

In-Situ Repair of PE pipe by Friction Stir Welding

Richard Collins

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1 Problem

There exists clear evidence that there is significant leakage in MDPE mains laid by the UK water industry. In 2010 UKWIR 1 reported electrofusion jointing as the predominant cause of joint failure on PE mains with a calculated failure rate of between 3 and 4 failures per 100km per year. Although there is a lack of more recent data there is a widely held view within the industry that failure rates on PE mains have not reduced in the past decade and there is still a significant problem.

2 Proposed Solution

2.1 Friction Stir Welding

2.1.1 Friction Stir Welding of PE