

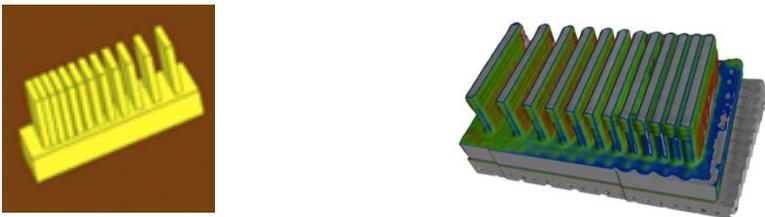
## CT application for examination of thin walls and gaps made FDM additive technique

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Additive methods constitute a branch of the most dynamic development from among all the manufacturing techniques. In the paper we presented the possibility of assessment regarding such products by means of computed tomography (CT). Using FDM technique, two groups of elements were designed and manufactured for the purpose of the study. The former features thin walls of fixed thickness and decreasing gaps between them. The latter is distinctive of fixed gaps between all the walls that are of variable thickness. Objects for printing were placed in various positions in relation to the axis of the device head. Samples prepared in such a way enabled us to verify limiting parameters allowing for the manufacture of narrow gaps between consecutive walls, as well as for the adjustment of limiting wall thickness. In all the models of even wall thicknesses and various gap widths, all the walls were printed out. For the elements of different wall thicknesses, a limit width value amounted to 0.3 mm.



**Fig. 1.** An element characterized by a variable thickness of gaps between consecutive walls – CAD model (on the left); the evaluation of performance quality – comparison with the CAD model (on the right).

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