

ABSTRACT**A METHOD AND APPARATUS FOR TESTING DYNAMIC RESPONSE AND IMPACT
RESISTANCE OF AN ADHESIVE BASED MATERIAL**

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A method (200) and apparatus (100) for testing dynamic response and impact resistance of an adhesive based material on a test specimen (106) prepared by lap-bonding a first surface of the test specimen (106) to a second surface of the test specimen (106) using the adhesive and clamping the first surface to the apparatus (100),
10 the apparatus (100) comprising a conveyor mechanism (102), a counter mechanism (110), a tracking mechanism (108) and a conduit (104). The conveyor mechanism (102) comprises means for inducing a cyclic drop (202) of a load with a predetermined mass from a predetermined height onto the test specimen (106). The conveyor mechanism (102) further comprises means for receiving the load (302), releasing the load from the
15 predetermined height (308) to free fall onto the test specimen (106) and retrieving the load (306). The counter mechanism (110) comprises means for tracking an iteration value of the cyclic drop (204). The tracking mechanism (108) comprises means for detecting a debonding failure of the test specimen (106). The conduit (104) comprises means for allowing free falling (308) of the load from the said height of the test specimen
20 (106) until the debonding failure occurs.

[FIG. 1A and FIG. 2]