

# *Ultrasonic Testing*

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The ultrasonic test for voids and delamination in fiberglass booms is necessary for booms produced by centrifugal casting and hand lay-up. In the centrifugal casting method the boom is removed from the tooling with a white gel coat surface that is already on the outside surface of the part. The outer gel coat hides subsurface voids, making a visual inspection impossible. In the hand lay-up method the fiberglass wall of the boom is too clouded to see into without aid of the testers.

The ultrasonic tests are also highly influenced by the operator, making this test not constant or accurate. Machines that perform the tests have to be calibrated for each part, which makes testing expensive.

The molded filament winding method performed by WBCL produces a laminate that is clear enough to allow for a visual inspection for voids that is far more accurate than the ultrasonic method. The molded process used in production of these fiberglass booms presses out the voids. This pressure produces a boom free from voids while other methods still require locating and repairing voids.

By Louis Haak

