

2014

Innovation in Manufacture | **Winner:** metrology software products ltd (MSP)

NC-PerfectPart software eliminating errors from composite part machining

Overview

metrology software products ltd (MSP) developed NC-PerfectPart - software which eliminates errors from composite part machining.

In the manufacturing industry, inaccurate machine tool set-up and the financial impact of rework and scrap is a major problem adding valuable time to schedules and creating expensive losses in material and production time.

NC-PerfectPart provides a fully automated process to compensate for errors and lack of consistency when machining composite materials. Where there are inconsistencies between machine tools, NC-PerfectPart uses a nominal cutter path and when run over a correctly located part, the problem is solved often at the press of a button. This replaces the need to generate a unique cutter path for each part variation, resulting in huge time and cost savings. Furthermore, the NC-PartLocator module guarantees the work piece is located and fixtured correctly, solving errors such as fixturing or part distortion which are commonly found in 5-axis composite machining. The use of composites in the aerospace industry is increasing year on year and new composites are regularly being introduced. This therefore provides a significant growth opportunity for NC-PerfectPart as this will result in a higher number of manufacturers encountering problems with fixturing and part distortion, resulting in an increase in the demand for NC-PerfectPart and the outstanding solutions it provides.

Partners & collaborators

Renishaw PLC

Assistance in maximising accuracy of machine tool probing and help with joint-patenting the solution technology around the globe.



"We are thrilled to be acknowledged for our contribution to innovation within composites manufacturing. The judges recognised the need for improvement in manufacturing efficiency that our product delivers; recognition in this way is testament to our highly skilled team and our continued success within the industry."

Peter Hammond, Technical Director at MSP.

The Composites UK Industry Awards are presented at the black-tie dinner on the first Wednesday in November. The event is aligned with the Composites Engineering Show in Birmingham.

Keep an eye out for our annual nomination process every May for your chance to apply.

www.compositesuk.co.uk/awardsdinner