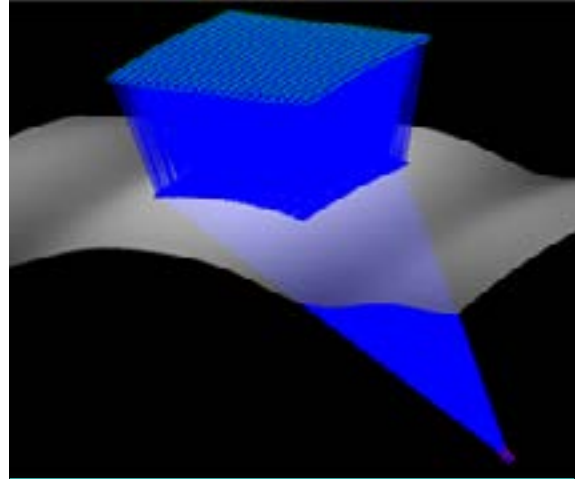


# Dynamic Full Matrix Capture

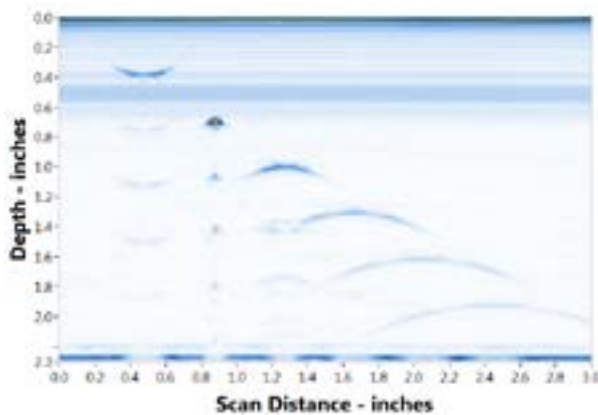
BWX Technologies, Inc. (BWXT) is at the forefront of the development of high-speed industrial Full Matrix Capture (FMC) inspections and holds five related patents. FMC allows inspections to be performed that dynamically adapt the focusing of the ultrasound to correct for a variety of surface conditions.

BWXT FMC ultrasonic inspections provide many advantages over phased array inspections:

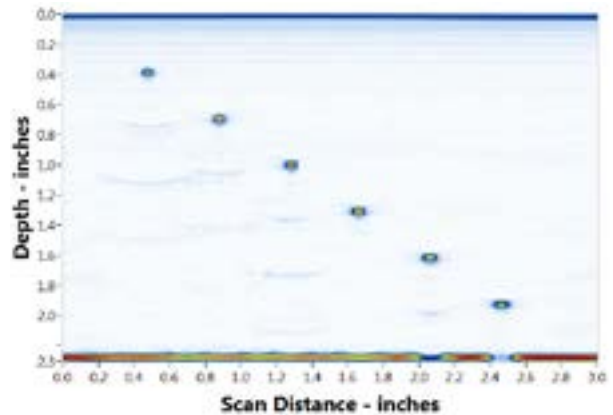
- More effective inspection of components with arbitrary curved, rough or wavy surface geometries
- Precise surface mapping
- Raw ultrasonic data collected during scanning can be reprocessed at any time with different beam characteristics for enhanced indication characterization
- FMC can provide ultrasonic inspections that are continuously focused throughout the inspection zone in real time



*3-D focusing on wavy surface*

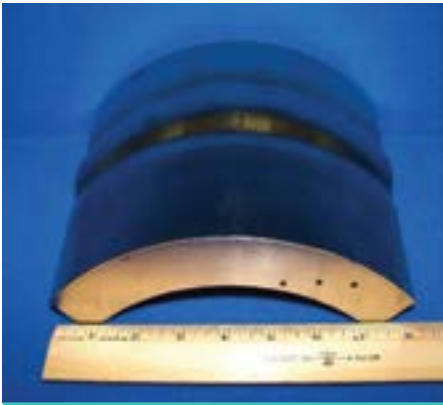


*Single focal depth phased array*

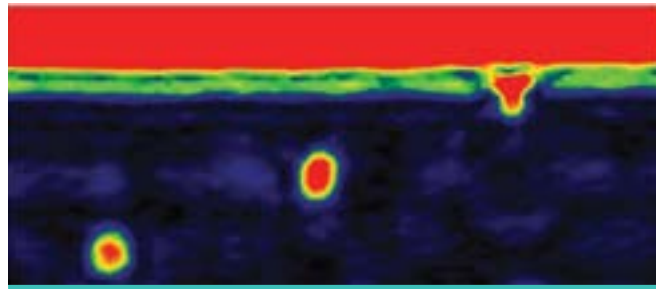


*BWXT FMC continuous focusing*

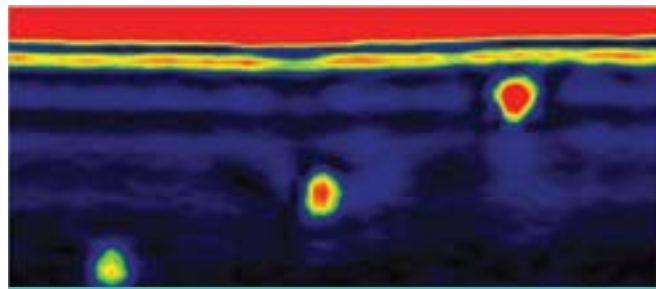
## Full Matrix Capture Dynamic Surface Corrected Inspections for Arbitrarily Wavy and Curved Surfaces



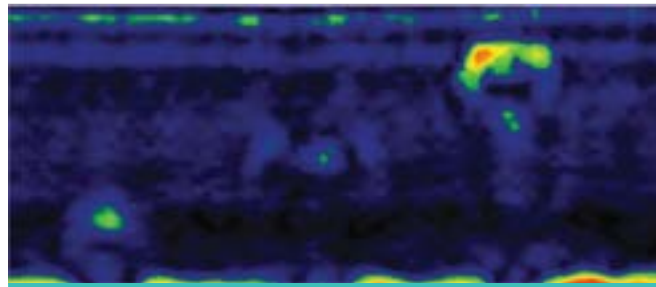
*Simulated weld surface test piece with side drilled holes (bottom)*



*0° beam angle scan over the axially flat region*



*0° beam angle scan over the simulated weld crown using surface correcting FMC*



*0° beam angle scan over the simulated weld profile without correcting for the surface geometry*

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