

عنوان مقاله:

Influences of depth and shape of corrosion pits on the ultimate compressive strength of plate elements

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خلاصه مقاله:

Structural components are prone to corrosion damage. Clearly either general or localized corrosion will reduce the residual strength of ageing structural components. The aim of this paper is to investigate the effects of pitting corrosion on the ultimate capacity of mild steel rectangular plates under uniaxial compression. The elastic-plastic large deflection behavior of the pitted plate has been analyzed by the ABAQUS. The ultimate strength assessment model that is in terms of the corroded volume loss was deduced in theory, and which was then completed through numerical experiment by employing nonlinear finite element analyses for series of corroded plate models. Here, the effects both of shape and depth of corrosion pits in case of total corroded volume loss for each model is same has been discussed, so that the effect of each of the parameters be investigated precisely

کلمات کلیدی:

Pitting Corrosion, Uniaxial compression, Ultimate strength, Depth, Shape

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