

The Review for Repair of Masonry Structures Using the Crack Stitching Technique

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Abstract : Masonry structures often crack due to different factors, which include differential movement of structures, thermal expansion, and seismic waves. Retrofitting is introduced to ensure that these cracks do not expand to a point of making the wall fail. Crack stitching is one of many repairing methods used to repair cracked masonry walls. It is done by stitching helical stainless steel reinforcement bars to reconnect and stabilize the wall. The basic element of this reinforcing system is the mechanical interlink between the helical stainless-steel bar and the grout, which makes it such a flexible and well-known masonry repair system. The objective of this review was to use previous experimental work done by different authors to check the efficiency and effectiveness of using the crack stitching technique to repair and stabilize masonry walls. The technique was found to be effective to rejuvenate the strength of a masonry structure to be stronger than initial strength. Different factors were investigated, which include economic features, sustainability, buildability, and suitability of this technique for application in developing communities.

Keywords : brickforce, crack-stitching, masonry concrete, reinforcement, wall panels

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