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Experimental Investigation Toward an SMA Retrofitting Application

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The positions where minarets are mostly built in the urban nuclei made the failure of such structures more severe. Their structural weakness could result in failures with heavy consequences. But the retrofit solutions are limited by their simple cantilever scheme. The use of metallic pre-stressed wires/cables is a rather consolidated technique. The use of shape memory alloy (SMA) wires was recently investigated. In view of such an application, a series of reduced scale tests was planned and realized. This paper synthesizes a full report on the achieved results from an experimental work on a SDOF model subjected to free vibration before and after being retrofitted with SMA wires. The results proved an enhancement imparted to the system in terms of the stiffness when equipped with SMA wires. The effect on damping is also discussed.

Ключевые слова:

Содержание.

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