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UPB Scientific Bulletin, Series D: Mechanical Engineering

Volume 78, Issue 2, 1 January 2016, Pages 57-66

Particularities of the asymmetric four-point bending testing of polyurethane foams

(Article)

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Abstract

Mixed mode four-point testing is performed on polyurethane foams. Taking into account that there is no standard method for the experimental determination of the fracture toughness, different geometrical configurations were used. This paper presents the results on the fracture toughness obtained experimentally for three different densities of polyurethane foams. Asymmetric four-point bending specimens were used for determining the fracture toughness in mode I and in a mixed mode, and discussions on the influence of the geometrical configuration of the experimental setup are done.

Author keywords

Asymmetric four-point bending; Digital image correlation; Mixed-mode; Polyurethane foams

Indexed keywords

Engineering controlled terms: Polyurethanes; Rigid foamed plastics

Different densities; Digital image correlations; Experimental determination; Four point bending; Four-point; Geometrical configurations; Mixed mode; Polyurethane Foam

Engineering main heading: Fracture toughness

ISSN: 14542358 CODEN: SDMEF Source Type: Journal Original language: English

Document Type: Article

Publisher: Politechnica University of Bucharest

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