A four-point single-edge-notch-beam (SENB) test specimen loaded in displacement control (fixed grip) is proposed for studying crack deflection at bi-material interfaces. In order to ensure stable crack growth, a novel analytical model of the four-point SENB specimen in fixed grip is derived and compared with numerical models. Model results show that the specimen should be short and thick, and the start-crack length should be deep for the crack to propagate stable towards the bi-material interface. Observations from experimental tests of four-point SENB specimens with different start-crack lengths, confirmed that the crack grows stable if the start-crack length is deep and unstable if not.
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