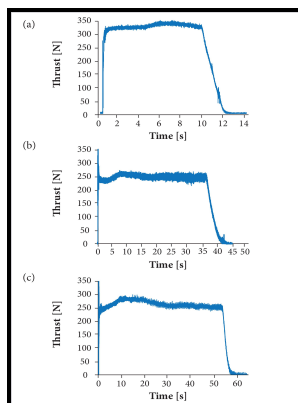


Study of combustion and flow behaviour in solid-propellant rocket motors

Institute for Aerospace Studies - Particle Tracking in Combustion Chamber of Solid Rocket Motor



Description: -

- History, Modern -- 20th century -- Dictionaries.

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Chemical reaction, Conditions and laws of

Canada -- Relations -- Ukraine.

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Solar flares

Solid propellant rocket engines

Erosive burningstudy of combustion and flow behaviour in solid-propellant rocket motors

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UTIAS report -- no.280study of combustion and flow behaviour in solid-propellant rocket motors

Notes: Includes bibliographical references.

This edition was published in 1987



Filesize: 54.31 MB

Tags: #Solid #Propellants

Solid Propellant Combustion Modeling

The ignition temperature is the temperature at which the propellant ignites within 5 s.

Numerical Simulations of Combustion Instability and Pressure Oscillation in Solid Rocket Motor

The combustion rate is defined by the equation below. Numerical calculations have been carried out to determine the vortex shedding frequency and the effect of varying the flow rate on this frequency. The model employs a two-step chemical reaction scheme with special attention focused on finite-rate kinetics.

Numerical study of turbulent reacting flows in solid

This poses a chemistry challenge: the propellant ingredients must react energetically with each other, but also be safely stored and handled while mixed together.

CiteSeerX — Unsteady Flow Evolution and Combustion Dynamics of Homogeneous Solid Propellant in a Rocket Motor

© 2002 by The Combustion Institute NOMENCLATURE a! Numerically obtained values for the vortex shedding frequency along with the experimental value have been shown in table 3. The special interest has been taken to determine the frequency of vortex shedding at the region of interest for the different flow rates.

Solid

Condensed exhaust products, solid or liquid, may be present downstream of the nozzle exit plane, leading to the presence of plume smoke, called primary smoke.

Solid Propellants

Also, the Weber number and the Froude number are monitored to explain the breakup phenomenon and the condition of alumina flow in the whole testing channel. In Nitrargols the ignition threshold velocity decreases when the ammonium perchlorate content increases. The reaction temperature is independent of the size of the specimen.

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