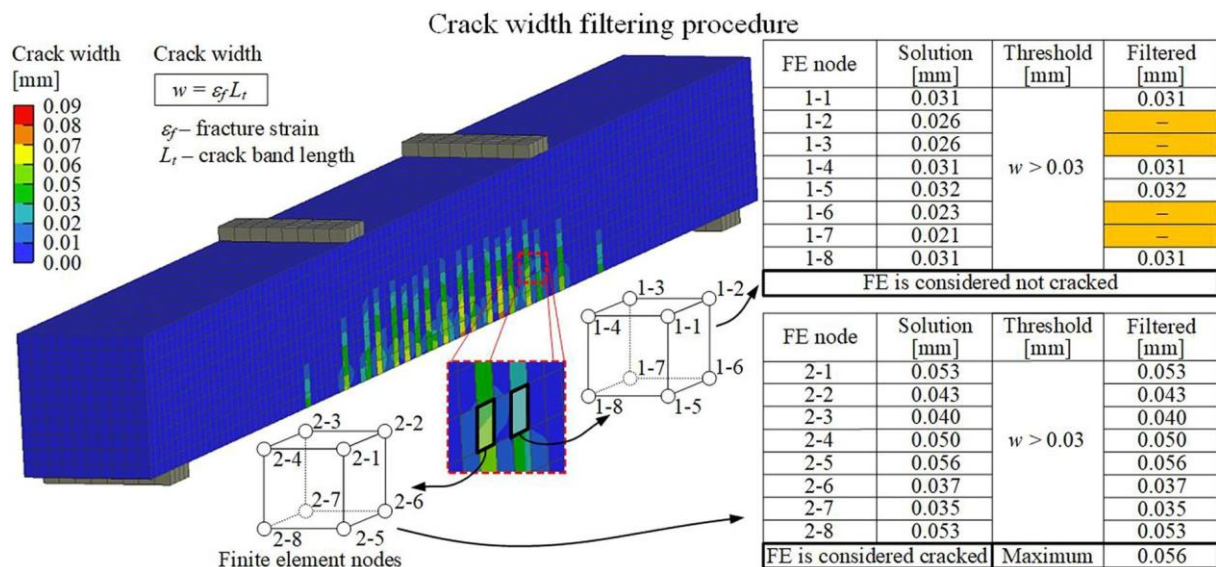


Uncertainty of the smeared crack model applied to RC beams

Rimkus, A.; Cervenka, V.; Gribniak, V.; Cervenka, J. Uncertainty of the smeared crack model applied to RC beams. Engineering Fracture Mechanics, Paper ID: 107088. DOI: 10.1016/j.engfracmech.2020.107088. ISSN: 0013-7944.

Abstract

A finite element model simulates concrete cracking using a smeared crack approach. The uncertainty of the crack width model is verified by the experimental data from tests of reinforced concrete beams. The parametric analysis of the numerical model includes the effects of the bond, fracture energy, and finite element mesh size. The model uncertainty analysis confirmed that the smeared crack model based on fracture mechanics could adequately predict the maximum crack width.



<https://doi.org/10.1016/j.engfracmech.2020.107088>