Additive Manufacturing to produce mold inserts for injection molds

Background

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Department of Industrial and Materials Science is hosting the competence center “Centre for additive manufacturing – metal (CAM²)” that involves broad network of national and international companies. Project will be done in collaboration between ABB corporate research in Västerås and IMS at Chalmers in the frame of CAM².

Description of the thesis work

Additive manufacturing opens up for many new exciting functionalities that can hardly be achieved by conventional manufacturing techniques.

The present master thesis is focused on evaluation of 3 AM technologies:
- Polyjet (plastic)
- Binder jetting (metal)
- Laser melting (metal)

used to produce mold inserts for injection molding processing. The overall goal is to be able to choose the most cost/performance efficient solution for different ABB products.

The study will first identify the benefits and limitations of the 3 technologies in terms of e.g. lead-time, production volume, post processing, surface treatment, part design and quality, etc.

In a second step a value proposition for a specific product should be performed.

Finally the thesis should provide guidelines which technology is the most suitable for production of different ABB products

Requirements:

We are looking for a master student with a profile towards material science. A solid background in additive manufacturing is an advantage.
Extent and time plan:
• Period (January-June 2019)
• Number of credits 30 ECTS/högskolepoäng(hp).
• The thesis is intended for one student

More information:
Recruiting Manager Santanu Singha, +46 21-34 51 72, will answer your questions. Union representatives - Sveriges Ingenjörer: Ulf Westblom +46 21 32 30 68. Unionen: Krista Andersson, +46 21- 34 02 85. Ledarna: Lenny Larsson +46 21-32 85 47. All other questions can be directed to Terese Björklund, + 46 21-32 80 75. Positions are filled continuously. Apply with your CV, academic transcripts and a cover letter in English

Welcome to apply!

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