



**STRENGTHENING OF MASONRY WALLS BY
TRANSVERSE CONNECTION THROUGH AFRP RODS:
EXPERIMENTAL TESTS AND ANALYTICAL MODELS**

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Abstract:

This paper proposes a partial-destructive method for connecting adjacent orthogonal masonry walls by means of aramid fibre reinforced polymer (AFRP) rods, in order to improve the overall performance of masonry buildings under horizontal forces. The proposed method is supported by an experimental campaign to assess the effectiveness of the strengthening measure, and by an analytical study to develop equations suitable for design. The experimental tests showed that the connection between adjacent masonry walls is actually effective in increasing both their strength and stiffness. It is also shown that the developed analytical equations satisfactorily predict the relevant design quantities.

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