

High Wycombe, 17th March 2015 - Q5 meeting at CRDM/3D System

As the LIGHT Project moves into its sixth quarter, project partners met at CRDM/3D Systems headquarters in High Wycombe to discuss and reflect on the last few months. A lot of progress has been made and the focus now is on driving towards the demonstrator and achieve the project objective of inspiring design freedoms and lightweight solutions for metal additive manufacturing.

With Chris Lewis Jones of Delcam, project coordinator and chairman, opening the meeting at CRDM/3D Systems in High Wycombe, the Q5 meeting of the LIGHT Project got underway. After a tough quarter of partners really pushing themselves beyond the remit of the project, Chris commented that he hoped that efforts will be rewarded as the project moves ever closer towards the demonstrator.

An overview of project progress was given by Jan Willem Gunnink, also of Delcam, followed by Dave Cooper (EOS), who stated that all mechanical test samples had been manufactured and then tested at Warwick University (see sample images below). FEA analysis data is also available which will aid in the design of the final demonstration parts. The lattice designs are being finalised to then input into the demonstration parts. The strategy for pushing the project forwards is being changed from the exploration approach used to define the testing scope to a more systematic approach aimed at showcasing the strengths of lattice structures. On the software side, the approach has also changed from active development to a more user feedback driven development. Jan Willem concluded that the project was progressing well, despite some delays, and deliverables in particular are moving along nicely.

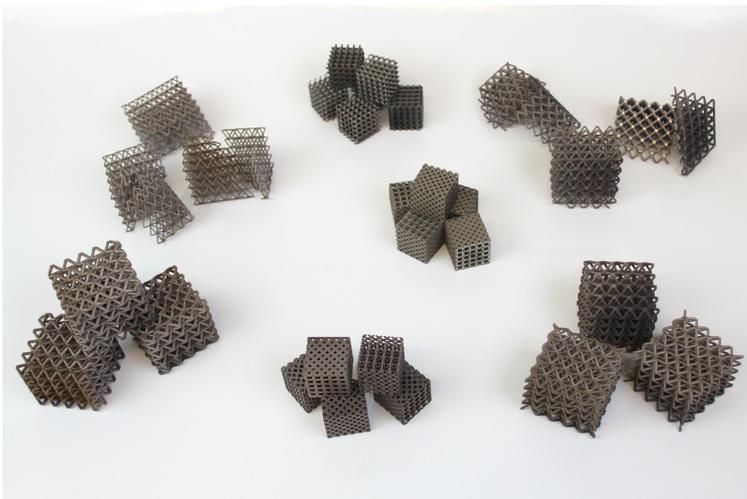


Figure 1: Samples demonstrating the wide range of lattices that have been tested

After the official quarterly meeting and a factory tour of the facilities at CRDM/3D Systems conducted by Graham Bennett, the partners gathered to discuss the next phase of work. A large emphasis and focus was placed on the unique needs of each end user. Magna Parva will transition from test cubes and samples into first design iterations, preparing for manufacture of their case study part. HiETA will continue their FEA analysis of the Inconel lattice and will look to apply the specified lattice parameters on their designed part. Bloodhound are updating and changing the hinge designs to make better use of the benefits of lattices, whilst still maintaining an effective hinge design.

Spirits are high and a lot of work has been completed in the last quarter to get the sample geometries manufactured and tested. With a few more face-to-face meetings planned over the next two months, the partners will keep this momentum to drive through the remaining manufacturing and learn faster from the results, which will then be fed directly into the final demonstrator parts. The consortium is shifting up a gear, moving away from testing samples and striving for application of their findings into the design and manufacture of the case study parts.

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Acknowledgements

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