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

GB/T 13749-2022

Replacing GB/T 13749-2003

Impact pile driver - Code of practice of safety operation

冲击式打桩机 安全操作规程

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 General requirements

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 of Standardization Documents" drafted. This document replaces GB/T 13749-2003 "Safety Operating Regulations for Diesel Pile Drivers". Compared with GB/T 13749-2003, except for the In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Change the relevant requirements for the selection and installation of wire rope clamps (see 4.5, 3.5 of the.2003 edition);
- Increased the requirements for the safety factor of wire ropes (see 4.5);
- Increased the requirements for the special operating environment of the impact pile driver (see 4.6);
- Changed the requirements for "working at heights" (see 4.9, 3.9 of the.2003 edition);
- Added the provisions of the impact pile hammer "pile pulling operation", "air driving operation" and "when using hoisting" (see 4.10~4.12);
- Added the provisions of hydraulic pile hammer "control box and cable" (see 4.13);
- Added provisions for "piling on water" (see 4.14);
- Increased the operating conditions of the impact pile hammer landing gear (see 5.4);
- Increased the operating conditions of the hydraulic pile hammer "manipulation box" (see 5.5);
- Added the operating conditions for "piling on water" (see 5.7);

1 Scope

GB/T 13749-2022 is the Chinese national standard on impact pile driver - code of practice of safety operation, in the field of construction materials and building. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 14 October 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2023. Classification: ICS 91.220, CCS P97. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

80 Safety technical specifications for working at heights in building construction

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 5972-2016 Maintenance, maintenance, inspection and scrapping of crane wire ropes

GB/T 6067.1 Safety Regulations for Lifting Machinery Part

GB/T 7920.6 Construction Machinery and Equipment Terminology and Commercial Specifications for Piling Equipment

GB 22361-2008 Safety Specification for Piling Equipment JGJ

3 Terms and Definitions

Terms and definitions defined in GB/T 7920.6 apply to this document.

4 General requirements

4.1 The operator should be specially trained to be familiar with the performance, structure, use and maintenance of the impact pile driver (hereinafter referred to as "piling driver") under operation. The maintenance method can only be operated after holding the operation certificate.

4.2 Before the operation, the surrounding environment, buildings and geological conditions of the work site should be fully understood.

4.3 The power device, hoist, hydraulic device and electrical device etc. equipped with the pile driver shall be operated according to their operating instructions.

4.4 The assembly, commissioning and disassembly of the pile driver should be operated according to the procedures specified in the instruction manual.

4.5 The steel wire rope should be fixed with wedge joints, pressing plates, rope clips, pressed joints or braided plugs corresponding to the diameter of the wire rope. steel wire rope When plugged and fixed, the length of the braided part should not be less than 20 times the diameter of the wire rope and should not be less than 300mm, and the braided part should be made of thin steel wire. tie up. When a wire rope clamp is used for fixed connection, the selection and installation of the wire rope clamp shall comply with the requirements of Appendix A. Pile frame wire rope safety factor It should comply with the provisions of

4.6.5 in GB 22361-2008, and the safety factor of the wire rope of the lifting pile driver should not be less than 6 times.

4.6 In case of severe weather such as level 6 and above strong wind or heavy rain, heavy snow and heavy fog, the operation should be stopped. When the wind is greater than seven, the piles should be driven Stop the machine in the windward direction, put down the impact piling hammer (hereinafter referred to as the impact hammer), and add a windproof cable. If necessary, the pile frame should be brought down. Pile driver should There are lightning protection measures, and personnel should stay away from the pile driver in case of lightning. In special operating environment, the operation can be continued after the operation review and approval.

4.7 When installing the impact hammer, the impact hammer should be transported to within 2m in front of the guide column of the pile frame, and at least two free ends of the impact hammer should be fastened. Pull the rope to ensure that the impact hammer does not sway left and right during the ascending process, and at the same time avoid the impact with the pile frame column.

4.8 When the pile driver is running, personnel should not enter within 3m below the impact hammer.