
Journal of the
STRUCTURAL DIVISION
Proceedings of the American Society of Civil Engineers

STRUCTURAL DIVISION
EXECUTIVE COMMITTEE

Lynn S. Beedle; Henry J. Degenkolb; Theodore R. Higgins;
Bruce G. Johnston; John D. Haltiwanger, Secretary;
Ralph B. Peck, Board Contact Member

COMMITTEE ON PUBLICATIONS

Gerald F. Borrmann, Chairman; Glen V. Berg; Herbert M. Glen;
William J. Hall; Francis J. Hanrahan; H. A. Miklofsky; William H. Munse;
Raymond C. Reese; George S. Vincent
Henry J. Degenkolb, Executive Committee Contact Member

CONTENTS

October, 1963

Papers

	Page
Limit Analysis of Grid Frameworks by F. S. Shaw.	1
Analysis of Arch Frames by F. P. Wiesinger, S. L. Lee, and D. L. Guell	15
Vibrations of Steel-Lined Concrete Chimneys by W. S. Rumman.	35
Zero Sidesway Axis of Rigid Frames by A. J. Celis and P. Glockner	65

(over)

Copyright 1963 by the American Society of Civil Engineers.

Note.—Part 2 of this Journal is the 1963-39 Newsletter of the Structural Division.

The three preceding issues of the Journal are dated April 1963, June 1963, and August 1963.

	Page
Analysis of Prestressed Cylindrical Shell Roofs by Ryszard Dabrowski	91
Galvanic Corrosion In Concrete Containing Calcium Chloride by T. E. Wright and I. H. Jenks	117
Analysis of Orthotropic Plate Bridges by Rodney J. Clifton, Jerry C. L. Chang, and Tung Au	133
Eigen-Matrix Method for Beams and Plates by Bennosuke Tanimoto	173
Inelastic Lateral Buckling of Beams by Theodore V. Galambos	217

DISCUSSION

Generalized Displacements in Structural Analysis, by J. L. Meek. (April, 1962. Prior discussion: December, 1962. Discussion closed.) by J. L. Meek (closure)	245
Use of Orthotropic Plate Theory in Bridge Design, by Kuang-Han Chu and G. Krishnamoorthy. (June, 1962. Prior discussion: December, 1962, February, 1963. Discussion closed.) (errata)	247
Experimental Study of Masonry Walls on Beams, by Saky Rosenhaupt. (June, 1962. Prior discussion: October, December, 1962, February, 1963. Discussion closed.) by Saky Rosenhaupt (closure)	249
Analysis of Free Straight Multiflight Staircases, by Avinadav Siev. (June, 1962. Prior discussion: December, 1962, February, 1963. Discussion closed.) by Avinadav Siev (closure)	251
Buffetting of a Suspension Bridge by Storm Winds, by Alan Garnett Davenport. (June, 1962. Prior discussion: February, 1963. Discussion closed.) by Alan Garnett Davenport (closure)	255
Influence Coefficients for Two-Hinged Arches, by Charles A. Miller and Sidney A. Guralnick. (August, 1962. Prior discussion: February, 1963. Discussion closed.) by Charles A. Miller and Sidney A. Guralnick (closure)	261
Stability of Space Frames by Computer Analysis, by John D. Renton. (August, 1962. Prior discussion: February, April, 1963. Discussion closed.) by John D. Renton (closure)	263

