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Sommario/riassunto

Advanced High-Strength Steels: Science, Technology, and Applications is the second edition of the original book, first published by ASM in 2013. The book covered the science and technology of developing and applying new grades of advanced high-strength steels (AHSS) with original superior attributes that can compete with alternative lightweight materials, such as aluminum, magnesium, polymers, and composites based on enhanced mass reduction, fuel economy, safety, emissions, recycling, and cost.This second edition expands upon the foundational knowledge presented in the first edition, including the examination of the types, microstructures, thermal processing, deformation mechanisms, properties, performance, and applications of AHSS. The new edition revises and updates text, and the extensive charts and figures in all chapters. New to this edition are comprehensive chapters or sections on sustainability, automotive applications, nanosteels, additive manufacturing, ultra-high-strength steels, and the principles of Integrated Computational Materials

Engineering (ICME).This book is targeted for technical and engineering individuals with graduate programs in research, many engineering disciplines (mechanical, metallurgical, manufacturing), and professionals in the automotive and steel industries and their suppliers.