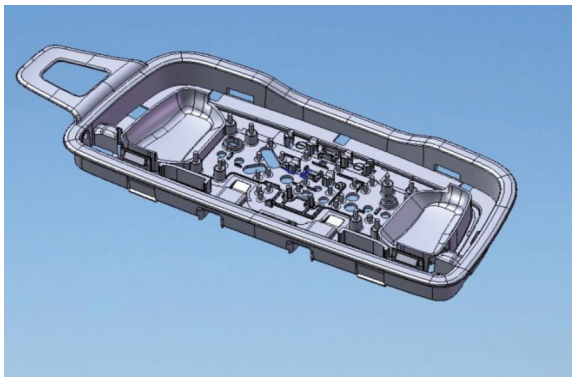
Research and investigation regarding the dimensional and geometrical accuracy of injected plastic parts

Goal of the project:
To improve the quality and dimensional accuracy of injected plastic parts used, especially, in the automotive industry.

Short description of the project:
In this research the 3D inspection of the injected plastic parts has done on a CMM with contact sensors.
For each plastic parts studied, used in the automotive industry, is developed its own strategy for measuring according to the characteristics of the part, shape, accuracy and the quality of the real part.



Project implemented by:
S.C. Elbromplast S.A. Timişoara, Romania

Implementation period:
July 2012– July 2013

Main activities:
•study the real plastic parts and their drawings;
•3D measuring program conception;
•3D measure of the plastic parts;
•analysing the measuring results;
•interpretation of the results and conclusions.

Results:
Different types of plastic parts regarding the dimensions, shape and accuracy. For each plastic part studied were formulated conclusions regarding the actual dimensions and shape.

Fields of interest:
3D measuring on Coordinate Measuring Machines, mold design, injection process, quality assurance for plastic parts used in the automotive industry and for different other plastic parts.

Financed through/by:
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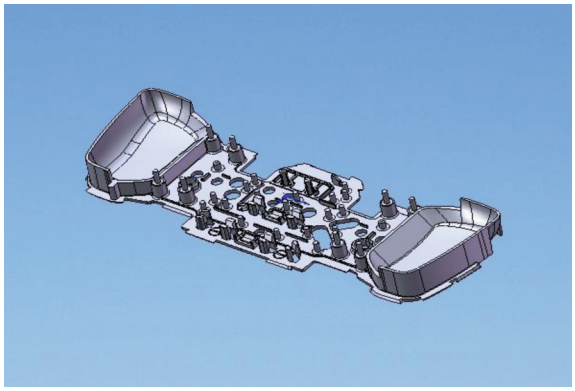

Research team:
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Research centre:
Research Centre for Integrated Engineering

Aplicability and transferability of the results:
All the research results are transfered to the company. Based on these results, in the mold testing phase, some corrections at the injection mold can be made. During the part production period the results could be used to change the injection process parameters in order to fit the part in the technical specifications.

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