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

GB/T 25010-2010

**Ships and marine technology -- Data transfer standard for
maritime, intermodal transportation and security**

船舶和海上技术 海运、联运和保安数据传输标准

(English Translation)

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Table of Contents

Preface
ISO Foreword
Introduction
1 Scope
2 Normative references
3 Terms and definitions
4 Data Dictionary (GB/T 18391)
5 Data Model
6 Data Connection Architecture
10 7 Data Transfer Architecture
8 Data dictionary development and support
Appendix A (informative) about GB/T 18391 (ISO/IEC 11179:1999, IDT) Background and purpose of the introduction
Annex B (informative) Data Transfer Data Model
References

Foreword

This standard is identical with the international standard ISO/PAS16917.2002 "Ships and marine technology shipping, intermodal and security of data transmission standard Accurate "(in English).

This standard is equivalent translation ISO/PAS16917.2002.

For ease of use, this standard made the following editorial changes.

--- "The common rules" be replaced by "this standard";

Acronyms --- international standard in Chapter 3 under the terms of some terms used in a separate line arrangement, according to this standard reference GB/T 18391-2002 "Information technology - Specification and standardization of data elements" (ISO/IEC 11179:1999, IDT) is formatted with the term row in the same line and in parentheses identity.

Appendix A of this standard and Appendix B is an informative annex.

The standard proposed by China State Shipbuilding Corporation.

This standard by the National Standardization Technical Committee Marine Boats

(SAC/TC12) centralized.

This standard was drafted. Technical and Economic Research Institute of China Shipbuilding Industry.

0.1 Background

Industry and government departments are aware of the need to exchange data in electronic form, which needs to be driven by specific business needs and guide Data transmission caused by the introduction of standards. Transportation in particular rely on the exchange of information for a large number of industry members. Data transmission requirements includes both use Transport Transport of the asset, but also contains the business information required for freight. As a result, some agencies in a common effort to promote the exchange of data Development, standards organizations such as the UN and WTO. Demand for data exchange relates to the carriage of goods related to shipping, intermodal and port security, Therefore, the establishment of an appropriate data exchange standards became urgent thing.

Data exchange standards and frameworks have been established, including recognition model specific business processes and the need to exchange data sets. a lot of Special business needs requires compliance EDI data packets. STEP (GB/T 16656.1) standards address specific ocean data exchange Change issues. These standards include the software data definitions, limitations, and application flexibility in other areas when. EDI needs and STEP to cost an expensive complex software to implement, therefore, the main work is done by large organizations and their business partners to achieve. Worldwide data exchange Change, including small and medium enterprises need an Internet-based low-cost, flexible data transfer method. The method of implementation of the new system contains all Between common data definitions, and without prejudice to the continued application of EDI or STEP.

The new requirements include commercial and safety-related data, extensive search, and will be specified in the dispersion between database data with other data linked Ability. Obviously, to meet the needs of commercial and government data exchange, we need some standard data element definitions. interconnected Network plays a crucial role in the data exchange, however, the major limitation is that the data expressed in the lack of common sense management solution. Therefore, data relating to a particular field definitions must be developed by the industry to understand the needs of the organization, and then record the number of other data locations According to the dictionary definition, and connect to a database of member organizations. This does not require any organization to change the format of their own data, but allowed him to it defined a standard data dictionary mapping for data exchange.

Development of data exchange technology results in a change document exchange and technology. From the change of the data transmission technology separating relatively fixed

Data definitions, will facilitate the implementation of new technologies.

Demand for data exchange should start from the construction and operation of maritime transport and port facilities, and other related equipment. Commercial operation of equipment required to a greater amount of data exchange, including running the terminal and cargo documents, transport equipment. Governments need to involve the exchange of information and personnel security environment Change, and quickly identify potential security risks of data transmission.

Data exchange involving the entire transportation process, the following procedures are there is a need for information exchange.

- Vessels and equipment construction and operation;
- Carriers and related equipment construction and operation;
- Construction and operation of ports and terminals;
- Goods and cargo tracking (cargo visibility);
- Commercial document (shipper, broker, Transportation) exchange;
- E-commerce transport support (license terms, the fuel tank, and services) to;
- Vessels and cargo monitoring, including safety inspection of goods, ships and personnel;
- Customs duties and tariff collection.

Every aspect of the above process have developed transport data exchange program to meet their needs. However, these systems are not designed to You can exchange data with external organizations, even if the application of the same basic transmission technology, data is recorded in a different way, and the whole Sphere of transport needs to have the ability to exchange data between all relevant sectors of. The standard implementation of the ISO standards have been published, and without to change an existing database can now address these basic needs.

Objective 0.2 GB/T 25010 of Purpose of this standard is to involve shipping, intermodal transportation and security information to facilitate information between different organizations can efficiently transfer lose. Transport security information need to obtain a wider range of data including trucks, trains and shipping. This standard provides worldwide carried the method of database connection, so without the need for manual intervention and change the data storage format, you can transfer data between computers according to. This standard does not apply to business and international trade norms official file format, which requires further development of additional criteria to resolve. this Standard with precise terminology defines the data elements to be used for a variety of data files, and transfer files to and independent of the standard form Formula defines the data elements in the data dictionary. The standard also specifies the data dictionary organization and maintenance requirements, as well as worldwide phase Like between the data

requirements of the connection. Data exchange will be applied to maritime operations under normal conditions, including commercial and military transport, or Collection and exchange of data under the conditions to ensure the worldwide distributed database. Data search and exchange process should be efficient and low-cost Used by accessing the Internet, relying on the data dictionary maps common data elements to connect to databases of different data structures.

0.3 GB/T 25010 Introduction

GB/T 25010 and define and organize meaningful data to solve the maritime and transport data exchange process demand. With data Meaning and structure is defined on the electronic exchange without human intervention levels. Data elements representing specific areas of business given the data dictionary Righteousness. Data transmission using packet data exchange protocol to complete (for example. EDI, STEP/EXPRESS, XML, etc.). This standard specifies the it contains specific data elements from the field of data dictionary consisting of the reference database. This standard also provides reference data dictionary in the data even between Connection. This standard is applied to the data dictionary data and business data model that provides an index, structured and common way to connect, and support Transport equipment for data exchange in the life cycle of business applications and processes. This standard reference GB/T 18391 requirements, and the standard as a prospective basis to build the data dictionary.

This standard specifies four parts.

- 1) a standard form (data dictionary) definition data, see Chapter 4;
- 2) data for indexing and searching to establish a model (for example. XML model and topic maps), see Chapters 5 and 6;
- 3) data mapping data to other occasions the same manner as in Example (example. Topic Maps), see Chapter 6;
- 4) between a computer system to electronically transmit data merge XML and EDI standards, as well as other languages, see Chapter 7.

Ships and marine technology Shipping, intermodal and security of data transmission standards

1 Scope

This standard specifies the information representation of goods and people and ocean freight, road transport and rail transport-related. include.

--- The entire life cycle of transport equipment (see Figure 1), the definition of the need to exchange information, build and operate the process.