

Birmingham, 12/12/2013 - Delcam to lead project aiming at new design solutions for lightweight metal additive manufacturing

The UK's manufacturing sector is set to benefit from a major £887,000 research and development project called LIGHT that began on 12th December with a kick-off meeting at Delcam's Birmingham headquarters. The project, to be managed by Delcam, will make a definitive step change to the current use of additive manufacture for lightweight metal products through an empirical set of trials, benchmarks and demonstrators, making it easier for the whole UK manufacturing supply chain of design and manufacture to adopt the technology.

The LIGHT project is being undertaken by a consortium of seven organisations that, in addition to Delcam, includes Bloodhound SSC, HiETA, CRDM/3DSystems, EOS, Simpleware and Magna Parva. The project is receiving £495,000 of support from the UK's innovation agency, the Technology Strategy Board.

The meeting started with all partners explaining their expectations about what they hoped the project would achieve, and also the opportunities for exploitation during the lifetime of the project and after it has ended. The concept of Additive Manufacturing (AM) was discussed and the meeting provided an excellent forum for partners to share their experiences and different perspectives on this manufacturing method. There was a real buzz in the air and a very positive atmosphere as thoughts and ideas about product innovation and bringing Additive Manufacturing to a reality at an acceptable cost were envisioned.



LIGHT project partners, Helen Lucas, TSB Monitoring Officer, and Liang Hao, Scientific Advisor at Delcam

Three exciting test parts have been identified from HiETA Technologies Ltd., Magna Parva and Bloodhound SSC, which will really push the boundaries for Additive Manufacturing. Stuart Jackson, Manager at EOS, commented that the LIGHT project will really "...push towards the optimum solution of Additive Manufacturing, making things lighter, better and more economical".

Johnny van der Zwaag, Project Manager at Delcam, discussed initial thoughts on the integration of a computational CAD/CAM tool for lightweight product design and AM. Within this work package a library of lattice structures will be created to satisfy the wide range of specifications within industry.

During the afternoon session, partners discussed the test parts further. The parts will need to withstand extreme conditions, such as temperatures up to 500°C and an attempt at a new World Land Speed record. This will provide additional challenges for the team but will also make for an exhilarating 30 months!

Project Coordinator Chris Lewis Jones from Delcam closed the meeting stating that the three demonstrator parts as chosen by the end-users represent 'extreme-engineering' with a focus on performance rather than on design. This is a unique approach that will test the capabilities of additive manufacturing technologies to its limits.

Acknowledgements

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