عنوان فارسی مقاله:
مدلی جهت ارزیابی یکپارچگی ساختاری سازه های جکت فراساحلی قدیمی برای طول عمر

عنوان انگلیسی مقاله:
A framework to assess structural integrity of ageing offshore jacket structures for life extension

توجه!
این فایل تنها قسمتی از ترجمه میباشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک نمایید.
4. Conclusions

In this paper, a framework is proposed to assess the structural integrity of existing aged offshore structures for possible life extension. The assessment should be carried out for all limit states. The FLS is considered the most critical limit state, and the framework is based on both safe life and damage tolerance approaches. The assessment procedure might involve going through all the paths of the framework, depending on the different degradation states of fatigue critical details in a single structure. The significance of the proposed framework is highlighted through a case study on an existing jacket structure. The framework is an attempt to provide more detailed case-dependent guidelines by adding relevant theories and models, which can capture the time-dependent structural degradation more precisely than currently available assessment guidelines and standards. It caters to the needs of practicing engineers by providing recommendations on various issues such as simulation of structural degradation in the absence of any corrosion measurements, precision of loading history, as well as the effect of localized corrosion on stress concentration factors. Suggestions are also made on the determination of stress cycles and the selection of a suitable fatigue strength curve, particularly for severely corroded details. Recently developed precise fatigue damage theories are also included for a more accurate estimation of remaining life.