Application of J-integral concept on blister coating problem

Abstract

This is analytical and computational approaches to coating blistering problem using the concept of J-integral. The result is compared with other available models, which are typically derived based on energy method or its derivatives. The result shows that J-integral has the big potential to be used for coating adhesion parameter similar with stress intensity factor and strain energy density. Being developed in the non-linear area, the J-integral has wider application coverage than the existing formulas developed by using linear elastic mechanics.