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Ultrasonic control of the adhesion quality of two aluminium sheets

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In this work, we present two ultrasonic methods allowing to control the quality of adhesion of two aluminium sheets with the same thickness. These methods are based on the analysis of the ultrasonic signals retrodiffused by the Al/glue/Al structure. The first method consists in controlling the behaviour of the mode of the sheets which is splitted. Two parameters controlling the transfers were allowed to characterize any type of adhesion: good, bad and intermediate. The second method is based on control of the width of the mode of the adhesive. The representation of this width by Argan diagram allows to control the quality of adhesion from the measurement of the diagram diameter.