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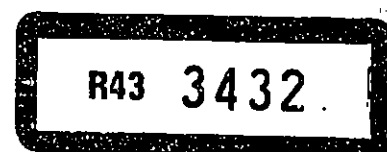
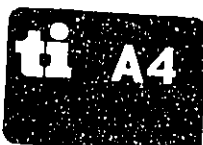
BRITISH STANDARD CODE OF PRACTICE

CP 111 : 1970

**STRUCTURAL
RECOMMENDATIONS FOR
LOADBEARING
WALLS**

**THE COUNCIL FOR CODES OF PRACTICE
BRITISH STANDARDS INSTITUTION**

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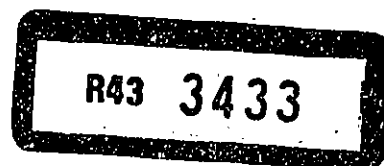
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STRUCTURAL RECOMMENDATIONS FOR LOADBEARING WALLS

This part of this Code of Practice has been prepared by a Committee convened by The Institution of Structural Engineers on behalf of the Council for Codes of Practice. Having been approved by the Codes of Practice Committee for Building and endorsed by the Council for Codes of Practice, it was published under the authority of the General Council on 29th July, 1970.

First published, December, 1948.

First revision, March, 1964.

SBN 580 060225 5

This part of this Code of Practice makes reference to the following British Standards and British Standard Codes of Practice:

- BS 476. Fire tests on building materials and structures. Part 8. Tests methods and criteria for the fire resistance of elements of building construction.
- BS 877. Foamed or expanded blastfurnace slag lightweight aggregate for concrete.
- BS 882, Aggregates from natural sources for concrete
1201 (including granolithic)
- BS 1047. Air-cooled blast furnace slag coarse aggregate for concrete.
- BS 1165. Clinker aggregate for concrete.
- BS 2028. Precast concrete blocks.
1364
- BS 3921. Clay bricks and blocks.
- BS 4449. Hot-rolled steel bars for the reinforcement of concrete
- CP 3. Code of basic data for the design of buildings. Chapter V. Loading. Part 1, Dead and imposed loads.
- CP 101. Foundations and substructures for non-industrial buildings of not more than four storeys.
- CP 114. Structural use of reinforced concrete in buildings.
- CP 115. The structural use of prestressed concrete in buildings.
- CP 121. Walling. Part 1. Brick and block masonry.
- CP 121.201. Masonry walls ashlarred with natural stone or with cast stone.
- CP 121.202. Masonry. Rubble walls.

British Standard Codes of Practice are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users ascertain that they are in possession of the latest amendments or editions.

The following BSI references relate to the work on this Code of Practice:
Committee reference BLC/29

A6

R43 3434

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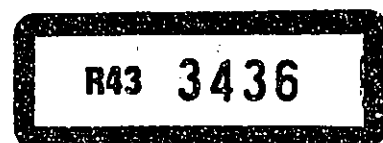
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CONTENTS

	Page
Foreword	9

SECTION 1. GENERAL

101. Scope	10
102. Definitions	10
103. Alternative materials and methods of construction	11

SECTION 2. MATERIALS, APPLIANCES AND COMPONENTS

201. General	11
202. Materials that have been previously used	12

SECTION 3. DESIGN CONSIDERATIONS

301. Loading	12
302. Load dispersion	12
303. Thickness	12
304. Lateral support	12
305. Effective height	13
306. Effective length	14
307. Effective thickness	14
308. Cavity walls	15
<i>a.</i> Loading	15
<i>b.</i> Minimum thickness of leaves	16
<i>c.</i> Width of cavity	16
<i>d.</i> Spacing of ties	16
<i>e.</i> Embedment of ties	16
<i>f.</i> External cavity walls	16
309. Maximum slenderness ratio	17
310. Zig-zag or chevron walls	17
311. Walls subdivided into panels	18
312. Parapet walls and balustrades	18
313. Foundation walls	18

UNREINFORCED BRICKWORK OR BLOCKWORK

314. General	18
<i>a.</i> Random rubble wall	18
<i>b.</i> Faced wall	18
<i>c.</i> Veneered wall	18

	Page
315. Permissible compressive stresses	18
<i>a.</i> General	18
<i>b.</i> Basic stress	18
<i>c.</i> Axially loaded members	21
<i>d.</i> Walls subjected to eccentric loading and/or lateral forces	21
<i>e.</i> Walls subjected to concentrated loads	22
<i>f.</i> Reduction of stress due to slenderness of member	22
<i>g.</i> Allowances for the shape of the units themselves	22
<i>h.</i> Walls of hollow concrete blocks filled with in-situ concrete	22
316. Tensile stresses in brickwork or blockwork	23
317. Permissible shear stress	23
318. Building-in floors and other materials	24
319. Natural stone masonry of massive type	24

REINFORCED BRICKWORK OR BLOCKWORK

320. Principles of design	24
321. Permissible stresses	24
322. Modular ratio	26
323. Cover	26
324. Anchorage, spacing and cranking reinforce- ments	26
<i>a.</i> Anchorage	26
<i>b.</i> Spacing and cranking	26
325. Splicing of reinforcing bars	26
326. Columns or piers	26
<i>a.</i> Longitudinal reinforcement	26
<i>b.</i> Transverse reinforcement	26

CONCRETE

327. General principles of design	27
328. Shrinkage and thermal effects	27
329. Cover	28
330. Permissible stresses	30
331. Stresses due to eccentric loads or lateral forces	31
332. Stresses due to concentrated loads	31

