Defect Identification in Butt Weld Joint by Ultrasonic Method Phased Array and X-Ray Technique

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The article deals with the internal defects identification and characterization in butt weld joints by non-destructive ultrasonic Phased Array and X-ray technique. Basics of ultrasonic and X-ray testing are described in the theoretical part of manuscript. Phased Array and X-ray technique are volume nondestructive methods that can detect internal defects without breaking of construction. Ultrasonic Phased array and X-ray test procedures and test results obtained in non-destructive testing of butt weld are shown in experimental part. Ultrasonic record, X-ray record and weld macrostructure are given for each identified weld deffect. Advantages and disadvantages as well as comparison of ultrasonic and X-ray testing resulting from experimental measurements are described in the end of this article.

Keywords: Internal weld defects, Butt weld joints, Phased Array, X – ray, Non-destructive testing

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