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dimensional  
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made up of  
one or more  
curved slabs  
or folded

plates whose  
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extremely efficient in a dome or shell like shape. This shape eliminates tensile forces in the concrete. He also looked to solve problems by the simplest means possible. Félix Candela - Wikipedia Description This document governs the design of thin shell concrete structures, previously presented in ACI 318-11 Chapter 19. Where required for design of thin shell concrete structures,



<p>provisions of ACI 318 are to be used to complement the provisions of this Code.318.2-14 : Building Code Requirements for Concrete Thin ...Thin Shell Concrete Structures David P. Billington. 5.0 out of 5 stars 1. Hardcover. \$961.00. Only 1 left in stock - order soon. Theory of Plates and Shells, (Engineering Societies Monographs) S. Timoshenko. 4.4 out of 5 stars 13. Hardcover. 23</p>	<p>offers from \$59.99.Thin Shell Concrete Structures: Billington, David P ...existing methods in 1930 when the design of the shell was raised. These methods were based on solving a system of equations that model the structural behaviour of the cylindrical thin concrete shells. However, far from surrendering Torroja adapted these methods to a number of simplifications in order to</p>	<p>solve the problem by hand.Cylindrical Thin Concrete ShellsThe most popular types of thin-shell structures are: Concrete shell structures, often cast as a monolithic dome or stressed ribbon bridge or saddle roof; Lattice shell structures, also called gridshell structures, often in the form of a geodesic dome or a hyperboloid structureThin-shell structure - WikipediaThe structure is a</p>
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reinforced concrete shell so it will have some minor imperfections from the original construction, weak spots from existing penetrations, loads already added, degradation of material strengths over time and various considerations . These have to be factored into the analysis in order accurately to reflect its true state.  
 Billington, D. P. *Thin Shell Concrete Structures*. New York, NY:

McGraw-Hill, 1982. Bresler, B. "Design Criteria for Reinforced Concrete Columns under Axial Load and Biaxial Bending."  
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S. Timoshenko. 4.4 out of 5 stars 13. Hardcover. 23 offers from \$59.99. *THIN SHELL STRUCTURES* The concrete shell is 3.5 in. thick at the uppermost part, and is stiffened at 39 foot intervals by massive two-hinged arch ribs. The roof crown is 100 feet above the floor. The shell was constructed as five separate units, with expansion joints between units.

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