Product Design on the PLM Platform: QFD Quality Function Structuring Method

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key words

structuring method, PLM technologies, parallel design, matrix diagram Quality House, ABAQUS/SIMULIA software package

In the article we consider the actual problem of quality management and competitiveness of products of Russian industrial enterprises. We examined the use of the QFD quality function structuring (deployment) method in parallel tire design and visualized the scheme of automated support for parallel design processes of new industrial products based on PLM technologies. In addition, the structure of the Quality House matrix diagram is presented when implementing the QFD quality function deployment method in parallel tire design. We have substantiated the relevance of the use of parallel design in the development and production of tire products, the economic and technical effect of the QFD method for the transformation of consumer interests and proposals into technical requirements for products and parameters of production processes. We also suggested using the ABAQUS/SIMULIA software package for designing high-quality car tires.

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