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Nota di bibliografia	Includes bibliographical references (p. 331-334) and index.
Nota di contenuto	Mono-dimensional elastic theory of thin disk -- Constant thickness rotating disk -- Thermal loads and fictitious density variation along the radius -- Hyperbolic disks -- Disk of uniform strength -- Conical disk -- Non-linear variable thickness disks -- Disk having arbitrary profile -- Design of rotating disks and stress concentrations -- Stress analysis of rotating cylinders in the linear elastic field -- Stress analysis in rotating disks loaded beyond yielding: non-hardening materials -- Stress analysis in rotating disks loaded beyond yielding: hardening materials -- Rotating bars, paddles and blades -- In-depth analysis of the solution of the hypergeometric differential equation -- The finite element method for elasto-plastic problems.
Sommario/riassunto	Stress and strain analysis of rotors subjected to surface and body loads, as well as to thermal loads deriving from temperature variation along the radius, constitutes a classic subject of machine design. Nevertheless attention is limited to rotor profiles for which governing equations are solvable in closed form. Furthermore very few actual engineering issues may relate to structures for which stress and strain analysis in the linear elastic field and, even more, under non-linear conditions (i.e. plastic or viscoelastic conditions) produces equations to be solved in closed form. Moreover, when a product is still in its design stage, an analytical formulation with closed-form solution is of course simpler and more versatile than numerical methods, and it allows to

quickly define a general configuration, which may then be fine-tuned using such numerical methods. In this view, all subjects are based on analytical-methodological approach, and some new solutions in closed form are presented. The analytical formulation of problems is always carried out considering actual engineering applications. Moreover, in order to make the use of analytical models even more friendly at the product design stage, a function is introduced whereby it is possible to define a fourfold infinity of disk profiles, solid or annular, concave or convex, converging or diverging. Such subjects, even derived from scientific authors' contributions, are always aimed at designing rotors at the concept stage, i.e. in what precedes detailed design.