

Supplementary Information

Multiple Damage Detections in Plate-like Structures using CMS and GSM

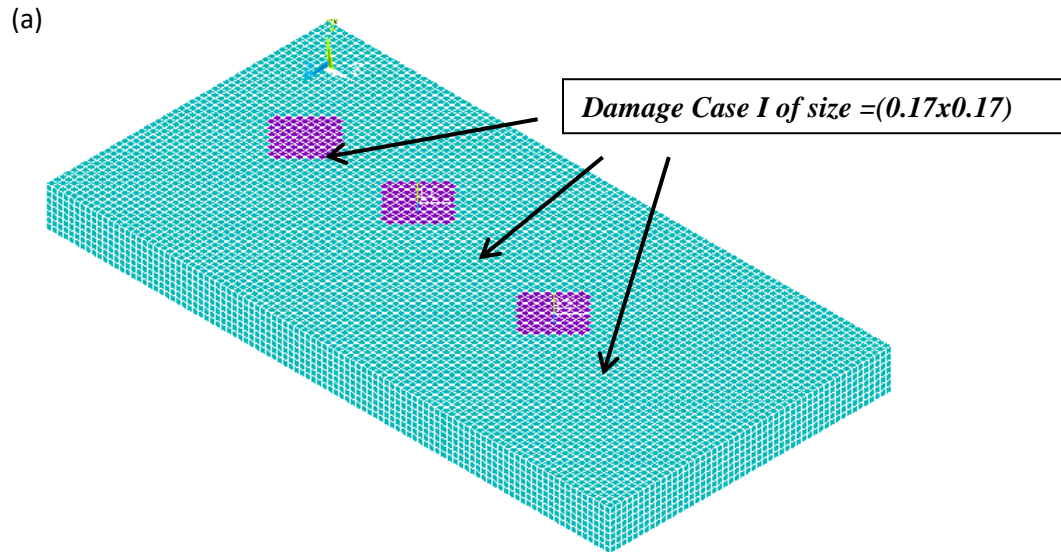
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The proposed method can successfully detect the multiple damages (even more than two damages). The case study with three diamond shaped damages has been provided below in **Figure S1**. Three square damage area of size is 0.17 x 0.17 m with depth of 0.02 m located centrally at (x, y) = (0.405, 0.485) m, (x, y) = (0.805, 0.485) m and (x, y) = (1.385, 0.585) m at an angle of 45° at x-axis (as shown in **Figure S1**).



(b)

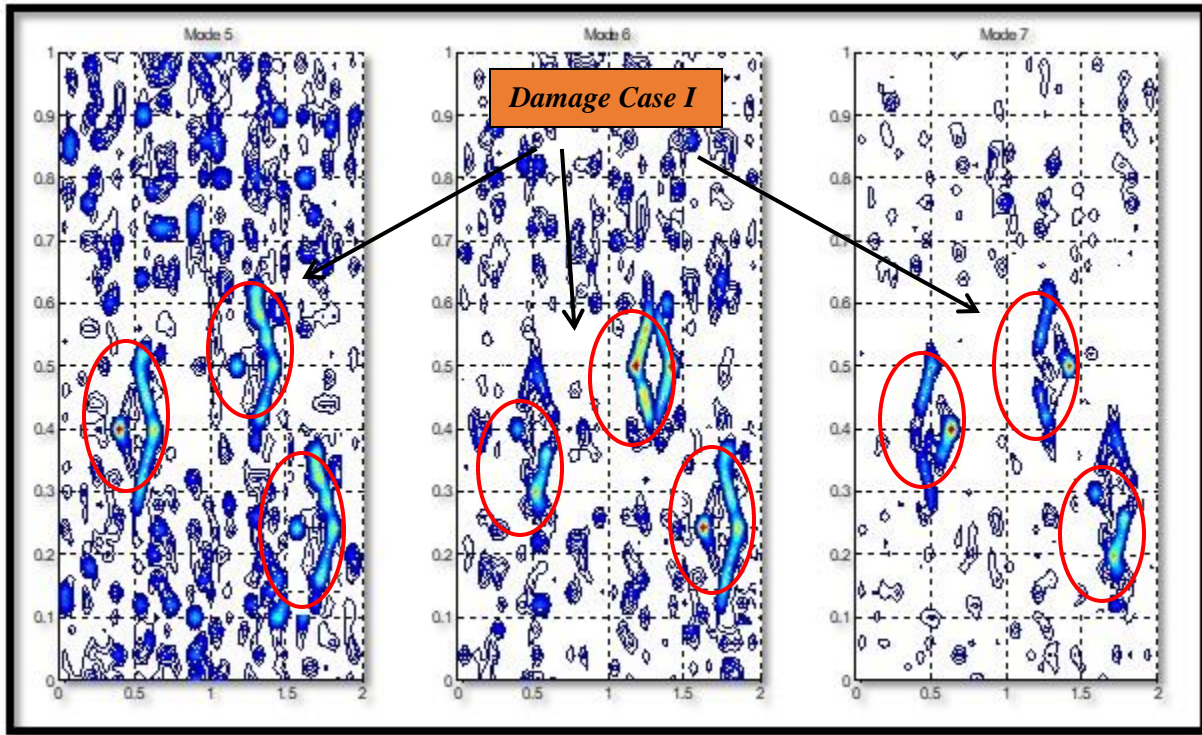


Figure S1: (a) Diamond shape damages (0.17 m x 0.17 m) in plate. (b) MATLAB Results: Detection of damages case I by 5th, 6th and 7th modes – noise-free case.