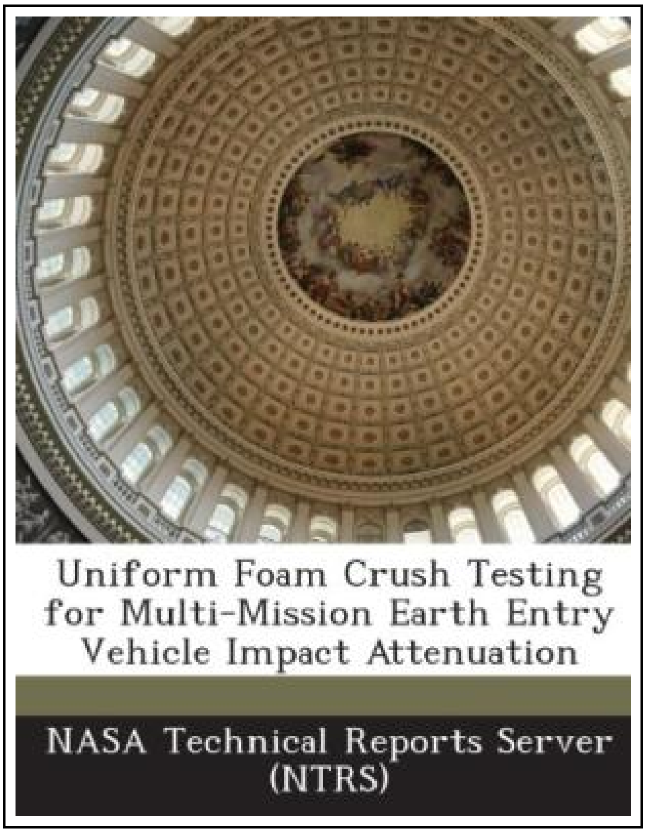
Uniform Foam Crush Testing for Multi-Mission Earth Entry Vehicle Impact Attenuation



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Reviews

I just started off reading this article publication. It is definitely simplistic but surprises in the 50 percent of your ebook. You are going to like how the author create this publication.
(Clint Labadie)

UNIFORM FOAM CRUSH TESTING FOR MULTI-MISSION EARTH ENTRY VEHICLE IMPACT ATTENUATION

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 40 pages. Dimensions: 9.7in. x 7.4in. x 0.1in.Multi-Mission Earth Entry Vehicles (MMEEVs) are blunt-body vehicles designed with the purpose of transporting payloads from outer space to the surface of the Earth. To achieve high-reliability and minimum weight, MMEEVs avoid use of limited-reliability systems, such as parachutes and retro-rockets, instead using built-in impact attenuators to absorb energy remaining at impact to meet landing loads requirements. The Multi-Mission Systems Analysis for Planetary Entry (M-SAPE) parametric design tool is used to facilitate the design of MMEEVs and develop the trade space. Testing was conducted to characterize the material properties of several candidate impact foam attenuators to enhance M-SAPE analysis. In the current effort, four different Rohacell foams are tested at three different, uniform, strain rates (approximately 0. 17, approximately 100, approximately 13, 600s). The primary data analysis method uses a global data smoothing technique in the frequency domain to remove noise and system natural frequencies. The results from the data indicate that the filter and smoothing technique are successful in identifying the foam crush event and removing aberrations. The effect of strain rate increases with increasing foam density. The 71-WF-HT foam may support Mars Sample Return requirements. Several recommendations to improve the drop tower test technique are identified. This item ships from La Vergne,TN. Paperback.

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