

1.1.3. PREDICTION OF SURFACE RESIDUAL STRESSES IN BUTT-WELDED STEEL PLATES BY MAGNETIC BARKHAUSEN NOISE ANALYSIS

Yelbay I., Cam I., Gur H., Welding Technology & Non-Destructive Testing Research/Appl. Center, METU, Ankara; Central Laboratory, METU, Ankara, Turkey; Metallurgical and Materials Engineering Department, METU, Ankara, Turkey

Residual stresses have significant influences on the service performance and life of the welded components. Various studies have been continuing to develop nondestructive methods for determination of residual stresses with portable equipment and short measurement time, as an alternative to the existing techniques such as X-ray diffraction method. This study aims to investigate the applicability of Magnetic Barkhausen Noise method on predicting surface residual stresses in the welded steel plates.