

(PREVIEW)

HANDBOOK ON CONCRETE MIXES

(BASED ON INDIAN STANDARDS)

SECTION 1 INTRODUCTION

<i>IS No.</i>	<i>Title</i>
IS 456-1978	Code of practice for plain and rein forced concrete (<i>third revision</i>)
CP 116 Part 2 1969	Code of practice for the structural use of prectice concrete British Standards Institution
CP 110 Part 1 1972	Code of practice for the structural use of concrete British Standards Institution
IS 456 1964	Code of practice for plan and rain forced concrete (<i>second revision</i>)
IS 1343 1980	Code of practice for prestressed concrete (first revision)
ISO 3893 1977	Concrete classification by com presseve strength International Organization for Standardination

SECTION 2 CONCRETE MAKING MATERIALS

<i>IS No.</i>	<i>Title</i>
IS 456 – 1978	Code of practice for plain and rein forced concrete (<i>third revision</i>)
IS 269-1976	Specification for ordinary and low heat Portland cement (<i>third revision</i>)
IS 8041-1978	Specification for rapid hardening Portland cement (<i>first revision</i>)
IS 455-1976	Specification for Portland slag cement (<i>third revision</i>)

IS 1489-1976	Specification for Portland pozzolana cement (<i>second revision</i>)
IS 8112-1976	Specification for high strength or dinary Portland cement
IS 8043 1978	Specification for hydrophobic Portland cement (<i>first revisions</i>)
IS 6452 1972	Specification for high alumina cement for structural use
IS 6909 1973	Specifcaton for supersulphated cement
IS 1343 1980	Code of practice for prestressed concrete (<i>first revision</i>)

SECTION 3 PROPERTIES OF FRESH AND HARDENED CONCRETE

<i>IS No.</i>	<i>Title</i>
IS: 6461 (Part VII)-1973	Glossary of terms relating to cement concrete: Part VII Mixing, laying, compaction, curing and other construction aspects.
IS: 1199-1959	Methods of sampling and analysis of concrete
IS: 7861 (Part 1)-1975	Code of practice for extreme weather concreting: Part I Recommended practice for hot weather concreting.
IS: 456-1978	Code of practice for plain and reinforced concrete.
IRE: 44-1976	Tentative guidelines for cement concrete mix design for road pavements. The Indian Roads Congress, New Delhi.
ACI 318-77	Building code requirements for reinforced concrete. American Concrete Institute

SECTION 4 VARIABILITY OF CONCRETE STRENGTH - STATISTICAL ASPECTS

IS: 456-1978	Code of practice for plain and reinforced concrete (<i>third revision</i>).
ACI 214-77	Recommended practice for evaluation of strength teat results of concrete. American Concrete Institute.
IS: 1199-1959	Methods of sampling and analysis of concrete.
IS: 516-1959	Methods of test for strength of concrete

SECTION 5 PRINCIPLES OF CONCRETE MIX DESIGN

<i>IS No.</i>	<i>Title</i>
IS: 456-1978	Code of practice for plain and reinforced concrete (<i>third revision</i>).

IS: 1343-1980	Code of practice for prestressed concrete (<i>first revision</i>).
IS: 8112-1976	Specification for high strength ordinary Portland cement.
IS: 8041-1978	Specification for rapid hardening Portland cement (<i>first revision</i>).
IS: 269-1976	Specification for ordinary and low heat Portland cement (<i>third revision</i>).
IS: 3370 (Part 1).1965	Code of practice for concrete structures for the storage of liquids: Part 1 General requirements.

SECTION 6 METHODS OF CONCRETE MIX DESIGN

<i>IS No.</i>	<i>Title</i>
IS 10262 1982	Recommended guidelines for concrete mix design
IRC 44-1976	Tentative guidelines for cement concrete mix design for road pavements The Indian Roads Congress, New Delhi
IS: 383 1970	Specification for coarse and fine aggregates from natural sources for concrete (<i>second revision</i>)
IS: 9013 1978	Method of making, curing and determining compressive strength of accelerated concrete test specimens
IS: 4031 1968	Methods of physical tests for hydraulic cement
IS : 269 1976	Specification for ordinary and low heat Portland cement (<i>third revision</i>)

SECTION 7 EXTREME WEATHER CONCRETING

<i>IS No.</i>	<i>Title</i>
IS: 7861 (Part 1)-1975	Code of practice for extreme weather concreting: Part I Recommended practice for hot weather concreting.
IS: 7861 (Part 11)-1981	Code of practice for extreme weather concreting: Part II Recommended practice for cold weather concreting.
ACI 306-1966	Recommended practice for cold weather concreting. ACI Manual of Concrete Practice. Part I: 1974. P 306-1-19.

SECTION 8 TESTING OF CONCRETE MIXES

<i>IS No.</i>	<i>Title</i>
IS: 1199-1959	Methods of sampling and analysis of concrete.
IS: 456-1978	Code of practice for plain and reinforced concrete.
IS: 516-1959	Methods of tests for strength of concrete.
IS: 9013-1978	Methods of making, curing and determining the compressive strength of accelerated cured concrete test specimens
IS: 5816-1970	Method of test for splitting tensile strength of concrete cylinders.