

Novel adjacent criterion method for improving ultrasonic imaging spatial resolution

Abstract

In this letter, we present a novel approach for improving spatial resolution in ultrasonic tomography. The proposed technique modifies a Back-projection (BP) algorithm in reconstructing tomography images. We used 32-ultrasonic transducer on a liquid column to perform the imaging process. Two phantoms were used to evaluate the proposed technique and compared with BP technique. The results showed that the proposed technique improves the spatial resolution and exhibits more accurate tomograms.