Record Nr. UNINA9910373932803321 Autore Ng Xian Wen **Titolo** Pocket Guide to Rheology: A Concise Overview and Test Prep for Engineering Students // by Xian Wen Ng Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 **ISBN** 3-030-30585-6 Edizione [1st ed. 2019.] 1 online resource (XI, 176 p. 134 illus., 79 illus. in color.) Descrizione fisica Disciplina 531.1134 531.38 **Fluids** Soggetti Fluid mechanics Mechanics Mechanics, Applied Materials science Fluid- and Aerodynamics **Engineering Fluid Dynamics** Solid Mechanics Classical Mechanics Characterization and Evaluation of Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Fluid Types and Rheological Properties -- Flow Models and Constitutive Equations -- Coordinate Frames and the Stress Matrix -- Analyzing Fluid Flow Scenarios. Sommario/riassunto This pocket guide serves as a supplementary learning resource to help students deconstruct challenging problems in the topic of rheology commonly encountered in engineering examinations, as well as those in related courses such as in the STEM disciplines. The book is organized into a series of 30 problems and worked solutions, with problems written in a format typical of examination questions. This

> book offers students ample practice in solving problems which will help sharpen their skills in applying abstract theoretical concepts to solving

real-life problems. The presentation of detailed and comprehensive step-by-step explanations in each problem will also guide students in the thought process towards arriving at final solutions. The balanced mix of both numerical and open-ended problems in this book ensures students gain a well-rounded understanding of the topic, with the dual ability to handle detailed mathematical analysis as well as relate the significance of desktop problem-solving to the larger real world context. -Stands as a handy resource for students, with comprehensive depth and breadth of coverage in the topic of rheology which is common to most engineering disciplines; -Adopts a highly relevant question and answer pedagogy; -Maximizes understanding through clear use of visuals; -Supports well-rounded understanding with the combination of numerical and open-ended problems; -Emphasizes detailed, step-by-step explanations.