

STUDY OF THE BEHAVIOR OF A COMPOSITE MATERIAL USED IN THE AUTOMOTIVE INDUSTRY

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ABSTRACT

The purpose of this study is to analyze a case of failure of composite materials that are used in the automotive industry. This work has allowed us to identify the following points: Theoretical and practical information that concern composite materials, in order to be able to produce mechanical parts. On the other hand; to acquire the static characteristics of rupture of these materials (ABS and Acrylic) through a numerical simulation using the software SOLIDWORKS

We apply to these two materials three static loads, which begin with 1000N and end with 3500N, where we notice that the first material ABS is more resistant than the other one (Acrylic) to the load 3500N and this according to the numerical simulation by software SOLIDWORKS.

KEYWORDS: Composite Materials, Damage, Impact, Numerical Simulation

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