

Fatigue crack propagation life calculation in welded joints

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Abstract

The determination of fatigue strength of welded joint across the board has big draw to evaluate fatigue life of welded joints. In spite of considerable fatigue design data which exist for welded joints in the recommendations, the studies for the effect of crack growth parameters C , m and initial crack length determinations of welded structures are still not clear and have not been discussed enough. Therefore, this paper aims to present procedures to find the FAT for welded geometries and determine initial crack depth. The new recommended limits of FAT for new geometries not listed yet in recommendations can be calculated according to backward calculations. Initial crack and crack growth parameter are determined.