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Nota di contenuto	LOAD CARRYING CAPACITY OF SPUR AND HELICAL GEARS: INFLUENCE FACTORS AND LOAD ANALYSIS -- SURFACE DURABILITY (PITTING) OF SPUR AND HELICAL GEARS -- TOOTH BENDING STRENGTH OF SPUR AND HELICAL GEARS -- LOAD CARRYING CAPACITY OF BEVEL GEARS: FACTORS INFLUENCING LOAD CONDITIONS -- SURFACE DURABILITY (PITTING) OF BEVEL GEARS -- TOOTH ROOT STRENGTH OF BEVEL GEARS -- SCUFFING LOAD CARRYING CAPACITY OF CYLINDRICAL, BEVEL AND HYPOID GEARS -- SCUFFING LOAD CAPACITY OF CYLINDRICAL, BEVEL AND HYPOID GEARS: INTEGRALTEMPERATURE METHOD -- WEAR LOAD CAPACITY RATING OF GEARS -- MICROPITTING LOAD CAPACITY OF SPUR AND HELICAL GEARS -- TOOTH FLANK BREAKAGE LOAD CARRYING CAPACITY OF SPUR AND HELICAL GEARS.
Sommario/riassunto	This book explores the geometric and kinematic design of the various types of gears most commonly used in practical applications, also considering the problems concerning their cutting processes. The cylindrical spur and helical gears are first considered, determining their main geometric quantities in the light of interference and undercut

problems, as well as the related kinematic parameters. Particular attention is paid to the profile shift of these types of gears either generated by rack-type cutter or by pinion-rack cutter. Among other things, profile-shifted tothing allows to obtain teeth shapes capable of greater strength and more balanced specific sliding, as well as to reduce the number of teeth below the minimum one to avoid the operating interference or undercut. These very important aspects of geometric-kinematic design of cylindrical spur and helical gears are then generalized and extended to the other examined types of gears most commonly used in practical applications, such as straight bevel gears; crossed helical gears; worm gears; spiral bevel and hypoid gears. Finally, ordinary gear trains, planetary gear trains and face gear drives are discussed. This is the most advanced reference guide to the state of the art in gear engineering. Topics are addressed from a theoretical standpoint, but in such a way as not to lose sight of the physical phenomena that characterize the various types of gears which are examined. The analytical and numerical solutions are formulated so as to be of interest not only to academics, but also to designers who deal with actual engineering problems concerning the gears.
