Contribution ID: **230** Type: **not specified**

Additive manufacturing in-situ repair solutions for the FCC

Thursday, 12 April 2018 13:50 (20 minutes)

Additive manufacturing technology and its applications steadily grew from the niche product to the multi-purpose manufacturing solution, which today is being applied in many fields of mechanical engineering and machine building technologies. In particular laser cladding proved its high efficiency, precision and economic benefits in repair sectors of aerospace, automotive and ship repair industries. This technology is very flexible and well suited for multi-material micro and macro in-situ repairs. Additive manufacturing equipment, tools and technical solutions are getting more and more compact, precise, productive and versatile.
Therefore, this is of special interest for FCC and eventual in-situ repairs of its structures and elements within the future tunnel itself. Additionally, the in-situ additive manufacturing and laser cladding with moderate R&D effort could be applied in already existing robotised service and surveillance systems of LHC tunnel.

This presentation outlines the current achievements in the additive manufacturing, emphasising in-situ and multi material repair solutions. Future trends and potential application within the FCC framework will be discussed.

Primary author: TORIMS, Toms (Riga Technical University)

Co-authors: BRUCKNER, Franck (Fraunhofer IWS); RATKUS, Andris (RTU)

Presenter: TORIMS, Toms (Riga Technical University)

Session Classification: Special Technologies

Track Classification: STP