

Dr. Kenneth P. Buchert

Selected Publications:

A.E. Johnson and K.P. Buchert, "Critical combinations of bending, shear and transverse compressive stresses for buckling of infinitely long flat plates", NACA TN 2536, 1951

K. Buchert, "Buckling of doubly curved orthotropic shells", Engineering Experiment Station, University of Missouri, Columbia, Missouri, November 1965

Buchert, K., "Zur Stabilität grosser, doppelt, gekrummter und versteifter Schalen", Der Stahlbau, February 1965, pp. 55-62

K. P. Buchert, "Buckling considerations in the design and construction of doubly curved space structures", in Space Structures edited by R.M. Davies, London, 1966

Buchert, K.P. (1967), Discussion of 'Denting of Circular Silos with Eccentric Drawpoints', Jnl. Struct. Div. ASCE, Vol. 93, No. ST3, Aug

K.P. Buchert, "Effect of edge conditions on buckling of stiffened framed shells", Engineering Experiment Station Bulletin Series No. 65, University of Missouri, Columbia, Missouri, October 1967

K. Buchert, "Space frame buckling", Engineering Journal, American Institute of Steel Construction, Vol. 5, No.4, October 1968

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"Reticulated Space Structures", ASCE Journal of the Structural Division, Vol. 96, No. 3, March 1970, pp. 687-700

ABSTRACT: Recent developments in the application of reticulated or shell-type construction are presented. Five general methods of analysis are given: (1) the stiffness approach; (2) continuum shell analogy; (3) concepts of discrete field mechanics; (4) split rigidity concepts; and (5) the use of models. Analysis, member loading, physical properties, edge effects, general buckling, and local buckling of domed structures are described. Equations and computer methods that have been used in the design of domed reticulated space structures are given. Suggestions are made for future research and development for these types of structures.

Buchert, K. P.: Buckling of Shell and Shell-Like Structures; for Engineers, Architects, Fabricators, Builders and Designers, K. P. Buchert & Assoc., Columbia, MO 1973