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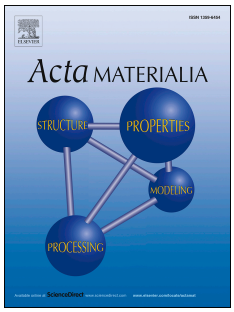

The effect of deformation twins on the quasi-cleavage crack propagation in twinning-induced plasticity steels

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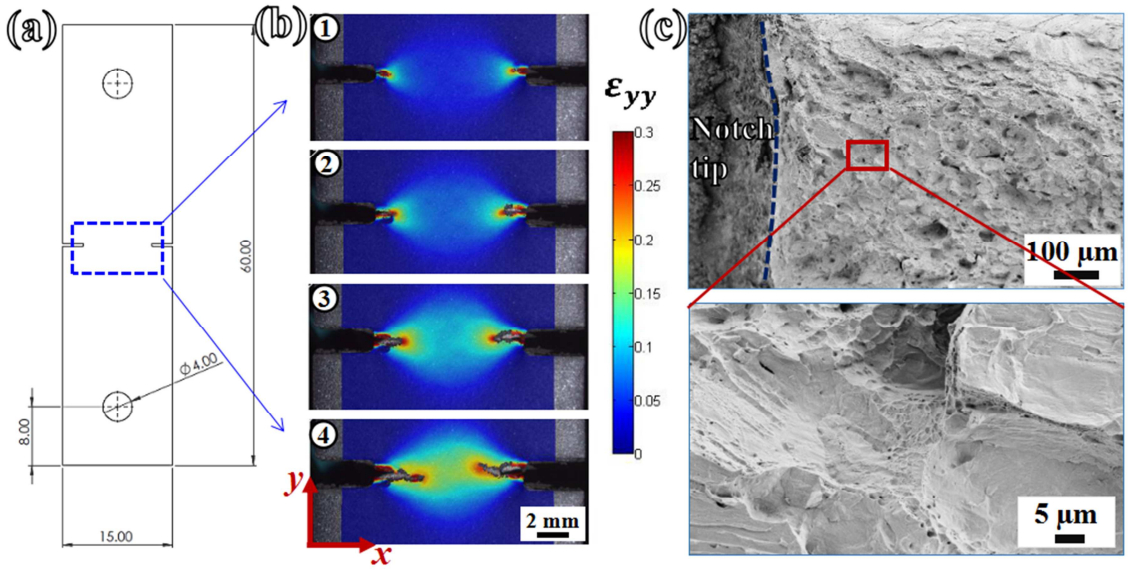
Graphical abstract



(a) The geometries of pre-cracked specimen used in this paper; (b) the plastic strain (ε_{yy}) field around crack tip during crack propagation as calculated by digital image correlation (DIC) technique, showing the stable crack propagation accompanied with large plastic deformation; (c) the quasi-cleavage fracture surface, showing a brittle fracture mechanism.