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Experimental investigation of edge moment factor *k* for single lap adhesive bonded joints

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The eccentric load path of a single lap joint cause a bending moment, which in generate a rotation in joint, altering the direction of load line. This effect gives rise to a nonlinear geometric problem. In literature, this effect can be represented by a bending moment factor *k*. The main of this works is to present an experimental and analytical analyses of the bending moment factor. The experimental process is carried out using Digital Image Correlation-DIC method, which is an optical-numerical experimental approach developed for full-field and non-contact measurements of surface displacement and deformation. In order to validate the results, the experimental data are compared with classical theoretical predication.

Keyworks: Full-field displacement, Single lap joint, Digital Image Correlation method and bending moment factor

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