96[P, X].—J. M. ALEXANDER, ET AL., *Progress in Applied Mechanics*, The Macmillan Company, New York, 1963, xii + 384 p., 24 cm. Price $12.50.

This volume contains twenty-eight papers on applied mechanics, and is dedicated to Professor William Prager of Brown University on the occasion of his sixtieth birthday, May 23, 1963. The authors of the papers are colleagues, friends or former students of Professor Prager. The papers thus reflect Professor Prager's interests, and it is not surprising that most of them are on some phase of elasticity or plasticity.

It is impossible to give detailed reviews of each of the papers here. Those papers on subjects which the reviewer feels competent to judge are substantial contributions to the field. A list of titles and their authors is given below:

FLUID DYNAMICS

Studies of the Inviscid Boundary Layer of Magnetohydrodynamics. W. R. Sears & Y. Mori

On the Interaction of Solitary Waves. R E. Meyer

NUMERICAL METHODS

Extended Initial-Value Problems and Their Numerical Solution. H. J. Greenberg

DYNAMICS OF SOLIDS

Surface Waves Over a Slightly Curved Elastic Half-Space. G. H. Handelman

Non-Linear Stress-Wave Propagation in Metals. H. G. Hopkins

High Frequency Vibrations of Plated, Crystal Plates. R. D. Mindlin

Elementary Theory for the Vibration of a Beam of a Special Linear Viscoelastic Material. L. N. Persen

GENERAL THEOREMS OF ELASTICITY

New Derivations of Some Elastic Extremum Principles. R. Hill

Extremum Principles in the Theory of Small Elastic Deformations Superposed on Large Elastic Deformations. R. T. Shield & R. L. Fosdick

ELASTIC MEMBRANES AND SHELLS

On the "Best" First-Order Linear Shell Theory. B. Budiansky & J. L. Sanders, Jr.

The Deformation of an Inflated Circular Cylindrical Membrane by a Uniform Radial Line Load. N. J. Hoff & W. Nachbar

A Spherical Shell Under Point Loads at Its Poles. W. T. Koiter

On the Equations for Finite Symmetrical Deflections of Thin Shells of Revolution. E. Reissner

Elastic Deformations of Thin Cylindrical Sheets. J. J. Stoker

PLASTICITY AND SOIL MECHANICS

On the Limit Analysis of Hot Rolling. J. M. Alexander & H. Ford

An Experimental Study of Cylindrical Shells Under Ring Loading. H. H. Demir & D. C. Drucker

Instabilities of Plastic Solids in Sustained Flow. J. N. Goodier

The Kinematics of Soils. R. M. Haythornthwaite

On the Soap-Film Sand-Hill Analogy for Elastic-Plastic Torsion. P. G. Hodge, Jr.

STRUCTURAL DESIGN

The Calculation of Steel Frames. J. Heyman

Optimum Design of Beams and Frames in Reinforced Concrete. Ch. Massonnet and M. Save

TIME DEPENDENT BEHAVIOR (CREEP, VISCOELASTICITY)

Influence of Redistribution of Stress on Brittle Creep Rupture of Thick-Walled Tubes Under Internal Pressure. F. K. G. Odquist and J. Erikson

On the Equations of State for Creep. Y. N. Rabotnov

Some Limiting Cases of Non-Newtonian Fluids. H. Ziegler

On Critical States in Viscoelasticity. W. Olszak

On Uniqueness in Linear Viscoelasticity. E. T. Onat and S. Breuer

Thermo-Viscoelastic Stresses in a Sphere with an Ablating Cavity. T. G. Rogers & E. H. Lee

Uniqueness in the Theory of Thermo-Rheologically Simple Ablating Viscoelastic Solids. E. Sternberg and M. E. Gurtin

The volume represents an interesting and valuable collection. The title *Progress in Applied Mechanics* is well chosen.

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97[S, X].—R. COURANT & D. HILBERT, *Methods of Mathematical Physics*, volume II by R. COURANT, Interscience Publishers, New York, 1962, xxii + 830 p. Price $17.50.

The two volumes of Courant and Hilbert's *Methoden der mathematischen Physik* have been regarded, since their appearance, as standard source books for applied mathematicians. And this is the second volume of the English version, contributing to "breaking through the language barrier," so to speak.

The preface, by Professor Courant, explains the genesis of the book; this English version is said to have been in preparation ever since the appearance during the last war (1943) of the Interscience Publishers reprint of volume II of the German edition, under license of the United States Government. It also explains the dedication of the book to Kurt Otto Friedrichs as "a natural acknowledgment of a lasting scientific and personal friendship." The polycephalic character of the authorship of the book is also explained (one is reminded here of the skiing picture which was distributed along with many copies of Courant and Friedrichs' book, *Supersonic Flow and Shock Waves*, showing Courant leading a crowd of readily identifiable skiers down a slope, and the resulting shock wave): "The present publication would have been impossible without the sustained unselfish cooperation given to me by friends. Throughout all my career I have had the rare fortune to work with younger people who were successively my students, scientific companions and instructors. Many of them have long since attained high prominence and yet have continued their helpful attitude. Kurt O. Friedrichs and Fritz John, whose scientific association with me began more than thirty years ago, are still actively interested in this work on mathematical physics. . . . To the cooperation of Peter D. Lax and Louis Nirenberg I owe much more than can be expressed by quoting specific details.