عنوان مقاله:

Prediction of Crack Initiation Direction for Inclined Crack Under Biaxial Loading by Finite Element Method

محل انتشار:

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خلاصه مقاله:

This paper presents a simple method based on strain energy density criterion to study the crack initiation angle by finite element method under biaxial loading condition. The crack surface relative displacement method is used to eliminate the calculation of the stress intensity factors which are normally required. The analysis is performed using higher order four node quadrilateral element. The results by finite element method are compared with DET (determinant of stress tensor criterion) and strain energy density criteria. Finite element results are in well agreement .with the experimental and analytical results

کلمات کلیدی:

Biaxial loading, mixed mode, Crack Initiation, Finite Element Method, Crack tip displacement