

Book Reviews

Buckling of Structures—Theory and Experiment (The Josef Singer Anniversary Volume) edited by I. Elishakoff, J. Arbocz, C. D. Babcock Jr., and A. Libai, Elsevier Science Publishers, Amsterdam and New York, 1988, xx + 449 pp., \$136.75.

This volume contains 21 papers as well as a biographical sketch of Professor Singer and a complete list of his publications. The volume was assembled in honor of the 65th birthday of this eminent aeronautical structures engineer. The 45 authors and co-authors represent eight countries: Belgium, Canada, England, Federal Republic of Germany, Israel, Netherlands, Poland, and the United States.

Due to the importance of buckling as a failure mode in shell-type structures, 11 of the papers deal primarily with elastic buckling or postbuckling of shells, 4 are concerned with either plastic or viscoplastic buckling of shells, 2 are concerned with elastic buckling of both plates and shells, 3 are concerned with buckling of plates, and one with buckling of pretwisted rods.

Of particular interest and importance to aerospace structures specialists are those papers on optimum design and test of stiffened, curved composite panels in compression by Bushnell and his colleagues; composite-facing sandwich cylinders in compression by Cheung and

Tennyson; stiffened, flat composite panels in compression by Sheinman et al.; delamination buckling by Simitse; composite cylinders in torsion by Stavsky et al.; and the "Endeavour" lobed spherical balloon by Calladine. Also, the paper on pretwisted rods by Rosen et al. has potential application to rotor and propeller blades.

It is interesting to note that 17 of the papers are authored solely by university researchers, 2 by teams of university and industry researchers, and 2 by industry researchers.

This book should be of great value to all practicing engineers, as well as researchers, involved with buckling of plate and shell structures. In addition to aerospace structures specialists, mechanical and civil engineers involved with design of both internal- and external-pressure vessels and storage tanks should be interested in it.

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