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Object: Proposal for publication on Special Issue of ACTA IMEKO

Dear Editor,

Please find enclosed the paper "Uncertainty assessment for measurement and simulation in Selective Laser Melting: A case study of an aerospace part", by G. D'Emilia, A. Di Ilio, A. Gaspari, E. Natale and A. G. Stamopoulos, for possible publication on Special Issue of ACTA IMEKO.

The proposed paper is an extended version of the work "The role of measurement and simulation in additive manufacturing within the frame of Industry 4.0" by G. D'Emilia, A. Di Ilio, A. Gaspari, E. Natale, R. Perilli and A. G. Stamopoulos, presented at 2019 II Workshop on Metrology for Industry 4.0 and IoT (MetroInd4.0&IoT).

The paper has been extensively modified and extended according to the following points.

The extended article has a more metrological slant, analyzes different aspects and presents different results compared to the previous one. In particular:

- the introduction emphasizes the metrological problems related to the validation of the simulation results and to the conformity assessment of the pieces realized by additive manufacturing.
- the "materials and methods" section focuses on the measurement procedure, rather than on the technological aspects.
- the uncertainties causes are analyzed for the data coming from both the model and the measurements, and an estimate of their variability is carried out, in sections 3 and 4.
- the figures and, in particular, the graphs that represent the results of the analysis are different, and the conclusions add new elements of reflection and delineate the way to follow in the future work.

Regards,

Giulio D'Emilia