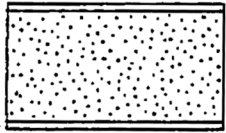
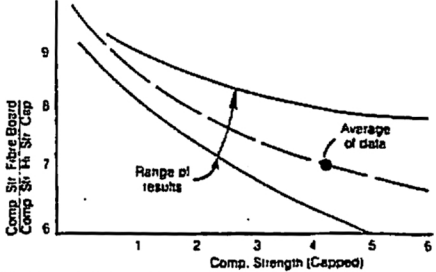
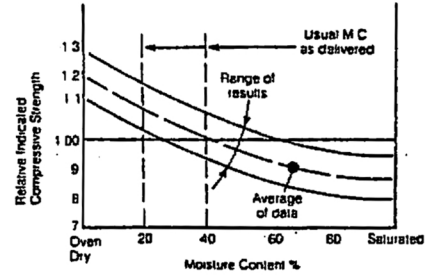
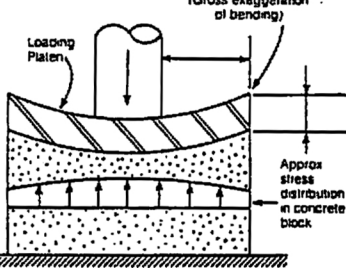
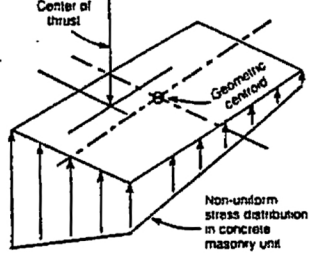
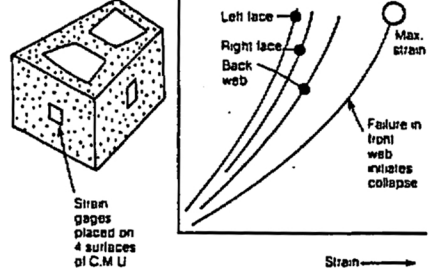
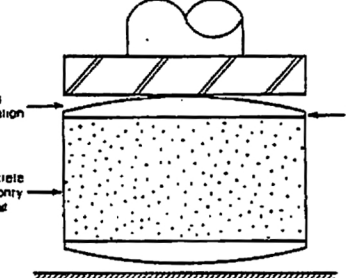
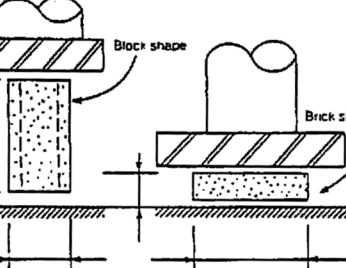
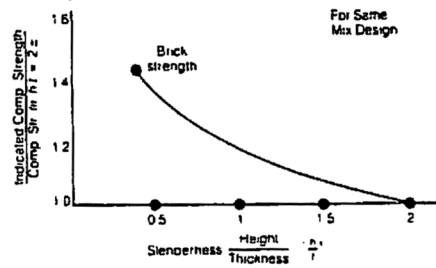


Table I. Influence of Major Testing Variables on the Indicated Compressive Strength of Concrete Masonry Units

Variable	Cause of Variation	Effect on Indicated Strength	Reference (Remarks)
Capping Material	 In-plant use of fibre board in place of lab prepared thin cap of high-strength gypsum, sulfur, mortar etc. Soft fibre board spreads, causing lateral tension.		(A) Holm (C.O.B.) (B) Roberts. (C) Self 1. Solid block tend to have smaller loss of indicated strength when tested with fibre board. 2. Irregularly surfaced blocks produce wide scatter and greater loss.
Moisture Content of Concrete Masonry Unit at Time of Test	Axial loading causes secondary hydrostatic pressures due to moisture content resulting in additive lateral tensile forces.		(B) Roberts (C) Self (D) NCMA Concrete Masonry Units should be delivered to lab at moisture contents comparable to intended use)
Thickness of Loading Platen		Considerable loss of indicated compressive strength on high strength CMU's if ASTM C140 is followed ($t = 1/3$ to furthest corner). California Concrete Masonry Tech. Comm. recommends $t = 1$ to minimize bending of platen—thus developing uniform deformations and stresses.	(E) C.C.M.T.C.
Center of Thrust Not Co-Linear With Geometric Centroid			(A) Holm (H) Failure is precipitated by excessively loaded corner or face resulting in false, low indicated strength.
Non-Uniform Thickness of Capping		15% loss of indicated strength from tests on units sampled from same cube sent to second lab for re-testing. (Actual high rise project).	(A) Holm (F) ASTM C140 stipulates planeness within 0.003 inches in 16 inches. Max. thickness of cap 1/4" with sulfur, 1/8" with gypsum plaster.
Shape Effect			(A) Holm (S) Indicated relationship applies to one type and strength of unit. Strength ratio varies with aggregate type, block strength, etc.

(A) Holm, T. A., unreported data from experimental block runs in various plants. (C. O. B. H. F. S.)
 (B) Roberts, J. J., see ref (8) at end of paper
 (C) Self, M., see ref (7) at end of paper
 (D) NCMA, see ref (6) at end of paper

