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Abstract

While steel is generally treated as being isotropic, tension and compression tests in the different pipe orientations for API X100 grade pipeline steel show that this is not the case. To better understand the anisotropy, tests in the longitudinal, transverse, short transverse and at 45 degrees in the L-T plane were performed. Three extensometers were oriented orthogonally to each other on the specimen, allowing for the calculation of the strain ratio, R. The results of these tests along with an analysis of the ratios are discussed.

Keywords

Anisotropy, Anisotropic Ratio, Pipeline, UOE, X100