

Theory of Elasticity

3rd Edition

A comprehensive textbook covering not only the ordinary theory of the deformation of solids but also some topics not usually found in textbook on the subject, such as thermal conduction and viscosity in solids, and various problems on the theory of elastic vibrations and waves. The authors have discussed only briefly certain special matters, such as complex mathematical methods in the theory of elasticity and the theory of shells, which are outside the scope of this book.

A chapter on the macroscopic theory of dislocations was added in the second edition, while for the third edition, which was enlarged by E.M. Lifshitz, A.M. Kosevich and L.P. Pitaevskii, the main change besides general updating is the inclusion of a new chapter on the mechanics of liquid crystals. This is a new branch of continuum mechanics which combines features of liquids and elastic solids, and whose proper position in the Course of Theoretical Physics is therefore after both fluid mechanics and the elasticity of solids.

The THEORY OF ELASTICITY is a valuable textbook for advanced undergraduates, postgraduates and research workers in theoretical physics. It is also of interest to mechanical engineers and materials scientists.

INDEPENDENT OPINION OF EARLIER EDITIONS

"I shall be surprised if this book does not come to be regarded as a masterpiece".

Journal of the Royal Institute of Physics

"...the book is well constructed, ably translated and excellently produced."

Journal of the Royal Aeronautical Society

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