

Ultrasonic Identification of Weld Defects Made by Butt Welding with Hot Plate on Plastic Pipelines

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This article describes usage of ultrasonic method TOFD for testing of welds on plastic pipelines welded with butt fusion with hot plate. As an artificial defects were selected cold fusion and inclusion in the weld area, by using metallic tape and wire as a mentioned defects. To test defects was necessary to use wedges with water as a bonding agent. Results of testing are proof of usefulness of this method. It can severely reduce risks of accidents caused by unidentified defects, which can occur in welded joints. Since plastic pipelines are used even in nuclear industry as a replacement for metal pipelines for its resistance against radiation decay, it is necessary to implement similar testing regulations to avoid fatal incidents and method like TOFD and Phased Array ultrasonic testing can prevent such failures.

Keywords: ultrasonic defectoscopy, TOFD, plastic pipelines, gas industry

Acknowledgement

Article was created within project solution VEGA: 1/0836/13, KEGA: 034ZU-4/2015 a KEGA: 014ZU-4/2015.

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Paper number: M201669

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