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MODERN ENGINEERING FOR DESIGN OF LIQUID-PROPELLANT ROCKET ENGINES

Dieter K. Huzel and David H. Huang

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Modern Engineering for Design of Liquid-Propellant Rocket Engines Dieter K. Huzel,1992 **Modern Engineering for Design of Liquid-Propellant Rocket Engines** James R.,1969-01-02 This book intends to build a bridge for the student and the young engineer to link the rocket propulsion fundamentals and elements with the actual rocket engine design and development work as it is carried out in the industry The book attempts to further the understanding of the realistic application of liquid rocket propulsion theories and to help avoid or at least reduce time and money consuming errors and disappointments This book was written on the job for use by those active in all phases of engine systems design development and application in industry Modern Engineering for Design of Liquid Propellant Rocket Engines ,1992

Modern Engineering for Design of Liquid-propellant Rocket Engines Dieter K. Huzel,David H. Huang,Harry Arbit,2005* **Design of Liquid Propellant Rocket Engines** Dr Jim Ras,2016-09-20 This book intends to build a bridge for the student and the young engineer to link the rocket propulsion fundamentals and elements which are well covered in the literature with the actual rocket engine design and development work as it is carried out in industry which is very little if at all covered in literature The book attempts to further the understanding of the realistic application of liquid rocket propulsion theories and to help avoid or at least reduce time and money consuming errors and disappointments In so doing it also attempts to digest and consolidate numerous closely related subjects hitherto often treated as separate bringing them up to date at the same time *Liquid Rocket Engine* Rene Nardi Rezende,2018-11-15 The great engineering achievement required to overcome most of the challenges and obstacles that prevented turning rocket design from art into science took place in Europe and the United States between the 1930s and the 1950s With the vast majority of the engines currently in operation developed in the pre computer age there are new opportunities to update the design methodologies using technology that can now handle highly complex calculations fast The space sector with an intense focus on efficiency is driving the need for updating adapting or replacing the old modeling practices with new tools capable of reducing the volume of resources and the time required to complete simulations and analysis This book presents an innovative parametric model applicable to the project of some elements of the liquid rocket thrust chamber with the level of detail and accuracy appropriate to the preliminary design phase It addresses the operating characteristics and dimensioning of some thrust chamber elements through a set of equations and parameters which include thrust or propellant characteristics The model degree of sophistication was adjusted to the requirements of the Project Life Cycle Phase B while also enabling quick analysis of new configurations from changes in initial project parameters **History of Liquid Propellant Rocket Engines** George Paul Sutton,2006 Liquid propellant rocket engines have propelled all the manned space flights all the space vehicles flying to the planets or deep space virtually all satellites and the majority of medium range or intercontinental range ballistic missiles *Rocket Propulsion Elements* George P. Sutton,Oscar Biblarz,James H. Morehart,2026-03-30 Best selling classic text

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Design of Liquid Propellant Rocket Engines Dieter K. Huzel, David H. Huang, 1971 Fundamental Concepts of Liquid-Propellant Rocket Engines Alessandro de Iaco Veris, 2020-09-26 This book is intended for students and engineers who design and develop liquid propellant rocket engines offering them a guide to the theory and practice alike It first presents the fundamental concepts the generation of thrust the gas flow through the combustion chamber and the nozzle the liquid propellants used and the combustion process and then qualitatively and quantitatively describes the principal components involved the combustion chamber nozzle feed systems control systems valves propellant tanks and interconnecting elements The book includes extensive data on existing engines typical values for design parameters and worked out examples of how the concepts discussed can be applied helping readers integrate them in their own work Detailed bibliographical references including books articles and items from the gray literature are provided at the end of each chapter together with information on valuable resources that can be found online Given its scope the book will be of particular interest to undergraduate and graduate students of aerospace

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