SECTION 4. WORKMANSHIP

	Page
401. Brickwork and blockwork	31
402. Concrete walls	31

SECTION 5. APPENDICES

501. Method of determining the compressive strength of structural units	31
502. Tests for brick and block walls	31
503. Fire resistance of loadbearing walls	33

TABLES

1a. Stiffening coefficient for walls stiffened by piers	15
2. Spacing of ties	16
3a. Basic compressive stresses for brickwork members (at and after the stated times)	19
3b. Basic compressive stresses for blockwork members (at and after the stated time)	20
4. Stress reduction factors for slenderness and eccentricity	21
5. Modification factor for shape of unit	23
6a. Modular ratios for reinforced brickwork	25
6b. Modular ratios for reinforced blockwork	25
7. Maximum permissible uniformly distributed stresses on plain concrete walls using nominal-mix concrete	28
8. Maximum permissible uniformly distributed stresses on plain concrete walls using the special concrete mixes of structural-grade concrete	30
9. Reduction factors for slenderness for concrete walls	31
10. Load factors for test panels	32
11. Fire resistance of loadbearing walls	34
12. Examples of effective thickness of walls	36

FIGURES

1. Zig-zag or chevron wall	17
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	Page
2-4. Examples of effective height of columns	37
5. Anchorage of solid walls: joists at right angles to wall	38
6. Anchorage of solid walls: joists parallel to wall	38
7. Anchorage of cavity walls: timber joists at right angles to wall	39
8. Anchorage of cavity walls: timber joists parallel to wall	39
9. Anchorage of cavity walls: precast concrete floor units parallel to wall	40

This Code of Practice represents a standard of good practice and takes the form of recommendations. Compliance with it does not confer immunity from relevant legal requirements including byelaws.

Attention is, however, drawn to the fact that in certain byelaws, notably those building byelaws based upon one of the models issued by the Ministry of Housing and Local Government and the Scottish Development Department, compliance with the provisions of certain British Standards or British Standard Codes of Practice, or of specific clauses therein, is 'deemed to satisfy' the requirements of certain of the byelaws in the fields covered by the British Standards and Codes of Practice, or by the specific clauses referred to.

BRITISH STANDARD CODE OF PRACTICE CP 111
 STRUCTURAL RECOMMENDATIONS
 FOR LOADBEARING WALLS

FOREWORD

This Code of Practice was first issued in 1948 and was revised in 1964. In that revision the permissible stresses in loadbearing brickwork and blockwork walls were, in general, substantially raised. The basic stresses were only slightly altered, but the changes in reduction factors for slenderness had the effect of increasing permissible stresses, the extent of the increase depending on the type of wall and load it is carrying.

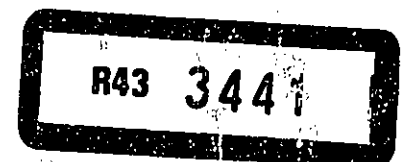
The recommendations for loadbearing concrete walls were not confined to in-situ concrete as previously, and permissible stresses for plain concrete walls were related to cube-strength requirements of both nominal-mix concrete and special-mix concrete.

In July 1970 it was decided to delay the publication of the revision to the Code to enable this to be redrafted as a limit state document. Amendment No. 1 was therefore published to introduce certain changes which had been circulated in the draft for comment of the revised code. The changes included the amendment from nominal thickness to actual thickness; the reduction in thickness from 100 mm to 90 mm in certain instances; changes in the maximum slenderness ratio and to the reduction factor for slenderness; a change in the permissible shear stress; the inclusion of hollow concrete blocks with in-situ filling.

At the same time that Amendment No. 1 was published, CP 111 was published as Part 1 'Imperial units' and Part 2 'Metric units'. Part 1 was withdrawn in 1976 and Part 2 was renumbered CP 111.

*As added
June 1971*

*As amended
June, 1976*



SECTION 1. GENERAL

101. Scope. This Code gives structural recommendations relating to loadbearing walls of brickwork, blockwork (which for the purposes of this Code includes masonry) and concrete, in regard to the materials to be used, the maximum permissible stresses and the methods of design and construction.

Two methods of determining the necessary thickness of walls have been used:

- a. the thickness is related to the height and length of the wall; or
- b. the thickness is determined in relation to the load to be carried by the wall, in conjunction with certain specified permissible stresses.

This Code deals only with the design of walls based on method *b**.

NOTE. Recommendations other than structural may be found by reference to the following Codes:

As amended
June, 1976

- CP 121, Walling. Part 1, Brick and block masonry.
- CP 121.201, Masonry. Walls ashlared with natural stone or cast stone.
- CP 121.202, Masonry. Rubble walls.

102. Definitions. For the purposes of this Code the following definitions apply:

Loadbearing wall. A wall designed to carry an imposed load other than that due to its own weight. A wall subjected to its own weight and wind only is excluded. It may be constructed of any of the following materials:

Brickwork. An assemblage of bricks bonded and solidly put together with mortar.

Blockwork. An assemblage of blocks of clay, concrete or other suitable material bonded and solidly put together with mortar.

Masonry. An assemblage of blocks of natural or cast stone bonded and solidly put together with mortar.

Reinforced brickwork, blockwork or masonry. Brickwork, blockwork or masonry in which reinforcement is so embedded in the mortar that all the materials act together in resisting forces.

Concrete. Concrete without reinforcement or concrete having reinforcement which is not designed to carry load.

Structural units. These may be either:

- Brick or loadbearing blocks* complying with Clause 201; or
- Blocks of natural stone* complying with Clause 201.

Types of wall.

Cavity wall. A wall comprising two leaves tied together with metal or

* Method *a* is dealt with in the relevant clauses of Ministry of Housing and Local Government, Series IV, 'Buildings', or those issued by the Scottish Development Department or sometimes in the appropriate byelaws.