3D ANALYSIS OF CFRP NOTCHED JOINTS UNDER UNIAXIAL TENSION LOAD WITH LATERAL CONSTRAINT AND TEMPERATURE VARIATION.

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ABSTRACT: The purpose of this study is the 3D analysis of a CFRP notched joint under tensile load. In such analysis two parameters are varied: the lateral pressure and the temperature, while the specimen geometry and the lamination stacking sequence are fixed. The determination of the internal stress state is performed using MSC/NASTRAN[1]. In addition, the friction load and the variation with the temperature of the elastic moduli are considered. The obtained results are compared with experimental values and with the results of a previous 2D F.E. model with a lower D.O.F. number, obtained by the use of the same code.

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[1] *McNeal-Schwendler Corp. NASTRAN version 69.0.*