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

GB 16994.6-2024

**Safety requirements for port operation - Part 6: Solid bulk
dangerous cargo**

港口作业安全要求 第6部分：固体散装危险货物

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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 is required. This document is Part 6 of GB 16994 Safety Requirements for Port Operations. GB 16994 has been published in the following parts. Part

1 Scope

Part 6 of China's mandatory safety requirements for port operations, covering solid bulk dangerous cargo. The cargoes here are the ones loaded loose by the shipload and dangerous by their nature rather than by their packaging - coal, sulfur, direct reduced iron, fertilisers, seed cake, metal concentrates. Their hazards are those of a large mass of material rather than of a drum: self-heating that becomes a fire deep in a stockpile or a hold, oxygen depletion and toxic gas in the space above the cargo, dust that is explosive in suspension, and liquefaction, in which a cargo that looked like a solid turns to slurry in a seaway and capsizes the ship. The requirements cover the moisture limits and the transportable moisture limit testing, the temperature monitoring, the ventilation and gas testing, the dust suppression, and the segregation in the storage area.

This document specifies the general requirements for port operations for solid bulk dangerous goods, loading and unloading operations, horizontal transport operations, storage operations, operations Information and emergency security requirements. This document applies to Class 4, Division 5.1 (except ammonium nitrate), Class 8 and Class 9 solid bulk dangerous goods specified by IMO IMSBC port operations. This document is not applicable to port operations of Class 7 solid bulk dangerous goods as specified by IMO IMSBC.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB 14784 Safety Specification for Belt Conveyors

GB 16993 Safety regulations for preventing dangerous oxygen deficiency in enclosed spaces on board ships

GB 50016 Code for Fire Protection Design of Buildings

GB 55037 General code for fire protection of buildings IMO IMSBC International Maritime Solid Bulk Cargoes Code

3 Terms and definitions

There are no terms or definitions that require definition in this document.

4 General requirements

4.1 Enterprises should formulate operating procedures based on the characteristics of loading, unloading and storage processes and the hazardous properties of solid bulk dangerous goods.

4.2 Enterprises should carry out safety education and training for employees in port operations of solid bulk dangerous goods and inform employees of the The dangerous factors, preventive measures and emergency measures in the workplace and work positions. Professionals should not work on the job.

4.3 Safety risk notice boards should be set up in conspicuous locations and key areas of solid bulk dangerous goods work sites, and job safety risk notices should be made. The card should indicate the main safety risks, types of potential accident hazards, accident consequences, control measures, emergency measures and reporting methods.

4.4 Enterprises should deal with loading and unloading equipment and facilities, fire-fighting equipment and facilities, lightning protection and static grounding devices, communication equipment, explosion-proof facilities, emergency rescue Facilities and personal protective equipment should be regularly inspected and maintained to ensure they are in suitable condition.

4.5 Enterprises should provide employees with appropriate protective equipment according to the hazardous characteristics and safety requirements of loading and unloading solid

bulk dangerous goods, and Guide practitioners to wear and use them in a standardized manner.

4.6 Port operations of solid bulk hazardous chemicals should be carried out under the on-site command or supervision of qualified loading and unloading management personnel.

4.7 Solid bulk dangerous goods should be stored in dedicated warehouses in the port area and managed by dedicated personnel.

4.8 Operators should promptly clean up any solid bulk hazardous goods spilled during operations.

6 Dangerous goods in solid bulk; - Part

7.Cement. - Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed and coordinated by the Ministry of Transport of the People's Republic of China.

Port operations involve the safety of port facilities, equipment, ships, cargo and personnel, and are key areas of safety monitoring and management. There are great differences in the types of cargo, equipment and facilities, operation techniques and operator skills at port operation sites. GB 16994 "Safety Requirements for Port Operations" takes full account of the industry's safety development level, the current status of enterprise safety management and on-site operation experience. Based on this, different types of port operation sites and operation projects have been formulated for safety requirements of port operations. GB 16994 aims to effectively provide Improve the safety level of port operations and reduce operational safety risks. It consists of 7 parts. Part

1.Oil, Gas and Chemical Terminals. The purpose is to clarify the operational safety requirements of oil, gas and chemical terminals and standardize operational behaviors. Part

2.Petrochemical Storage Area. The purpose is to clarify the operational safety requirements of the port petrochemical storage area and standardize operational behaviors. Part

3.Dangerous Goods Containers. The purpose is to clarify the safety requirements for dangerous goods container operations in ports and standardize operations. Behavior. Part

4.General cargo containers. The purpose is to clarify the safety requirements for general cargo container operations in ports and standardize operations. Behavior. Part

5.General cargo. The purpose is to clarify the safety requirements for general cargo operations in ports and standardize operational behaviors. Part

6.Solid Bulk Dangerous Goods. The purpose is to clarify the safety requirements for solid bulk dangerous goods operations in ports and standardize operations. Behavior. Part

7.Cement. The purpose is to clarify the safety requirements for port cement operations and standardize operational behaviors. Safety requirements for port operations Part

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