

CONTENTS

Papers	Page
FATIGUE OF A514 STEEL IN BOLTED CONNECTIONS by Peter C. Birkemoe, Donald F. Meinheit, and William H. Munse	2011
ELASTO-PLASTIC SEISMIC RESPONSE OF REINFORCED CONCRETE FRAME by Warren R. Walpole and Robin Shepherd	2031
RESPONSE OF COOLING TOWER TO TURBULENT WIND by Noel J. Gardner	2057
VIBRATIONAL CHARACTERISTICS OF LINEAR SPACE FRAMES by William D. Whetstone and Charles E. Jones	2077
ANALYSIS OF SHEAR WALLS WITH OPENINGS by Chiyvarath V. Girijavallabhan	2093
OPTIMIZATION OF TRUSS GEOMETRY by Michael W. Dobbs and Lewis P. Felton	2105
BUCKLING OF ANISOTROPIC COMPOSITE PLATES by Christos C. Chamis	2119
ALUMINUM CORROSION AT URBAN AND INDUSTRIAL LOCATIONS by William H. Ailor, Jr.	2141
GRAIN STORAGE STRUCTURES FOR FOOD DEFICIENT AREAS by Alexander M. Turitzin	2161

(over)

This Journal is published monthly by the American Society of Civil Engineers. Publications office is at 2500 South State Street, Ann Arbor, Michigan 48104. Editorial and General Offices are at 345 East 47th Street, New York, N.Y. 10017. Subscription price is \$16.00 per year with discounts to members and libraries. Second-class postage paid at Ann Arbor, Michigan. ST.

	Page
EFFECTIVE WIDTH OF THIN PLATES IN COMPRESSION by George Abdel-Sayed	2183
MINIMUM WEIGHT PROPORTIONS FOR STEEL GIRDERS by Edward C. Holt and Gary L. Heithecker	2205
BENDING OF DEEP GIRDERS WITH A514 STEEL FLANGES by Phillip S. Carskaddan	2219
ULTIMATE LOAD TESTS ON BRACED MULTI- STORY FRAMES by Joseph A. Yura and Le-Wu Lu	2243
BONDED WOOD-CONCRETE T-BEAMS by George Pincus	2265
FAILURE PROBABILITIES OF REINFORCED CONCRETE BEAMS by James F. Costello and Kuang-han Chu	2281
OUT-OF-PLANE BUCKLING OF CURVED MEMBERS by Morris Ojalvo, Edvins Demuts and Frank Tokarz	2305

DISCUSSION
Proc. Paper 6803

ANALYSIS OF LONGITUDINALLY LOADED SUSPENSION BRIDGES, by Takeo Fukuda (April, 1968. Prior Discussion: March, 1969). closure	2319
ELASTO-PLASTIC ANALYSIS OF REINFORCED PLATES, by Harvey A. Kagan, and Gerald G. Kubo (April, 1968. Prior Discussion: Feb., 1969). closure	2319
HYPERBOLIC PARABOLOID STRUCTURES ON FOUR SUPPORTS, by Roy R. Russell and Kurt H. Gerstle (April, 1968. Prior Discussion: Feb., 1969). closure	2320

	Page
PROBABILISTIC MODELS FOR SEISMIC FORCE DESIGN, by Jack R. Benjamin (May, 1968. Prior Discussions: Jan., Feb., 1969).	
closure	2322
CUMULATIVE DAMAGE THEORIES AND APPLICATION, ^a by James E. Stallmeyer and William H. Walker (Dec., 1968).	
by D. J. Ashby and F. Sherratt	2322
NEW RECTANGULAR FINITE ELEMENT FOR SHEAR WALL ANALYSIS, ^a by Iain A. MacLeod (March, 1969. Prior Discussion: Sept., 1969).	
by A. Hrennikoff	2323
FIELD OBSERVATION OF TAGUS RIVER SUSPENSION BRIDGE, ^a by José Marécos, Mário Castanheta, and J. Teixeira Trigo (April, 1969).	
by Robert H. Scanlan	2325

TECHNICAL NOTE

Proc. Paper 6806

INFLUENCE LINES FOR THERMAL LOADS IN STRUCTURES by Mrinmay Biswas	2329
--	------

^a Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.