uses over 2,000 FANUC robots to support a monthly production capacity of 30,000 CNC controllers, 5,000 robots, 250,000 servo and spindle motors and 5,000 robomachines and 250 CO_2 lasers.