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CAD/CAE technologies in the design and development of sustainable products

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ABSTRACT

Sustainable development is the key to the future development of society and to the preservation of the environment. Traditional product research in the development phase required certain resources, such as material resources, which after testing are often discarded as waste or elements that are not applicable, with additional environmental pollution. Today's technologies such as CAD and CAE design enable virtual development and testing of new products. Thus, the initial phase can be carried out using simulations that would indicate irregularities in the design or applied materials without the need to develop real models for testing, and therefore require significantly fewer resources. In this work, CAE technology was applied in testing a new product, where it was observed that for some materials it is not necessary to develop them in reality and even requires significantly fewer resources. In this way, testing was carried out without developing models from real materials, which showed that it is not necessary to waste resources in sustainable development.

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