

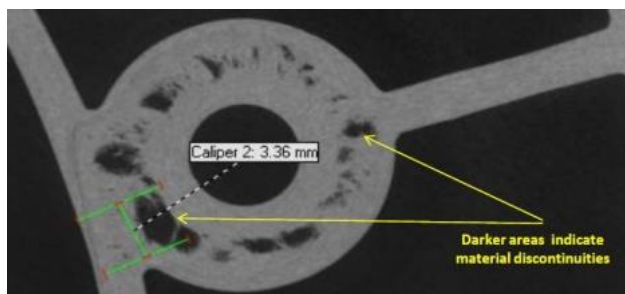
## Computed tomography as quality control technique in 3D modeling of car system components

Monika BARCIEWICZ\*, Andrzej RYNIEWICZ\*\*

\*MSc Eng Monika Barciewicz PhD student, [monika.barciewicz@gmail.com](mailto:monika.barciewicz@gmail.com); \*\*Associate Professor Andrzej Ryniewicz, [andrzej@ryniewicz.pl](mailto:andrzej@ryniewicz.pl), The Faculty of Mechanical Engineering of Cracow University of Technology in the Laboratory of Coordinate Metrology

**Keywords:** industrial CT, CAD 3D model, STL, quality control, development process

This paper presents the sophisticated capabilities of Industrial Computed Tomography (CT) in 3D modeling process of car system components. Usually process of development new car components takes 3 to 5 years. On each development process stage quality control is crucial to catch all internal and external defects. It is very important in components made in injection moulding process. Computed tomography as non-destructive testing method is an excellent machine to control and improve manufacturing process and simultaneously 3D model of tested component. All analyzes performed with use of CT are essential to meet customer requirements. This paper shows how industrial computed tomography controls quality of car components development process.



**Fig. 1.**  
View of CT scan of car component, material PP-GF40.

- [1] T. Kowaluk, E. Ratajczyk: Wzorce do badania dokładności przemysłowych tomografów komputerowych i przykłady ich zastosowania. MECHANIK NR 4/2015, p. 291-296, DOI: 10.17814/mechanik.2015.4.156B, ISSN 0025-6552.
- [2] P. Müller, A. Cantatore, J.L. Andreasen, J. Hiller, L. De Chiffre: Computed tomography as a tool for tolerance verification of industrial parts. 12th CIRP Conference on Computer Aided Tolerancing, ScienceDirect, Procedia Engineering 00 (2012) 000–000, ISSN 1877-7058.