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Nota di contenuto	CONTENTS; Foreword of the Editor; Contributing Authors; Chapter 1 Fundamentals of Hydroabrasive Erosion Theory; 1.1 Introduction; 1.2 Mechanism of Hydraulic Abrasive Effect of Particles; 1.2.1 Mechanism of Hydro-abrasion; 1.3 Abrasive Erosion of Hydraulic Turbine; 1.3.1 Illustrative Examples of Hydraulic Abrasion in Hydraulic Turbines; 1.3.2 Silt Erosion of Hydro-turbines; 1.4 Abrasive Erosion of Pump; 1.4.1 Examples of Hydraulic Abrasion Taking Place in Pumps; 1.4.2 Silt Erosion in Pumps; 1.5 Technical and Economic Effect Caused by the Erosion Arising in Hydraulic Turbines and Pumps 1.6 Approach to Anti Abrasive from Hydraulic Machinery1.6.1 Approach Avenues on Anti-silt Erosion of Hydraulic Machinery; 1.6.2 Anti-abrasion Hydraulic Design of Pumps; 1.6.3 Prediction of Silt-Erosion Damage in Pump Design by Test; References; Chapter 2 Calculation of Hydraulic Abrasion; 2.1 Calculation of Hydraulic Abrasion Proposed by V.Ya. Karelin and A. I. Denisov; 2.2 Prediction Model of Hydraulic Abrasion; 2.2.1 Prediction Erosion Model Proposed by Finnie and Bitter; 2.2.2 Mechanistic Model Developed by The Erosion/Corrosion Research Center 2.2.3 Prediction Erosion Model Proposed by McLaury et alReferences; Chapter 3 Analysis and Numerical Simulation of Liquid-Solid Two-Phase Flow; 3.1 Basic Equations of Liquid-Solid Two-Phase Flow

Sommario/riassunto

This book gives a systematic exposition of abrasive erosion and corrosion of hydraulic machinery in both theory and engineering practice, and is the first comprehensive volume to cover this area in depth. All the important subjects are discussed including fundamentals, calculation, analysis and numerical simulation of liquid-solid flow design, erosion-resistant materials, interaction between cavitation and abrasive erosion, and corrosion of hydraulic machinery.
Contents:
Fundamentals of Hydroabrasive Erosion Theory (V Y Karelin et al.)
Calculation of Hydrauli