Book Review

Developments in Thin-Walled Structures—1, edited by J. Rhodes and A. C. Walker, Applied Science Publishers, London, 1982, 290 pp., $67.75.

This book is the first volume of a planned series which has as its objective the review of major topics in the broad field of thin-walled structures. This volume contains seven chapters, ranging from 28 to 52 pages in length, by ten authors, five from the United Kingdom, two from the Netherlands, and one each from Denmark, Japan, and the United States.

Three chapters are devoted to shell structures, two primarily to plates, one to connections, and one to numerical analysis. Although most of the information presented is more of an applied and empirical nature, it appears to be written primarily for practicing civil and mechanical engineers rather than aerospace engineers. Briefly, the chapter topics are storage vessels, buckling of buried cylindrical shells, dynamics of cylindrical shells, effective widths in plate buckling, connections, foundations of plastic buckling, and numerical analysis.

This reviewer hopes that future volumes in this series will address these topics of particular importance in modern aerospace structures: stiffened shells, laminated composite-material plates and shells, sandwich structures, and crashworthiness of shell structures. Also, chapters on the physical and analytical foundations of plate and shell theory would be welcomed.

Since this series is apparently intended for practicing structures engineers in industry, it contains no problem sets. However, each chapter contains ample references to the literature for those who wish to delve further into specific facets.

This book should be in the library of each structural design office concerned with thin-walled structures. However, this volume is insufficiently oriented toward aerospace structures to warrant its appearance on the bookshelf of each aerospace structures specialist.

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