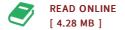


A Heat Transfer Investigation of Liquid and Two-Phase Methane (Paperback)

By Jonathan Vannoord

Bibliogov, United States, 2013. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****. A heat transfer investigation was conducted for liquid and two-phase methane. The tests were conducted at the NASA Glenn Research Center Heated Tube Facility (HTF) using resistively heated tube sections to simulate conditions encountered in regeneratively cooled rocket engines. This testing is part of NASA s Propulsion and Cryogenics Advanced Development (PCAD) project. Nontoxic propellants, such as liquid oxygen/liquid methane (LO2/LCH4), offer potential benefits in both performance and safety over equivalently sized hypergolic propulsion systems in spacecraft applications. Regeneratively cooled thrust chambers are one solution for high performance, robust LO2/LCH4 engines, but cooling data on methane is limited. Several test runs were conducted using three different diameter Inconel 600 tubes, with nominal inner diameters of 0.0225-, 0.054-, and 0.075-in. The mass flow rate was varied from 0.005 to 0.07 lbm/sec. As the current focus of the PCAD project is on pressure fed engines for LO2/LCH4, the average test section outlet pressures were targeted to be 200 psia or 500 psia. The heat flux was incrementally increased for each test condition while the test section wall temperatures were monitored. A maximum average heat flux...



Reviews

Good e book and useful one. It really is simplistic but shocks in the 50 % of your book. Your way of life period will probably be convert the instant you total reading this ebook.

-- Myah Williamson

The book is fantastic and great. It generally does not expense excessive. Its been designed in an exceptionally easy way and it is simply right after i finished reading through this book by which really changed me, change the way i think. -- Adolfo Lindgren

DMCA Notice | Terms