

Contribution to the study of the composite and associated materials joints

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Summary

The PhD thesis is a synthesis material for calculus and design of composites joints, mainly of the fiber polymer matrix composites materials.

The thesis continues the researcher member's activity and brings some original issues as the study of some types of adhesive composites joints.

The study supposes an analytical study and a finite element analysis for single lap joints.

An experimental program is presented as well.

It is to underline the following:

- Critical evaluation of the joints that can be applied to structural composite with their advantages and disadvantages.



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- The identification of different patterns of yielding for adhesive joints and also ways of rising of structural efficiency for some joint solutions through mechanical and geometrical parameter modifications

Keywords: adhesives, adhesive joints, composite materials, confinement, FRP, stress-strain models,

