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Building construction machinery and equipment — Concrete placing systems for stationary equipment —

Part 1: Terminology and commercial specifications

Machines et matériels pour la construction des bâtiments — Système de distribution de béton pour équipements stationnaires —

Partie 1: Terminologie et spécifications commerciales

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Contents

Page

Foreword

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 195, *Building construction machinery and equipment*, Subcommittee SC 1, *Machinery and equipment for concrete work*.

ISO 17740 consists of the following parts, under the general title *Building construction machinery and equipment — Concrete placing systems for stationary equipment*:

— *Part 1: Terminology and commercial specifications*

Additional parts, dealing with safety requirements, are under preparation.

Introduction

This International Standard is part of a series of standards for concrete placing systems which are mounted on a slewing pedestal at the top of a base structure.

Building construction machinery and equipment — Concrete placing systems for stationary equipment —

Part 1: Terminology and commercial specifications

1 Scope

This part of ISO 17740 defines terminology and commercial specifications for concrete placing systems which are stationary.

This part of ISO 17740 is not applicable to concrete placing systems which are part of a mobile or trailer-mounted concrete pumping system (see ISO 21573-1).

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
concrete placing system
power-driven devices consisting of an extensible placing boom, a boom pedestal and base structure to deposit concrete

2.2
placing boom
extensible boom with a fixed concrete conveying pipe for delivering concrete to work areas within its reach

Note 1 to entry: Typically, a rubber hose is fixed to the end of the conveying pipe to facilitate concrete distribution.

2.3
boom pedestal
support structure for connecting the placing boom with the base structure

2.4
counter-jib and ballast
counter-weighted structure which is typically located 180° opposite the placing boom which offsets or partially offsets the weight and moments of the placing boom

2.5
control station
location which contains devices or controls for the operation of the concrete placing system

Note 1 to entry: This can include a radio remote, cable remote or local controls and emergency controls. The normal working place during pumping and distributing concrete is the remote control.

2.6
working platform
work area typically used for assembly and maintenance work

2.7
base structure
tubular columns, lattice booms or other base structures on which stationary booms can be erected

Note 1 to entry: Base structure can be affixed to a baseplate, wall or other structure and typically includes the distributing pipeline, working platform and an access ladder.

2.8
floor frame
guide for the base structure in the floor of the building

Note 1 to entry: It also can be part of the self-climbing system, in which case it is part of the vertical support.

2.9
access ladder
means of access to the working platform

2.10
climbing system
combination of components and assemblies that allow for the lifting and support of the entire concrete placing system within or outside a building or structure

Note 1 to entry: This system includes provisions for connecting to a building or structure for both vertical and horizontal support and can be lifted with a crane or other lifting device.

2.10.1
self-climbing system
hydraulically-powered climbing and engagement system for lifting and support of the entire concrete placing system without the use of a crane or other lifting device

2.11
base plate
clamps the free-standing concrete-placing boom to the ground floor and supports the base structure

2.11.1
ballastable base structure
employs counter-balancing weights to support the free-standing concrete-placing boom and the base structure

2.12
free-standing system
application method which allows the concrete placing system and base structure to function up to a given height without being supported by a building or structure

2.12.1
ballasted free-standing system
employs counterbalancing weights mounted to a ballastable base structure instead of a method for rigidly attaching the base structure to a grounded structure

2.12.2
supported free-standing system
additional horizontal support from a building or structure because its height exceeds the overturning support capacity of the base

3 Classification

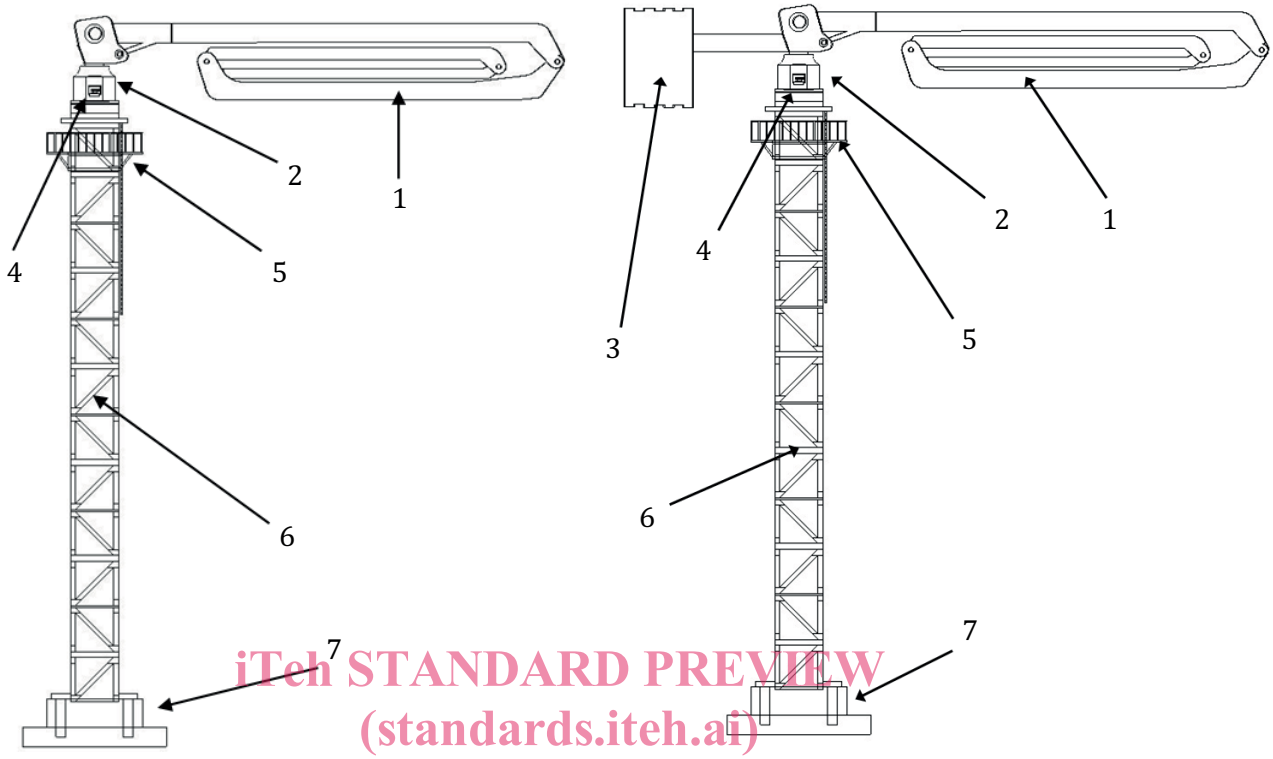
The concrete placing systems shall be classified by the following:

— free-standing and ballasted free-standing (see Figure 1);

— free-standing with support (see Figure 2);

— inside climbing (see Figure 3);

— wall mount (see Figure 4).



a) Free-standing **b) Ballasted free-standing**

Key

1 placing boom
2 boom pedestal
3 counter-jib and ballast
4 control station
5 working platform
6 base structure
7 base plate

Figure 1 — Free-standing and ballasted free-standing