

An introduction to Hybrid Additive Manufacturing

9.15am - 12.30pm, 7th December 2016

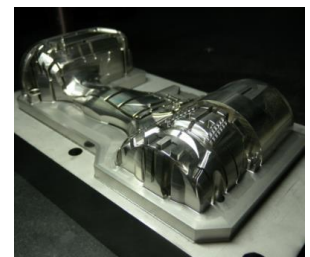
Manufacturing Technology Centre, Coventry

Major benefits can be gained if Additive Manufacturing is combined with machining to give a flexible, efficient, productive and precise hybrid AM process.

One type of hybrid AM processes is based on adding a “cladding” capability to a modified machine tool to enable material to be added and subtracted in a seamless operation. These Directed Energy Deposition (DED) units date back more than 20 years and were initially conceived as a way of repairing complex mould tools. In 2012 Hybrid manufacturing Technology Limited (HMT) launched a revolutionary interchangeable deposition head concept which enables multiple processing tools to be loaded into the tool changer of the machine and selected with the same freedom as conventional cutting tools. The flexibility of HMT’s approach has enabled systems to be retrofitted to a wider range of machine tool platforms and exploited in repair, part customisation and coating applications.



In 2002, Japanese machine tool company, Matsuura launched the world’s first hybrid laser melting powder bed fusion machine. A periodic high speed machining operation is used to “finish” the perimeter of each layer enabling precise and smooth surfaces to be produced directly on the machine. One of the biggest applications is the production of complex mould tool inserts however the process can be used wherever the precision of conventional laser melting is inadequate. In 2016 Matsuura launched the LUMEX Avance-60 with more than twice the laser power and 14 times the working volume of the LUMEX Avance-25 to give a 75% reduction in processing time.



The aim of this free half day seminar is to introduce the different types of hybrid AM technologies and illustrate the benefits of a hybrid approach using industrial case studies. The seminar will conclude with a tour of the MTC laboratories where both powder bed and DED hybrid AM machines will be demonstrated.

To register and receive joining instruction please email david.wimpenny@the-mtc.org
If you want more information please contact David Wimpenny on 07748591189

Agenda			
9.15am	Refreshments & networking		
10.00am	Welcome to the MTC	David Wimpenny	MTC
10.10am	Overview of hybrid AM technology	David Wimpenny	MTC
10.30am	Expanding the capability of Hybrid Powder bed AM technology	Simon Chappell	Matsuura
11.00am	Adding an AM capability to conventional machines tools	Peter-Jon Solomon	HMT
11.30am	Tour of the MTC laboratories		
12.30pm	Event closes		