	Page
Safety of Eccentrically Loaded Reinforced Concrete Columns, by H. Blaut and H. Hilsdorf. (October, 1962. Prior discussion: April, June, 1963. Discussion closed.) by H. Blaut and H. Hilsdorf (closure)	265
Beam Analogy for the Solution of Vierendeel Trusses, by Bernardo Deschappelles. (October, 1962. Prior discussion: April, 1963. Discussion closed.) by Bernardo Deschappelles (closure)	269
Elastic Strength of Tapered Columns, by Charles M. Fogel and Robert L. Ketter. (October, 1962. Prior discussion: April, 1963. Discussion closed.) by Charles M. Fogel and Robert L. Ketter (closure)	271
Suggested Specifications for Structures of Aluminum Alloys 6061-T6 and 6062-T6, Report of the Task Committee on Lightweight Alloys of the Committee on Metals of the Structural Division. (December, 1962. Prior discussion: None. Discussion closed.) (errata)	275
Suggested Specifications for Structures of Aluminum Alloy 6063-T5 and 6063-T6, Report of the Task Committee on Lightweight Alloys of the Committee on Metals of the Structural Division. (December, 1962. Prior discussion: None. Discussion closed.) (errata)	277
Direct Design of Plate and Shell Structures, by John F. Brotchie. (December, 1962. Prior discussion: June, 1963. Discussion closed.) by George J. Megarefs and Anthony J. Lacopulos	279
Buckling of Shear Buildings, by Pasala Dayaratnam. (December, 1962. Prior discussion: None. Discussion closed.) by Martin L. Moody	285
Lateral Stiffness of Infilled Frames, by Bryan S. Smith. (December, 1962. Prior discussion: June, 1963. Discussion closed.) by Jack R. Benjamin	295
Metallic Dome-Structure Systems, by Shu-t'ien Li. (December, 1962. Prior discussion: April, 1963. Discussion closed.) by R. M. Davies	297
Space Frame Analysis by Matrices and Computer, by Kurt Eisemann, Lin Woo, and Saul Namyet. (December, 1962. Prior discussion: April, June, 1963. Discussion closed.) by John H. Wells	299

	Page
Deflection and Slope of Beams with Varying I, by Otakar Ondra. (February, 1963. Prior discussion: June, 1963. Discussion closed.)	
by Anthony Hoadley.	301
by K. T. Krishnaswamy and S. Anantharamu	301
by Robert W. Gerstner	307
by N. C. Sinha	309
by A. C. Gangadharan and Dronnadula V. Reddy.	315
by William D. Lockwood	321
Riveted and Bolted Joints: Truss-Type Tensile Connection, by E. Chesson, Jr., and W. Munse. (February, 1963. Prior discussion: None. Discussion closed.)	
by A. J. Francis	329
Analysis and Design of Struts with Tension Ties, by Kuang-Han Chu and Sigmon S. Berge. (February, 1963. Prior discussion: None. Discussion closed.)	
by Bruce G. Johnston	331
Effects of Cold-Straining on Structural Steel Sheets, by Alexander Chajes, S. J. Britvec, and George Winter. (April, 1963. Prior discussion: None: Discussion closed.)	
by S. T. Rolfe	333
Dynamic Pressure of Granular Material in Deep Bins, by Alexander M. Turitzin. (April, 1963. Prior discussion: None. Discussion closed.)	
by Ryszard Dabrowski.	337
by Eugene Guillard	338
by Neil W. Lane	339
by M. L. Sharp.	341
by Jesus R. Tamargo	342
by Eugene A. Zwenig	345
Iterative Method in Frame Analysis, by Paul Lustgarten. (April, 1963. Prior discussion: None. Discussion closed.)	
by John E. Goldberg	347
Stresses in a Pressurized Box, by H. D. Conway. (April, 1963. Prior discussion: None. Discussion closed.)	
by Robert Schmidt	349
Analysis of Rigid Frames by Difference Equations, by Hsien-San Tsang. (April, 1963. Prior discussion: None. Discussion closed.)	
by Donald L. Dean and Celina P. Ugarte	351
Ultimate Load of H-Columns Under Biaxial Bending, by Charles Birnstiel and James Michalos. (April, 1963. Prior discussion: None. Discussion closed.)	
by Ryszard Dabrowski	363
by Boyd C. Ringo	363

Stability of Frames Under Primary Bending Moments,
by Le-Wu Lu. (June, 1963. Prior discussion: None.
Discussion closes November 1, 1963.)

by John E. Goldberg	367
by Eugene Guillard	367