

# CONTENTS

<b>Structural System—Standard Oil of Indiana Building</b> <i>by E. Alfred Picardi</i> . . . . .	605
<b>Computer-Aided Design—Standard Oil of Indiana Building</b> <i>by Kanu S. Patel, Robert D. Logcher, Thomas G. Harmon, and Robert J. Hansen</i> . . . . .	621
<b>Some Structural Problems—Standard Oil of Indiana Building</b> <i>by José M. Roesset, Thomas G. Harmon, R. Elangwe Efimba, and Robert J. Hansen</i> . . . . .	637
<b>Differential Expansion in Elastic Laminates</b> <i>by Akhilesh C. Agarwal and Mark W. Huggins</i> . . . . .	655
<b>Punching Failure of Slabs—Transfer of Moment and Shear</b> <i>by Adrian E. Long</i> . . . . .	665
<b>Concrete T-Beams Subject to Combined Loading</b> <i>by Thomas G. Barton and D. Wayne Kirk</i> . . . . .	687
<b>Residential Buildings Engineered to Resist Tornadoes</b> <i>by Zachary Sherman</i> . . . . .	701
<b>Buckling of Steel Columns at Elevated Temperatures</b> <i>by Charles Culver, Vinod Aggarwal, and Paul Ossenbruggen</i> . . . . .	715
<b>Steel Column Failure Under Thermal Gradients</b> <i>by Paul J. Ossenbruggen, Vinod Aggarwal, and Charles G. Culver</i> . . . . .	727

→

---

This Journal is published monthly by the American Society of Civil Engineers. Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price to members is \$10.00. Nonmember subscriptions available; prices obtainable on request. Second-class postage paid at New York, N.Y. and at additional mailing offices. ST.

The Society is not responsible for any statement made or opinion expressed in its publications.

<b>Stability of Guyed Towers</b> by John E. Goldberg and John T. Gaunt . . . . .	741
<b>Transverse Stiffener Requirements for Curved Webs</b> by Nicholas Mariani, John D. Mozer, Clive L. Dym, and Charles G. Culver . . . . .	757
<b>Gust Factors and Alongwind Pressure Correlations</b> by Emil Simiu . . . . .	773

---

DISCUSSION

Proc. Paper 9640

---

<b>Analysis of Cable-Stayed Girder Bridges</b> , by Man-Chung Tang (May, 1971. Prior Discussions: Oct., 1971, Mar., 1972). <i>closure</i> . . . . .	787
<b>Stability and Load Capacity of Members with No Tensile Strength</b> , by Felix Y. Yokel (July, 1971. Prior Discussions: Mar., Apr., May, 1972). <i>closure</i> . . . . .	788
<b>Analysis of Space Truss as Equivalent Plate</b> , by William R. Flower and Lewis C. Schmidt (Dec., 1971. Prior Discussion: Oct., 1972). <i>closure</i> . . . . .	789
<b>Mechanical Properties of Structural Cables</b> , by John B. Scalzi and William K. McGrath (Dec., 1971. Prior Discussion: Aug., 1972). <i>closure</i> . . . . .	790
<b>Analysis of Three-Dimensional Structures</b> , by Jacobus H. Wynhoven and Peter F. Adams (Jan., 1972. Prior Discussion: Oct., 1972). <i>closure</i> . . . . .	791
<b>Multicell Curved Girder Model Studies</b> , <sup>a</sup> by Conrad P. Heins, Jr., Bijan Bonakdarpour, and Lansford C. Bell (Apr., 1972). by A. Rajaraman . . . . .	791
<b>Plastic Collapse of Horizontally Curved Bridge Girders</b> , <sup>a</sup> by Chai Hong Yoo and Conrad P. Heins, Jr. (Apr., 1972). by Ganpat S. Pandit . . . . .	792

---

<sup>a</sup>Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.

<b>Strength of Fiber-Reinforced Concrete,<sup>a</sup></b> by Jitendra N. Kar and Anil K. Pal (May, 1972. Prior Discussion: Sept., 1972). by <i>Ganpat S. Pandit</i> . . . . .	793
<b>Cylindrical Concrete Hulls Under Hydrostatic Loading,</b> by Harvey H. Haynes, Robert J. Ross, and Norman D. Albertsen (June, 1972). <i>errata</i> . . . . .	795
<b>Economical Design of Prestressed Plate Girder,</b> by Miloslav Tochacek and Champa L. Mehta (June, 1972). <i>errata</i> . . . . .	795
<b>Analysis of Hipped Roof Hyperbolic Paraboloidal Structures,<sup>a</sup></b> by William C. Schnobrich (July, 1972). by <i>Milo S. Ketchum</i> . . . . .	796
<b>Historical Development of Cable-Stayed Bridges,<sup>a</sup></b> by Walter Podolny, Jr. and John F. Fleming (Sept., 1972). by <i>Stanley W. Woods</i> . . . . .	797
<b>Strength of Square-Tube Connections Under Combined Loads,</b> by Roger L. Brockenbrough (Dec., 1972). <i>errata</i> . . . . .	798

---

<sup>a</sup>Discussion period closed for this paper. Any other discussion recieved during this discussion period will be published in subsequent Journals.