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STRUCTURAL ENGINEERING / EARTHQUAKE ENGINEERING

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[\[PDF \(4382K\)\]](#) [\[References\]](#)**DEVELOPMENT OF 3D FLAW DETECTION SYSTEM WITH
MULTI-CHANNEL PLANAR ARRAY PROBES AND 3D SAFT
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Multi-channel planar array probes had been developed in order to improve detectability of three-dimensional defects. The ultrasonic system, which is applicable to the planar array probes, was developed in order to make the compact and fast detection system. Specific 3D SAFT algorithms were proposed for the planar array probes. Experiments for verifying the improvement in detectability of three-dimensional defects and the advantage of the 3D SAFT processes were performed. The results show that the planar array probes and the 3D SAFTs show great improvement in detection and information of defects in three dimensions.

Key Words: multi-channel planar array probe, synthetic aperture focusing technique, beam-spread angle, three-dimensional defects

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