


[DOWNLOAD](#)


Reduced Equations for Calculating the Combustion Rates of Jet-A and Methane Fuel

By Melissa Molnar, John C Marek

Bibliogov, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.Simplified kinetic schemes for Jet-A and methane fuels were developed to be used in numerical combustion codes, such as the National Combustor Code (NCC) that is being developed at Glenn. These kinetic schemes presented here result in a correlation that gives the chemical kinetic time as a function of initial overall cell fuel/air ratio, pressure, and temperature. The correlations would then be used with the turbulent mixing times to determine the limiting properties and progress of the reaction. A similar correlation was also developed using data from NASA s Chemical Equilibrium Applications (CEA) code to determine the equilibrium concentration of carbon monoxide as a function of fuel air ratio, pressure, and temperature. The NASA Glenn GLESENS kinetics code calculates the reaction rates and rate constants for each species in a kinetic scheme for finite kinetic rates. These reaction rates and the values obtained from the equilibrium correlations were then used to calculate the necessary chemical kinetic times. Chemical kinetic time equations for fuel, carbon monoxide, and NOx were obtained for both Jet-A fuel and methane.



[READ ONLINE](#)
[7.75 MB]

Reviews

Complete guideline for publication fans. I am quite late in start reading this one, but better then never. It is extremely difficult to leave it before concluding, once you begin to read the book.

-- *Llewellyn Terry*

Absolutely essential go through publication. It is filled with knowledge and wisdom Once you begin to read the book, it is extremely difficult to leave it before concluding.

-- *Dr. Sierra Lowe Sr.*