

عنوان مقاله:

EFFECT OF CORROSION ON LOAD CARRYING CAPACITY AND BUCKLING BEHAVIOR OF LOCALLY
CORRODED OFFSHORE TUBULAR MEMBERS

محل انتشار:

دهمین همایش بین المللی سواحل، بنادر و سازه های دریایی (سال: 1391)

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خلاصه مقاله:

This paper presents the results of an investigation into numerical modeling of locally corroded tubular members. A parametric finite element approach was used in order to simulate the behavior of corroded tubular members. In order to validate the numerical model, the results were examined against available experimental records. The dimensions of tubular members were taken from SPD 12A offshore jacket platform. The parametric approach associated with regression analysis led to derive a semi-empirical formula for predicting load carrying capacity as a function of corrosion dimensions. The corrosion pattern used was defined by the depth, length, width and location of damage. In this study it is focused on the effect of some parameters that have not been addressed yet. The effects of corrosion dimension were assessed and it was shown that location of corrosion has great effect in the form of reduction of ultimate strength. In cases with severe corrosion damages, the occurrence of local buckling plays an important role on deformation of damaged region

کلمات کلیدی:

tubular member, corrosion patch, ultimate strength, local buckling

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