

An Anisotropic Failure Criterion for Masonry

Suitable for Numerical Implementation

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Abstract:

A novel anisotropic continuum failure criterion is proposed. The criterion comprehends solely a tension regime and a compression regime, which makes it suitable for numerical implementation. The model includes different compressive and tensile strength along the material axes, which is typical for masonry behavior. Validation of the criterion against experimental results in solid clay brick masonry, hollow clay brick masonry and hollow concrete block masonry shows the capability of the model to represent diverse masonry materials.

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