

# Manual of Aggregate and Concrete Testing<sup>1</sup>

## INTRODUCTION

This manual is intended to supplement, not in any way to supersede, the various ASTM test methods for sampling and testing aggregate and freshly mixed and hardened portland-cement concrete. The manual was prepared by Committee C09 on Concrete and Concrete Aggregates and has been accepted by the Society for publication as information only. The manual is not a part of the ASTM methods. Comments and suggestions on the manual will be welcomed by Committee C09.

Many specifications for aggregates and concrete are based on the results of ASTM methods of testing and therefore strict adherence to the requirements of the test methods is important. Improper use of test procedures can result in inaccurate data and mistaken conclusions about aggregate and concrete quality. Accordingly, this manual directs attention to many of the factors that might affect the results of the tests.

*This manual does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of these standards to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

The subjects covered in the manual appear in the following order:

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<sup>1</sup> This manual is under the jurisdiction of the ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.07 on Manual of Testing.

Published as Informational, October 1965, revised 1967, 1969, 1977, 1978, 1983, 1987, 1989, 1995, 1997, 1998, 1999, 2000, 2001, 2002, and 2003.

# Concrete Testing Manual

**American Concrete Institute**

A red circular graphic with a gradient, appearing as a stylized arrow or a partial circle, located to the right of the American Concrete Institute text.

## **Concrete Testing Manual:**

**Portland Cement Concrete Testing Manual** United States. Federal Highway Administration,1991      **ACI Manual of Concrete Inspection** ,2008 This manual is intended to guide assist and instruct concrete inspectors and others engaged in concrete construction and testing including field engineers construction superintendents supervisors laboratory and field technicians and workers Designers may also find the manual to be a valuable reference by using the information to better adapt their designs to the realities of field construction Because of the diverse possible uses of the manual and the varied backgrounds of the readers it includes the reasoning behind the technical instructions The field of concrete construction has expanded dramatically over the years to reflect the many advances that have taken place in the concrete industry Although many of the fundamentals presented in previous editions of this manual remain relevant and technically correct this eleventh edition incorporates new material to address these advances in technology      **Manual of Recommended Practice for Inspection and Testing of Concrete Materials and Concrete** Concrete Industry Board,1957      **Concrete and Mineral Aggregates, Including Manual of Concrete Testing** American Society for Testing and Materials,1974      Concrete and Mineral Aggregates (including Manual of Aggregate and Concrete Testing) American Society for Testing and Materials,1979      An Introduction to the Making and Testing of Plain Concrete George Earl Troxell,Harmer E. Davis,1938      *Concrete and Mineral Aggregates (including Manual of Concrete Testing)* ,1973      **Manual of Recommended Practice for Inspection and Testing of Concrete Materials and Concrete with Short Specification** Concrete Industry Board, Inc. Testing Laboratories Committee,1961      **Manual for Inspection of Prestressed Concrete** Pennsylvania. Department of Transportation. Bureau of Materials Testing and Research,1973      **ACI Manual of Concrete Inspection** American Concrete Institute. Committee 311,1999      Manuals Combined: Nondestructive Testing (NDT) And Inspection (NDI) , Over 8 300 pages Just a SAMPLE of the CONTENTS NONDESTRUCTIVE INSPECTION METHODS Published by the Departments of the Army Navy and Air Force on 1 March 2000 771 pages and June 2005 762 pages Metallic Materials and Elements for Aerospace Vehicle Structures 1 733 pages Designing and Developing Maintainable Products and Systems Revision A 719 pages Sampling Procedures and Tables for Inspection by Attributes 75 pages Nondestructive Testing Acceptance Criteria 88 pages Environmental Stress Screening Process for Electronic Equipment 49 pages Handbook for Reliability Test Methods Plans and Environments for Engineering Development Qualification and Production Revision A 411 pages Human Engineering Revision F 219 pages Sampling Procedures and Tables for Life and Reliability Testing Based on Exponential Distribution 77 pages Test Method Standard Electronic and Electrical Component Parts 191 pages Reliability Testing for Engineering Development Qualification and Production Revision D 47 pages Electroexplosive Subsystem Safety Requirements and Test Methods for Space Systems 150 pages 8 64 MB Reliability Prediction of Electronic Equipment Notice F 205 pages Reliability Program for Systems and Equipment Development and Production Revision B 88 pages Electronic

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*Paint Testing Manual* Sward, 1972      *Concrete and Mineral Aggregates (including Manual of Cinctete Testing)*. American Society for Testing and Materials, 1973      *Concrete Inspection; a Manual of Information and Instructions for Inspectors of Concrete Work, with Standard and Typical Specifications* Charles Shattuck Hill, 2013-09 This historic book may have numerous typos and missing text Purchasers can usually download a free scanned copy of the original book without typos from the publisher Not indexed Not illustrated 1909 edition Excerpt CHAPTER IX STANDARD AND TYPICAL SPECIFICATIONS Specifications are the written instructions defining the duties of the inspector He should be familiar with their characteristics and requirements both generally and specifically A study of specifications is essential to an inspector who desires to keep abreast with his work It is only by such study that he will be able to interpret their requirements quickly accurately and fairly on any work with which he is connected The following specifications are given here for study They are not selected as being ideal but as representing general practice and therefore as being exemplifications of what the inspector may expect to find his business to interpret and enforce in practical work SPECIFICATIONS FOR CEMENT General Conditions 1 All cement shall be inspected 2 Cement may be inspected either at the place of manufacture or on the work 3 In order to allow ample time for inspecting and testing the cement should Standard specifications adopted by the American Society for Testing Materials Nov 14 1904 SO be stored in a suitable weather tight building having the floor properly blocked or raised from the ground 4 The cement shall be stored in such a manner as to permit easy access for proper inspection and identification of each shipment 5 Every facility shall be provided by the contractor and a period of at least 12 days allowed for the inspection and necessary tests 6 Cement shall be delivered in suitable packages with the brand and name of manufacturer plainly marked thereon 7 A bag of cement shall contain 94 lbs of cement net Each barrel of Portland cement

shall contain 4 bags and each barrel of natural cement shall contain 3 bags of the above net weight 8      ACI Manual of Concrete Practice American Concrete Institute,2003      **Laboratory Manual of Testing Materials** William Kendrick Hatt,Herbert Henry Scofield,1926      *Material Testing Laboratory Manual* C B Kukreja,Kishore K. & Ravi Chawla,2006-01-01  
Part 1 Cement Part 2 Cement Aggregates Part 3 Cement Concrete Part 4 Reinforced Concrete Part 5 Bricks Part 6 Timber  
Part 7 Steel Part 8 Building Lime Appendix      **Portland Cement Concrete Field Testing Procedures** Washington (State).  
Department of Transportation. Field Operations Support Service Center,1995 A course designed to teach the student about  
Portland cement concrete and how to test it so they can perform their inspection duties      *Concrete Inspection Manual*  
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