

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

LS 8001-2007

Replacing SBJ 10-1997

**Code for design of grain silos
(English Translation)**

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Foreword

This specification is based on the four food engineering construction standards issued by the State Food Bureau Office on the establishment of the "Guidelines for the Construction of the Grain Depot Management Information System".

The notification of the task (Guoliang Office Exhibition [2005] No. 186) was requested by the National Grain Reserve Bureau of Zhengzhou Scientific Research and Design Institute.

The construction unit constitutes a revised compilation group, and the industry standard of the Ministry of Internal Trade of the People's Republic of China, "Code for Design of Grain Cylinders" (Trial) SBJ10-97 was fully revised.

This specification is divided into eight chapters and six appendices. The main contents are the design principles of the construction, structure, technology and electrical of the grain silo.

method. The revised content mainly involves the arrangement of the original specification chapter, the use function of the grain storage silo, the inspection requirements of the crack detection of the silo wall, and the horizontal pressure the force correction factor and other contents have been appropriately adjusted.

During the revision process, the preparation team conducted extensive and in-depth investigations and carefully summarized the improvement in the use of World Bank loans since 1997.

The experience of the national grain circulation project and the construction of 50 billion kilograms of national grain storage, reference to the US "Code for Design of Reinforced Concrete Silos" ACI313.97 and related standards of other countries, carried out a lot of calculations and arguments, and repeatedly asked for relevant designs in the domestic grain industry.

The opinions of the units and experts were finally finalized after review.

In this specification, the provisions of the boldface logo are. 3.1.5, 3.1.6, 3.2.1, 4.1.10, 4.5.18, 4.5.19, 4.5. 20, 4.5.21, 4.5.23, 4.5.24, 4.5.25, 5.5.5, 6.1.1(1), 6.1.9, 6.6.3, 6.9.1 (1),

7.3.3, 7.6.3, 8.1.5 are mandatory provisions, Must be strictly enforced. The original industry standard "Code for Design of Grain Cylinders" (SBJ10-97) was abolished at the same time.

This specification is administered by the State Grain Administration. In order to improve the quality of the standard, all units are required to combine the engineering practice in the process of implementing this code.

Summarize the experience and send your opinions and suggestions to the Zhengzhou Scientific Research and Design Institute of the National Grain Reserve Bureau, No. 153 Nanyang Road, Zhengzhou City.

Design Specification Management Group (Zip code. 450053).

Compiling institute. Zhengzhou Scientific Research and Design Institute of the National Grain Reserve Bureau.

Participating units. Zhengzhou Cereals, Oils and Foodstuffs Engineering Architectural Design Institute, International Trade Engineering Design Institute, National Grain Reserve Bureau Wuxi Scientific Research and Design Institute, Dalian Beiliang Co., Ltd., Zhenjiang Sijian Group, Dalian Jinguang Construction Group, and Zhongshi Grain Xinsha Port are directly under the library.

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Grain silo design specification

1 General

1.0.1

To summarize the experience of the construction of grain silos in China in recent years, to meet the requirements of the modernization of the construction of food logistics facilities, so that the grain warehouse Designed to ensure safe storage, reliable structure, advanced technology, economical and reasonable construction guidelines for saving land, saving energy and protecting the environment.

Develop this specification.

1.0.2

This specification is applicable to the design of grain silo warehouse using reinforced concrete deep silos and block deep silos, not applicable to shallow round silos and steel plates.

The grain warehouse design of the warehouse.

1.0.3

The safety level of the grain silo warehouse is Grade II, the seismic fortification category is Class C, and the foundation design grade is Grade B.

The limit is not less than 50 years.

1.0.4 Fire hazard category and fire rating

1 The food fire hazard category is classified as Category C.

2 The refractory grade of grain reinforced concrete silos, block silos and working towers is Grade II.

1.0.5 In addition to complying with this specification, the design of the grain silo library should also comply with the relevant national mandatory standards.

2.1 Terminology

2.1.1

The general term for grain silos, supporting working towers, their corridors, and grain-growing trenches.

2.1.2

The vertical container for storing loose grain in the shape of a circle, a square, a rectangle, a polygon and other geometric shapes, the part accommodating the grain is a storage body.

2.1.3

The structure of the top surface of the closed bin.

2.1.4

The vertical wall of the silo body that is in direct contact with the grain and withstands the pressure on the side of the grain storage.

2.1.5

The support structure below the silo base above the silo body. There are structures such as the wall of the cylinder, the wall of the cylinder and the buttress column, the column and the wall of the cylinder and the inner column.

form.

2.1.6

The plane supports the vertical wall of the cartridge body in the same manner as the cartridge body.

2.1.7

They are the building space above the warehouse roof and below the warehouse floor.