Erowa Automation partners Dynamatic for setting the longest robotic cell in Aerospace

An Erowa robot pallet cell, supplied by REM Systems, is supporting Dynamatic Oldland Aerospace's drive to secure its position as a key supplier to the aerospace sector. Here, the flexibility and efficiency of the manufacturing cell is helping the company consistently produce complex 5-axis machined components on time and to precise specifications.

With manufacturing facilities in Bristol and Swindon, Dynamatic Oldland Aerospace is part of Dynamatic Technologies Limited, an Indian company supplying precision engineering services to the global aerospace, automotive and hydraulic industries. Originally established in the 1970s

in Bangalore, the company's initial successful growth was organic until in 2007 when it acquired Sauer Danfoss to provide support for its growing customer base. This was followed by the acquisition of Bristol-based Oldland CNC in 2008 and Eisenwerk Erla GmbH in 2011.

Continued success in the aerospace industry has come from leveraging the best of knowledge, skills and market conditions from each of its locations. As Managing Director, James Tucker, explains: "Essentially, where we have a company in the UK or mainland Europe a sister company operates in India. The businesses are linked and work closely together. For the aerospace division it allows the entire high precision complex machining operations to be carried out in the UK and the more labour intensive assembly work to be completed in India."

Dynamatic Aerospace has become a tier one supplier for Airbus, Boeing, Bell Helicopter and has long-term business agreements as a tier two supplier supporting many established tier one suppliers within aerospace detail manufacturing sector. In fact, within the seven-year period since being part of the Dynamatic Group, Dynamatic Oldland Aerospace (UK) has more than doubled its size.

Following this successful growth, the company has expanded into a second manufacturing site. The original site located in Bristol is 23,000 ft^2 however the new facility in Swindon has 160,000 ft^2 of capacity. Additionally, Dynamatic-Oldland Aerospace has also recently completed a purpose-built 10,000 ft^2 extension to house a new DMG Mori DMC 340U RS4 Giga Milling Centre, currently the largest 6-axis machining centre in the UK.

The Swindon facility is where the company's most advanced automation system in located. Installed and commission in the first quarter of 2016, it comprises five Hermle 5-axis CNC machining centres, with 200 pallets and is 30 meters in length.

Installed by REM and Erowa Systems, the FMS line has three loading stations ranging in component size from 200 mm^2 to 1300 mm long. It has been configured to efficiently support five Hermle machines; four C42 Dynamic machines and a larger C52 Dynamic machining centre.

James Tucker says: "As the single source supplier for Flat Track Beams on the Airbus A320 and now A330 series aircraft, we have a commitment to the customers to provide a first class service. Using this technology combined with our long history of aeronautical manufacturing and assembly, we have uniquely positioned our company to grow and deliver to our customers'

expectations. This truly demonstrates Dynamatic's commitment to provide a global service within the aerospace sector."

Efficiency is key to Dynamatic Oldland Aerospace's growth as new projects such as the Airbus A330 platform will go through a FAIR process (First Article Inspection Report). September 2016 will see the first component part deliveries into India. These details will be assembled into Flap Track Beam structures and the same ethos of the FAIR process will be applied, therefore the detail manufacturing in the UK and assembly in India become an overall aligned process.

As well as civil aircraft programmes the company also supports defence aircraft with a contract to supply complete rear load ramps for the new Boeing CH-47 Chinook dual rotor helicopters. Ordered by the US Army the project will run until 2019.

James Tucker explains: "Our engineering skills have been gained from Oldland CNC, originally established in 1971 as a fixture manufacturing company that expanded into aerospace in 1975 manufacturing after-market spares and repairs items. Oldland CNC has an exceptional reputation within the aerospace market, and all this knowledge has been harvested in supporting our business requirements and challenges we all face today."

A significant amount of engineering time was invested in the Erowa cell before it was installed, such as cutting tool optimisation and rationalising, NC program verification and data transfer, fixturing systems and scheduling. James Tucker adds: "The Erowa scheduling software is very intuitive and we have set it up to communicate with our ERP system such that parts are produced by priority. It also provides real-time data about the time required to produce the part, which is key to optimising production planning and control.

"The robot cell knows the location of the pallet-loaded raw material required and the tooling software checks that all the cutting tools needed to finish the part are both present and have the tool life remaining to finish the machining cycle. Any issues are immediately flagged up and can be quickly addressed by the operator or by the engineering team."

As well as providing flexible and efficient production services, the Erowa cell also supports new product introduction. Any one of the machine tools can be 'blocked out' from production so the company's engineers can trial machine components to optimise the process before these are added to the growing list of live parts.

James Tucker concludes: “We are trying to eliminate human error and achieve scrap rates of zero, which is why we aim to finish the part within the cell. We have removed the need for hand-operated deburring by adding a deburring cycle to the machines. Consistency and efficiency will secure our future within the aerospace industry, and investment in advanced systems such as the Erowa Dynamic robot cell provides the foundation for these goals.”

Note to Editors

REM Systems was established in the early eighties to service Swiss EDM machines. This activity brought the company into contact with the Swiss tooling and automation company Erowa and it has been its distributor in the UK and Ireland since 1987.

At about the same time, it also became the distributor for another Swiss company, TRIAG that produces multi-vice systems. Recently it become the distributor for a third Swiss company, FTool that manufactures EDM tooling systems. REM Systems association with these companies, coupled with many years' experience of machine tools and production engineering, means it is well placed to help customers in their pursuit of lean manufacturing processes.

On behalf of:

REM Systems Erowa
Runway Farm Technical Park
Honiley Road
Meer End
Warwickshire CV8 1NQ
Tel: 01676 534534

www.remsystems.co.uk

Contact:

Ian Holbeche

Issued by:

Complete PR Limited
14 Wickham Close
Newington
Sittingbourne
Kent ME9 7NT
Tel: 0203 289 7515

simon@complete-pr.co.uk

Contact:

Simon Simmons