

# **Production Integrated CT Inspection Process**

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The industrial computed tomography has evolved to an established technology for defect detection as well as for metrology. This technology is used in many industry segments for process monitoring and 100% inspection of complex, expensive and safety critical industrial parts. As an example, one can mention the significantly increased demand for the inspection of casted and 3D printed parts for automotive and aviation industries. In this environment, different categories of challenges arise. On the one hand, the inspection demand is rising significantly faster than the availability of appropriately trained operators to setup the inspection procedures and evaluate the results. Conjugated with the requirements for high image quality and high and user independent defect detection performance, this challenge leads to a chain of requirements like automated part feeding combined with application of predefined and approved inspection programs as well as to automated or semi-automated image data evaluation. On the other hand, beside the optimization of the inspection process itself, the requirements are getting stronger to better integrate the inspection equipment into the production process and into the digital factory infrastructure like MES and ERP systems. With this, the operating organization is able to better plan the usage of the equipment as well as get quick overview about the state and performance level of each device in the installed base. This publication will give examples on how an industrial CT inspection system can be integrated in a so called Brilliant Factory for Additive Manufacturing and what are the building blocks to enable their usage in fully automated mode.