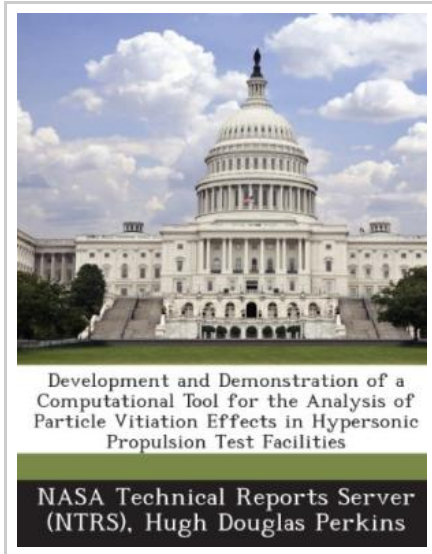




Development and Demonstration of a Computational Tool for the Analysis of Particle Vitiating Effects in Hypersonic Propulsion Test Facilities (Paperback)

By Hugh Douglas Perkins

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.In order to improve the understanding of particle vitiating effects in hypersonic propulsion test facilities, a quasi-one dimensional numerical tool was developed to efficiently model reacting particle-gas flows over a wide range of conditions. Features of this code include gas-phase finite-rate kinetics, a global porous-particle combustion model, mass, momentum and energy interactions between phases, and subsonic and supersonic particle drag and heat transfer models. The basic capabilities of this tool were validated against available data or other validated codes. To demonstrate the capabilities of the code a series of computations were performed for a model hypersonic propulsion test facility and scramjet. Parameters studied were simulated flight Mach number, particle size, particle mass fraction and particle material.



READ ONLINE
[9.35 MB]

Reviews

Basically no phrases to spell out. It is actually really interesting through studying time. You can expect to like just how the article writer created this publication.

-- **Braden Leannon**

A top quality pdf and also the font applied was fascinating to learn. It was actually written extremely properly and valuable. I discovered this publication from my i and dad recommended this publication to find out.

-- **Jan Schowalter**