

STRUCTURAL HEALTH MONITORING OF CURVED COMPOSITE STRUCTURES USING ULTRASONIC GUIDED WAVES

ABSTRACT

Systems and methods for non-destructive inspection of curved composite laminate structures (2/4) using interface guided waves (28). In particular, if the curved composite laminate structure has a noodle (12), then the noodle area may be inspected using interface guided waves. The systems and methods provide a repeatable and reliable nondestructive technique for monitoring the structural health of the noodle area of an adhesively bonded curved composite laminate structure by comparing detection data acquired from an inspected curved composite laminate structure with prediction data derived using a simulated curved composite laminate structure.

Fig. 3