Investigation on Impact Hammer Testing with Different Types of Hammer Tip for Welded Thin Plate

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Advanced Science Letters

2017, 23, 11325-11329

Modal testing using impact hammer had been used extensively in various industries to analyze the dynamic properties of the structure. Impact testing become famous due to their advantages for instances; fast, compatible for measurements in the field and relatively inexpensive. Even though these methods are fast and convenient, many important consideration should be take note during the measurement in order to get an accurate result. For this paper, hammer tip selection become the research issue. The thin sheet plate with different materials (Aluminum alloy; AA7075 & AA6061) joined by friction stir welding (FSW) will be used as a specimen. Four types of hammer tip used in this study; hard, medium, soft and super soft tip. The effect of hammer tip towards the shape of coherence and frequency response function for ranging between 0 to 1000 Hz will be discussed further. From this experiment, it was found that medium tip chosen as the most compatible tip for thin plate joined by FSW.