TO THE READER

One must surely have a lot of courage to undertake the work of presenting the anisotropic theory of elasticity in its most general (nonlinear) form. After all, it is obvious that one must deal with cumbersome computations and unwieldy formulas that do not come easily across to the reader who must also be shown their practical significance. But the advantage of K. F. Chernykh's treatment is in that he knows how to overcome difficulties of that sort. In this book a successful (and in many ways original) classification of formulas belonging to the linear theory of elasticity is given as well as a detailed treatment of the nonlinear theory, even including specific strain-energy functions for the most important types of anisotropy. The problems of large deformations of thin anisotropic shells are dealt with in great detail. Since anisotropic and constructively anisotropic (i.e., composite) materials are used more and more extensively, this book containing a wealth of information about their elastic properties will find, undoubtedly, its reader.

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