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Building construction machinery and equipment — Concrete mixers —

Part 2: Procedure for examination of mixing efficiency

Machines et matériels pour la construction des bâtiments — Malaxeurs de béton —

Partie 2: Mode opératoire pour la détermination de l'efficacité de malaxage

Reference number
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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 195, *Building construction machinery and equipment*, Subcommittee SC 1, *Machinery and equipment for concrete work*.

This third edition cancels and replaces the second edition (ISO 18650-2:2014), which has been technically revised.

The main changes are as follows:

— changed the Scope to be applicable to concrete mixers having a rated capacity greater than or equal to 0,5 m^3;

— modified the drawing for number of specimens in Figure 1;

— modified Figure 2 and key;

— modified Figure 3 b) and key;

— modified the number of specimens in 5.4.1.1;

— modified the drawing of mixer in Figure 7 and corrected water temperature to (20 ± 2) °C

— modified Table 4;

— corrected keys marks for T_1 to T_3 in Figure 8.

A list of all parts in the ISO 18650 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document deals with the testing of the mixing capabilities of concrete mixers, characterized as the recommended mixing time.

The test consists of the determination of the variance of the mortar, coarse aggregate and air content, and the consistency of concrete mix samples, drawn after an assumed mixing time.

Compressive strength is also tested.

The measure of a concrete mixer's efficiency is the value of the variance of the above parameters, after the assumed mixing time.

This document provides for the preparation of concrete mix, sampling, execution of particular tests, criteria of test result evaluation and the test report.

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Building construction machinery and equipment — Concrete mixers —

Part 2: Procedure for examination of mixing efficiency

1 Scope

This document specifies the procedure and requirements for examination of the mixing efficiency of batch-type and continuous-type concrete mixers as defined in ISO 18650-1. It is applicable to concrete mixers having a rated capacity greater than or equal to 0,5 m^3.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1920-1, *Testing of concrete — Part 1: Sampling of fresh concrete*

ISO 1920-2, *Testing of concrete — Part 2: Properties of fresh concrete*

ISO 1920-3, *Testing of concrete — Part 3: Making and curing test specimens*

ISO 1920-4, *Testing of concrete — Part 4: Strength of hardened concrete*

ISO 3310-1, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth*

ISO 11375, *Building construction machinery and equipment — Terms and definitions*

ISO 18650-1, *Building construction machinery and equipment — Concrete mixers — Part 1: Commercial specifications*

ISO 20290-1, *Aggregates for concrete — Test methods for mechanical and physical properties — Part 1: Determination of bulk density, particle density, particle mass-per-volume and water absorption*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 18650-1 and ISO 11375 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Requirements for mixer verified

The design and execution of the whole structure of the mixer and its components, such as the mixing chamber (drum, pan or trough), rotor with blades or paddle agitator(s), their directions of rotation, charging and discharging devices (if any), should be verified according to the manufacturer's instructions.

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