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## **RESEARCH AND TRENDS IN PRODUCT LIFE CYCLE MANAGEMENT IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT**

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### **Abstract**

During the creation of a product, the majority of the enterprises still apply a linear approach. This approach has been imposed by the organization way of the company and by the informational flow between the different departments.

In the present time different models of integrated engineering oppose to the sequential organization. These models permit the simultaneity of the activities deploying or at least their partial overlap. The activities overlap can be imagined eliminating first of all the borders between the phases of the product creation stage. This way, when an activity arrives to dispose of enough information, it will have the possibility to start before the end of the previous one.

Early in the design phase it has to be taken into consideration that the recycling activity is deployed on the entire life time of the product, so we'll have recycling in the stage of product development, in the production stage, in the exploitation phase and in the cassation phase. The products will incorporate new designing technologies that take into consideration the recycling process that will be applied to the product after utilization. The paper presents a comparative analysis of the visions belonging to the main industrial trusts concerning the life cycle of the product. In this context it is underlined the personal inspiration upon the life cycle including the analysis of the contributions brought to this interesting subject.

The selection of the research methodology was made based on the research topic, namely products' life cycle and the empirical approach method. The authors' contributions will lead to: thoroughness of knowledge on the new approach method for developing metallic products; pollution mitigation by recycling carried out on life cycle stages; new interpretation of products' dismantling as a quality issue.

*Key words:* product life cycle management, sustainable development, materials

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