

Acoustic emission source localization in plate-like structure

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Abstract : This article proposes a geometric approach for acoustic emission source (AE) localization in plate-like structure. In order to determine the arrival time of the acoustic emission waves for each sensor with more precision, we have used two techniques, the first one is based on thresholding and the second is based on the continuous wavelet transform. Experimental tests have been carried out on steel plate shown that the continuous wavelet transform allows to improve the accuracy of the acoustic emission source localization.

Keywords : acoustic emission signal, acoustic emission source location, arrival time, threshold, continuous wavelet transform