



SEMINARIOS INTERNACIONALES DE FRONTERAS DE LA CIENCIA DE MATERIALES

UNIVERSIDAD POLITÉCNICA DE MADRID
CAMPUS DE EXCELENCIA INTERNACIONAL MONCLOA



LUNES, 09 DE MAYO DE 2016 A LAS 9:30 H DE LA MAÑANA

COMPOSITE MATERIALS: LOW VELOCITY IMPACT PHENOMENON

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RESUMEN

The criticism about failure mechanisms of composite materials under dynamic impacts will be discussed. Delaminations, which can arise as a consequence of impacts with foreign objects, are probably the most investigated mode of failure in composite laminates because of its importance in compression strength lost. However, others damages such as matrix cracks, fiber-matrix debond, fiber fractures can also appear as a consequence of impacts in composite structures under service conditions. These different damage mechanisms can interact with each other and can lead to a considerable reduction in stiffness and strength of local critical areas and consequently to the reduction in the load-carrying capability of the entire composite structure.

The problem is that the failure are not always visible.

The following aspects will be faced in the talk:

- Understanding of the impact behavior of composite materials under low velocity impact conditions: influence of the impact parameters.
- Models for the prediction of low velocity impact behaviour of composite materials in terms of damage and residual strength.
- Understanding of energy absorption mechanisms and relationship with damage development.
- Destructive and non destructive damage investigations



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Sala de Seminarios del Departamento de Ciencia de Materiales

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