

ICS 91.220
CCS P 97



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 44747.1-2024

**Building construction machinery and equipment - Concrete
placing systems for stationary equipment - Part 1: Terminology
and commercial specifications**

建筑施工机械与设备 固定式混凝土布料机 第1部分：术语和商业规格
(English Translation)

Issued on: October 26, 2024

Implemented on: May 1, 2025

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface

Introduction

1 Scope

2 Normative references

3 Terms and Definitions

4 Categories

5 Size

6 Commercial Specifications

6.1 General Characteristics

6.2 Dimensional characteristics

6.3 System Characteristics

Reference

Figure 1.Standalone structure and standalone structure with balance arm and counterweight

Figure 2 Independent structure with weight

Figure 3.Independent structure with support

Figure 4 Internal climbing structure

Figure 5 Wall-attached structure

Figure 6 Schematic diagram of the working range of a fixed concrete placing boom

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is Part 1 of GB/T 44747 "Construction Machinery and Equipment - Stationary Concrete Placing Booms".

The following parts have been published.

--- Part 1: Terminology and commercial specifications.

This document is modified to adopt ISO 17740-1:2015 "Construction machinery and equipment - Stationary concrete placing booms - Part 1: Terminology" and Commercial Specifications.

This document adds a chapter on "Normative References".

The technical differences between this document and ISO 17740-1:2015 and their reasons are as follows.

- a) Change "concrete placing boom" to "fixed concrete placing boom" (see 3.1) to match the scope of this document and add the Sexuality;
- b) Change "controlstation" to "controlsystem" (see 3.5) to better fit the definition and increase operability;
- c) Change "base structure" to "tower structure" (see 3.7) to distinguish it from the term in 3.11.1 and eliminate ambiguity;
- d) Change "floorframe" to "climbingframe" (see 3.8) to improve the definition and description and increase operability;
- e) Added the terms and definitions of internal climbing structure and wall-attached structure (see 3.13 and 3.14) to adapt to the content of Chapter 4.

The integrity of the document;

- f) Added classification types, and added diagrams of independent structures with weight (see Figure 2) and floor climbing structures.

[See Figure 4a)], in order to apply my country's classification and increase the operability of this document;

- g) The translation of the title of Figure 1 and its sub-figure b) has been changed to match the term 3.4 and the "Explanation of Reference Numbers" of Figure 1.

The following editorial changes have been made to this document.

--- Added informative reference GB/T 25638.1-2010;

--- Changed references.

Introduction

Unifying and standardizing the terminology and commercial specifications of fixed concrete placing booms will help standardize the domestic fixed concrete placing boom market.

The revision of ISO 17740-1:2015 is conducive to exchanges with international peers and promotes domestic fixed Concrete placing boom products are introduced to the world.

The unification of the terminology and commercial specifications of fixed concrete placing booms ensures the communication and cooperation between product manufacturers and users.

Smooth.

GB/T 44747 "Construction Machinery and Equipment - Fixed Concrete Placing Boom" is a standard for determining the fixed concrete placing boom.

The standardized specification is planned to consist of two parts.

--- Part 1: Terminology and commercial specifications. The purpose is to unify and standardize the terminology and commercial specifications of fixed concrete placing booms.

--- Part 2: Safety requirements. The purpose is to specify the structural and performance requirements of fixed concrete placing booms in terms of safety.

Construction machinery and equipment stationary concrete Material placing machines -
Part 1: Terminology and commercial specifications

1 Scope

This document defines the terminology and commercial specifications for stationary concrete placing booms.

This document does not apply to non-stationary or vehicle-mounted concrete placing equipment with concrete pumping systems.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

It is installed on a fixed machine base and mainly consists of a distribution arm that can move within a certain range, a rotary assembly, a tower structure, etc., and is used for pouring concrete.

Concrete machinery and equipment.

Placing boom

The foldable boom equipped with a concrete delivery pipe is used to deliver concrete to the pouring station within the working range.

Note: A rubber hose is usually connected to the end of the delivery tube to help spread the material.

[Source. GB/T 25638.1-2010, 3.5, modified] 3.3 Rotary assembly boom pedestal A rotatable support structure connecting the fabric arm and the tower structure.

Balance arm and counterweight counter-jib and balast A balancing structure arranged in the opposite direction of the fabric arm to offset or partially offset the weight and bending moment of the fabric arm.

control system

Components or devices used to operate a concrete placing boom.

Note: The console includes wireless remote control, wired remote control, manual control and emergency control. When pumping and pouring concrete, the normal working position is Remote control.

working platformworkingplatform Typically used in work areas for installation and maintenance work.

Tower structure

A pipe column structure, truss structure or other form of structure on which a fixed boom can be installed.