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

GB/T 44085.1-2024

**Technical specification for global maritime distress and safety
system service based on BDS regional short message
communication - Part 1: General requirement**

基于北斗区域短报文通信的全球海上遇险和安全系统服务技术规范 第1部分：总
体要求

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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. This document is a copy of GB/T 44085 "Technical Specification for Global Maritime Distress and Safety System Service Based on Beidou Regional Short Message Communication" Part 1: GB/T 44085 has published the following parts.

1. General requirements;

2. Ship earth station. 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 was proposed by the Equipment Development Department of the Central Military Commission. This document is under the jurisdiction of the National Beidou Satellite Navigation Standardization Technical Committee (SAC/TC544). This document was drafted by: China Communications and Information Center, Jiaoxin Beidou Technology Co., Ltd., Shenzhen Maritime Safety Administration, East China Sea Navigation Security Center, North Sea Navigation Security Center, Hebei Maritime Safety Administration, South China Sea Navigation Security Center, and Beijing Satellite Navigation Center. The main drafters of this document are: Lu Hongyang, Liu Falong, Wang Huilin, Chen Jiayu, Tian Shihai, Liu Lijiao, Gong Yuan, Gao Ying, Li Yang, Wu Shuang, Xiong E, Xue Feng, Jin Wei, Weng Yanyun, and Yang Congxi.

In July 2020, the BeiDou-3 global satellite navigation system was officially launched, and the regional short message communication service capability was greatly improved. The BeiDou Message Service System (BDMSS) built by regional short message communication service can provide stable and reliable global maritime In November 2022, the 106th meeting of the International Maritime Organization (IMO) Maritime Safety Committee

(MSC) The meeting formally recognized BDMSS to join GMDSS, making BDMSS the third satellite system in the world to be approved after the International Maritime Satellite System and Iridium System. GMDSS mobile satellite system recognized by IMO. In order to give full play to the role of BDMSS in ensuring distress and safety communications at sea, the GMDSS services provided by BDMSS to users should be standardized. GB/T 44085 "Technical specifications for GMDSS services based on BeiDou regional short message communication" The Technical Specification for Global Maritime Distress and Safety System Service Based on Regional Short Message Communication of Beidou is a guide for the implementation of regional short message communication based on Beidou. The purpose of this document is to establish universal standards for GMDSS service construction, which are applicable to the construction of BDMSS systems and business systems, as well as the development and The production and testing guidelines are intended to consist of two parts.

1.General requirements. The purpose is to clarify the overall structure, functional requirements, technical requirements, and maritime distress requirements of BDMSS. Technical requirements for the two core business services. Alarm and Enhanced Group Calling (EGC).

2.Ship earth station. The purpose is to clarify the requirements, test methods and requirements that BDMSS ship earth stations should comply with. Test Results. Global maritime communications based on Beidou regional short message communication Technical specifications for distress and safety system services Part

1 Scope

GB/T 44085.1-2024 is Part 1 of the Chinese specification for providing GMDSS service over BeiDou regional short message communication. The IMO recognised BeiDou as a GMDSS provider, making it the third system after Inmarsat and Iridium and the first to carry distress alerting on a navigation constellation's own messaging channel; the short message service is unusual in that a ship's terminal transmits directly to the satellites without a separate communications payload. Part 1 sets the general requirements. It defines the system architecture - the basic structure and the space, ground and user segments - and the service functions the system must provide: distress alerting, distress alert relay, search and rescue coordinating communications, urgency and safety communications, the broadcast of search and rescue information and maritime safety information, and general radiocommunications, together with the performance, availability and interoperability requirements that follow from them. It took effect on 28 May 2024.

This document specifies the system architecture, service functions, and technical requirements of the global maritime distress and safety system based on Beidou regional short message communication. requirements, maritime distress alert service and enhanced group calling service. This document is applicable to the design and implementation of the

mobile satellite business system of the Global Maritime Distress and Safety System based on Beidou regional short message communication. Construction, testing and use of distress alarm and enhanced group calling services.

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 to This document.

GB/T 16162-2021 Global Maritime Distress and Safety System (GMDSS) Terminology

GB/T 39267-2020 Beidou Satellite Navigation Terminology

3 Terms, definitions and abbreviations

3.1 Terms and Definitions The terms and definitions defined in GB/T 16162-2021, GB/T 39267-2020 and the following apply to this document.

3.1.1 Through Beidou satellites within a certain coverage area, users are provided with short message communication, emergency search and rescue, and location reporting services.

3.1.2 Based on the BeiDou regional short message communication (3.1.1) service, it can provide maritime distress and safety communications that meet IMO standards and requirements. Satellite communication system for telecommunication services.

3.1.3 Space segment spacesegment In BDMSS, the general term for all satellites in space and the constellations they form. [Source:

GB/T 39267-2020, 2.1.22, modified]

3.1.4 ground segment A general term for ground systems that maintain the normal operation of BDMSS. [Source:

GB/T 39267-2020, 2.1.23, modified]