

Tolerances on Dimensions								
Specified Dimension (in.)	Maximum Permissible Variation (inches) Plus or Minus From							
	Specified Dimension	Specified Dimension or Average Brick Size in Job Lot Sample		Specified Dimension		Average Brick Size in Job Lot Sample <sup>‡</sup>		
	ASTM 62	ASTM C652 Type HBX	ASTM C652 Type HBS and HBB	ASTM C216 Type FBX	ASTM C216 Type FBS	ASTM C216 Type FBX	ASTM C216 Type FBX Smooth <sup>†</sup>	ASTM C216 Type FBX Rough <sup>‡</sup>
3 and under	3/32	1/16	3/32	1/16	3/32	1/16	1/16	3/32
Over 3 to 4	1/8	3/32	1/8	3/32	1/8	1/16	3/32	1/8
Over 4 to 6	3/16	1/8	3/16	1/8	3/16	3/32	3/32	3/16
Over 6 to 8	1/4	5/32	1/4	5/32	1/4	3/32	1/8	1/4
Over 8 to 12	5/16	7/32	5/16	7/32	5/16	1/8	3/16	5/16
Over 12 to 16	3/8	9/32	3/8	9/32	3/8	3/16	1/4	3/8

<sup>‡</sup> Lot size as determined by agreement between purchaser and seller. If not specified, lot size is understood to mean all brick of one size and color in the job order.

<sup>†</sup> Type FBS Smooth units have relatively fine texture and smooth edges, including wire cut surfaces.

<sup>‡</sup> Type FBS Rough units have textured, rounded, or tumbled edges or faces.

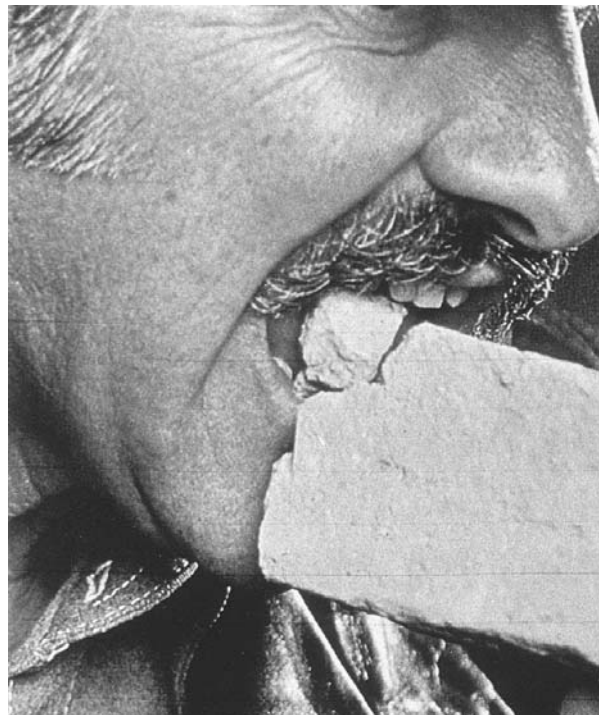
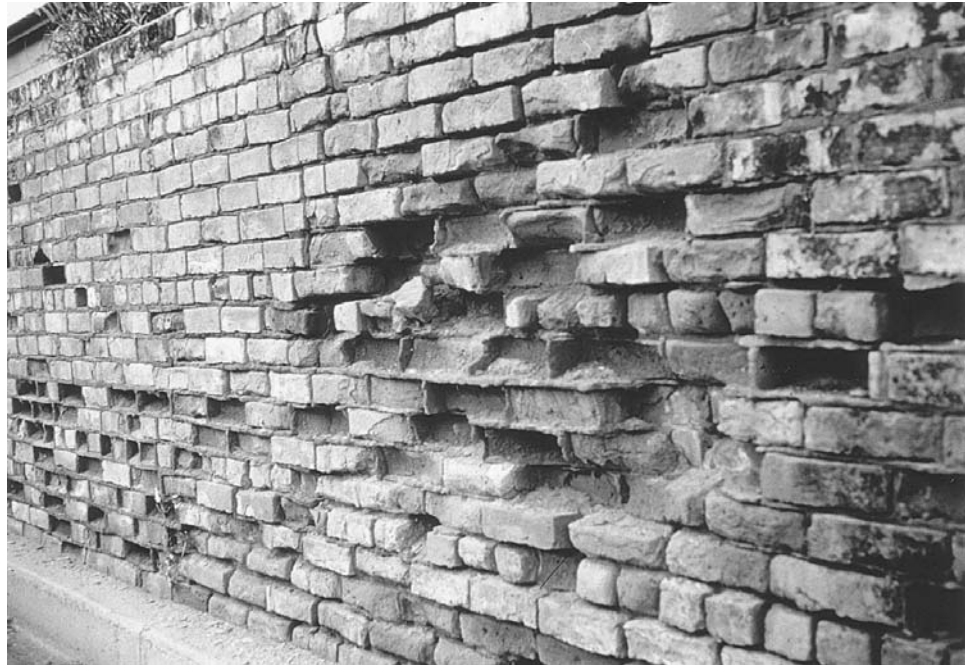
Tolerances on Distortion				
Maximum Dimension (inches)	Maximum Permissible Distortion (inches)			
	ASTM C216		ASTM C652	
	Type FBX	Type FBS	Type HBX	Type HBS
8 and under	1/16	3/32	1/16	3/32
Over 8 to 12	3/32	1/8	3/32	1/8
Over 12 to 16	1/8	5/32	1/8	5/32

Maximum Permissible Extent of Chippage						
Unit Type	Percentage Allowed <sup>‡</sup>	Chippage (in.) in from		Percentage Allowed <sup>‡</sup>	Chippage (in.) in from	
		Edge	Corner		Edge	Corner
FBX	5% or less	1/8 to 1/4	1/4 to 3/8	95 to 100%	0 to 1/8	0 to 1/4
FBS Smooth	10% or less	1/4 to 5/16	3/8 to 1/2	90 to 100%	0 to 1/4	0 to 3/8
FBS Rough	15% or less	5/16 to 7/16	1/2 to 3/4	85 to 100%	0 to 5/16	0 to 1/2
FBA	To meet designated sample or as specified by purchaser, but not more restrictive than Type FBS rough					
HBX	5% or less	1/8 to 1/4	1/4 to 3/8	95 to 100%	0 to 1/8	0 to 1/4
HBS Smooth	10% or less	1/4 to 5/16	3/8 to 1/2	90 to 100%	0 to 1/4	0 to 3/8
HBS Rough	15% or less	5/16 to 7/16	1/2 to 3/4	85 to 100%	0 to 5/16	0 to 1/2
HBA and HBB	To meet designated sample or as specified by purchaser, but not more restrictive than Type HBS rough					

<sup>‡</sup> Percentage of exposed brick allowed in wall with chips measured the listed dimension in from an edge or corner.

**Figure 3-3** Brick manufacturing tolerances. (Copyright ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428. Reprinted with permission.)

of the imported brick sold in that state each year is found to be substandard in water absorption, weathering, and compression tests. The abbreviated burning period and low firing temperatures typical of some Mexican brick plants produce units that are extremely soft and porous, causing severe maintenance problems even in relatively dry climates (see *Fig. 3-4*).



**Figure 3-4** Substandard brick. (Photos courtesy Brick Institute of Texas.)