

## Book Reviews

*Airplane Structures*. vol. I. Alfred S. Niles and Joseph S. Newell. Wiley, New York, and Chapman & Hall, London, ed. 4, 1954. xv + 607 pp. Illus. \$7.75.

In most fields of engineering education there are usually one or more textbooks that continue to live as the decades roll by and countless young men and women are trained and educated to enter the many phases of the engineering profession. *Airplane Structures*, representing the aeronautical structural field, is such a textbook. For more than 30 years it has continued to serve as a recognized and widely used textbook as well as a reliable reference for the practicing engineer.

The fourth edition of *Airplane Structures*, although maintaining practically the same chapter outline as the third edition, is far more than the usual revised edition, since nearly every chapter has been completely rewritten and in several cases greatly modified or expanded. The preface of this edition indicates that most of the revision was completed before Newell's death in 1952, and thus I sincerely feel that this excellent edition is a final fitting tribute to an individual who has done so much to assist countless persons to prepare for and to build careers in aeronautical engineering.

A study of the new edition indicates a number of important additions and changes. They are as follows.

1) A completely new chapter concerned with basic information on the properties of materials as needed or necessary for structural analysis and design of aeronautical structures. The normal curriculum in aeronautical engineering is usually too crowded to permit a separate course on materials, hence the instructor must cover this subject in his regular beginning structures course. This new chapter on materials should therefore prove a welcome and useful addition.

2) The conventional airplane structure involves a single or multiple thin-walled cellular tube with both longitudinal and transverse stiffening elements. The efficient strength and rigidity design of this type of structure requires a thorough understanding of basic simple bending theory, particularly the so-called "shear flow distribution." The fourth edition contains a greatly expanded presentation on this subject and should prove quite welcome to teachers, since the treatment of this subject in the third edition was somewhat limited.

3) This edition deserves considerable praise for its extensive lists of new home problems at the end of most chapters. These excellent problem lists have been made more useful to the instructor and the student by arrangement into four groups, with each group presenting problems to emphasize a different goal in the training of the student.

4) The conventional airplane involves a multitude of various types of connections and fittings, the analysis and design of which are just as important as the

primary structure. This book presents much new material on connections, particularly on riveted joint analysis.

Included as the last chapter is an introduction to statically indeterminate structures, a subject that was presented in volume II of the third edition. Since much other material formerly presented in volume II of the third edition has been transferred to volume I of the fourth edition, such as the treatment of the semitension field beam, I wonder why a chapter on the analysis of closed rings or frames was not included in this edition, for such structural units are a very important part of modern aircraft structures.

Both teachers and practicing engineers should welcome and make considerable use of the comprehensive reference lists at the end of each chapter.

As during the past 30 years, *Airplane Structures* will continue to play a very important part in the education of aeronautical engineers.

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*Symbolic Wounds*. Puberty rites and the envious male. Bruno Bettelheim. Free Press, Glencoe, Ill., 1954. 286 pp. \$4.75.

Bruno Bettelheim's stimulating and controversial book has two aims. On the positive side, it seeks to propose a new theory of puberty rites on the basis of clinical and anthropologic data indicating that men's envy of the female organs and of their functions is at least as strong as, if not stronger than, women's envy of the male organ.

In support of this thesis, Bettelheim cites a variety of cogent facts, such as the ritual surgery of the Australian aborigines which seeks to make the subincised penis like a vulva and which enables the male to equate the bleeding of his mutilated penis with the menses. He also cites data showing that men go through various rites suggesting that they too are capable of bearing children and of duplicating other important female sexual functions. These attempts often constitute the essence of "male secrets" whose spuriousness must not be revealed to the women. Due emphasis is also placed on Nunberg's finding that circumcised men, be they Occidental neurotics or normal primitives, often fantasize that circumcision was initiated by women and has as its aim the enhancing of women's sexual pleasure. The author's numerous clinical and anthropologic data appear to substantiate the validity of his qualitative, although not necessarily his quantitative, thesis; that is, whereas male envy of female procreative functions may be held to have been proved, I am not convinced that this envy has been shown to be *stronger* than female penis envy.

The book's second, negative or critical purpose is to challenge Freud's theory that circumcision represents attenuated castration and has as one of its chief pur-