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AS 3600 Supplement 2—1990

Extracts from AS 3600 Concrete structures—Concrete materials' requirements

(Supplement 2 to AS 3600—1988)

STANDARDS AUSTRALIA

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Extracts from AS 3600 Concrete structures—Concrete materials' requirements

(Supplement 2 to AS 3600—1988)

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PREFACE

This Supplement was prepared by Standards Australia at the request of the National Ready Mixed Concrete Association of Australia.

The purpose of the Supplement is to alert persons in the building construction sector of the concrete industry, to those particular aspects of AS 3600—Concrete structures which have a direct bearing on their daily activities.

The Supplement consists of a number of extracts from AS 3600, relating to the specification, manufacture, handling, placing, curing and testing of concrete in structures to which the Standard applies. Other aspects of concrete construction, such as the stripping of forms, which are also covered by AS 3600 have not been included. Page numbers correspond to the respective pages in AS 3600 and are not sequential because only the relevant material has been reproduced.

The Standard from which these extracts have been taken (and other Standards referenced therein) is the current edition at the time of publication of this Supplement. At any later time, the relevant Standards may be corrected or amended. Users of this Supplement should therefore check the status of the original Standard, before applying any of the extracts.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
CONCRETE STRUCTURES

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE AND APPLICATION.

1.1.1 Scope. This Standard sets out minimum requirements for the design and construction of concrete structures and members which contain reinforcing steel, or tendons, or both. It also sets out minimum requirements for plain concrete members.

1.1.2 Application. This Standard is intended to apply to structures made of concrete—

(a) with a characteristic compressive strength at 28 days, f'_c, in the range of 20 MPa to 50 MPa; and

(b) of saturated, surface-dry density in the range of 1800 kg/m^3 to 2600 kg/m^3.

This Standard is generally intended to apply to concrete roadway, railway, or pedestrian bridges. However, the specifications of the relevant Authority shall be used where applicable.

The general principles of concrete design and construction embodied in this Standard may be applied to concrete other than that specified above, or to concrete structures or members not specifically mentioned herein.

This Standard is not intended to apply to the design of mass concrete structures. It is also not intended that the requirements of this Standard should take precedence over those of other Australian Standards.

NOTE: It is intended that the design of a structure or member to which this Standard applies, be carried out by, or under the supervision of, an engineer as defined in Clause 1.6.2.

1.2 REFERENCED DOCUMENTS. The Standards and other documents referred to in this Standard are listed in Appendix B.

1.3 USE OF ALTERNATIVE MATERIALS OR METHODS.

1.3.1 General. Provided that the requirements of Section 2 are met, this Standard shall not be interpreted so as to prevent the use of materials or methods of design or construction not specifically referred to herein.

1.3.2 Use of other materials or methods. If it is desired to seek the opinion of the SAA Committee on Concrete Structures as to whether materials other than those specified, or methods of design or construction not covered herein, are deemed to comply with the intention of this Standard, details of these materials or methods, including relevant test results, shall be submitted to the Committee.

1.3.3 Existing structures. Where the strength or serviceability of an existing structure is to be evaluated, the general principles of this Standard may be applied. (See also Clauses 21.1 and 21.4.)

1.4 DESIGN.

1.4.1 Design data. The following design data shall be shown in the drawings:

(a) Reference number and date of issue of applicable design Standards.

(b) Live loads used in design.

(c) Exposure classification for durability.

(d) Fire-resistance rating, if applicable.

(e) Class and where appropriate, grade designation of concrete.

(f) Grade and type of reinforcement and tendons.

1.4.2 Design details. The drawings or specification for concrete members and structures should include, as appropriate, the following:

(a) The shape and size of each member.

(b) The finish and method of control for unformed surfaces.

(c) Class of formwork for the surface finish specified in accordance with AS 1510.1.

(d) The size, quantity and location of all reinforcement, tendons and structural fixings and the cover to each.

(e) Any required properties of the concrete (see Clauses 19.1.7 and 19.1.8).

(f) The curing procedure.

(g) The force required in each tendon, the maximum jacking force to be applied and the order in which tendons are to be stressed.

(h) The location and details of planned construction or movement joints, connections and splices, and the method to be used for their protection.

(j) The minimum period of time before stripping of forms and removal of shores.

(k) Any constraint on construction assumed in the design.

(l) Any other requirements.

1.5 CONSTRUCTION. All concrete structures, designed in accordance with this Standard, shall be constructed to ensure that all the requirements of the design as contained in the drawings and specifications are achieved.

1.6 DEFINITIONS.

1.6.1 General. The definitions below apply to this Standard. Definitions peculiar to a particular clause or section are given in that clause or section and referred to below.

1.6.2 Administrative definitions.

Approved—except as may be otherwise stated, approved by the Authority.