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

GB/T 42474.6-2023

**Safety monitoring system for vehicle transportation of
explosive hazardous chemicals - Part 6: Interface protocol
between communication center and monitoring client**

爆炸危险化学品汽车运输安全监控系统 第6部分：通信中心与监控客户端间数据
接口

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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 part 6 of GB/T 42474-2023 "Safety Monitoring System for Vehicle Transport of Explosive Hazardous Chemicals": GB/T 42474-2023 has issued the following parts:

- Part 1: General technical requirements;
- Part 2: Vehicle-mounted devices;
- Part 3: Vehicle-mounted device installation;
- Part 4: Monitoring client;
- Part 5: Data interface between vehicle-mounted device and communication center;
- Part 6: Data interface between communication center and monitoring client: Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents: This document is proposed and managed by the National Standardization Technical Committee on Hazardous Chemicals Management (SAC/TC251): This document is mainly drafted by: The Third Research Institute of the Ministry of Public Security, Jiangsu Yudao Data Technology Co., Ltd., Wuxi Internet of Things Industry Research Institute, Shanghai Shanghai Motor Vehicle Testing and Certification Technology Research Center Co., Ltd., Shanghai Institute of Chemical Industry Testing Co., Ltd., China City Gas Association, Guangdong Province

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In the context of promoting the implementation of the national big data strategy and accelerating the construction of a digital China, the integration of data resources and the development of open sharing will be promoted: A common direction for managing requirements and technology development: At the same time, with the rapid development of emerging technologies such as the Internet of Things and artificial intelligence, machine vision and other technologies have been initially applied in the safety management of hazardous chemical vehicle transportation: GB/T 42474 "Vehicle Transport of Explosive Hazardous Chemicals "Safety Monitoring System" selected explosive hazardous chemicals with the greatest potential safety hazards and the most serious consequences of safety accidents in the transportation of hazardous chemicals by vehicle Automobile transportation, in view of the current situation of multi-departmental collaborative management of hazardous chemical transportation in my country, closely focuses on implementing the national big data strategy, utilizing Advanced technology breaks down industry barriers, promotes the integration and open sharing of explosive hazardous chemicals transportation management data resources, and promotes the development of explosive hazardous chemicals With the goal of highly coordinated safety management, it is proposed to build a cloud computing platform as the vehicle transportation safety monitoring management system for explosive hazardous chemicals: The data resource pool, relevant industry authorities and parties involved in the transportation of explosive hazardous chemicals share technical solutions for data resources based on authority, and target The deployment of the three major explosive hazardous chemical vehicle transportation safety elements of "people", "vehicles" and "things" is based on biometrics, machine vision, emotion recognition, The on-board devices of related technologies such as active safety prevention and control of automobile driving, sensor network monitoring, etc., lead the development of the Internet of Things, cloud computing, big data, artificial intelligence, etc: The application of emerging technologies such as energy and energy in the transportation of explosive hazardous chemicals has promoted the formation of vehicles that use vehicle-mounted devices as the sensing layer of the Internet of Things to transport information: Sensing and collection, using cloud computing platform and vehicle gateway as the IoT transport layer for data communication, using cloud computing platform and B/S to monitor customers The client and mobile terminal APP are used as the application layer of the Internet of Things for data mining and intelligent collaborative management of explosive hazardous chemicals safety monitoring and early warning system, laying a technical foundation for strengthening the informatization construction of hazardous chemical transportation safety supervision and establishing a national hazardous chemical supervision information sharing platform: In order to achieve real-time tracking, comprehensive monitoring and linkage early warning of explosive hazardous chemicals transportation by vehicle, and effectively prevent serious and serious accidents in the transportation of hazardous chemicals Accidents help: GB/T 42474 "Safety Monitoring

System for Vehicle Transportation of Explosive Hazardous Chemicals" is proposed to be composed of 6 parts:

--- Part 1: General technical requirements: The purpose is to give the term definition of the safety monitoring system for the automobile transportation of explosive hazardous chemicals and system composition, clarify the technical requirements of the system functions, performance, operating environment, information security, reliability, etc.; and the corresponding tests methods and inspection rules:

--- Part 2: Vehicle-mounted devices: The purpose is to give the vehicle-mounted device group in the safety monitoring system of explosive hazardous chemicals automobile transportation: It defines the basic requirements of each component and the specific function and performance requirements of each component unit, and stipulates the power supply requirements of vehicle-mounted devices, Electrical safety requirements, electromagnetic compatibility requirements, environmental adaptability requirements and their corresponding test methods, determine the signs and Packaging, accompanying technical documents, transportation and storage conditions:

--- Part 3: On-board device installation: The purpose is to give the vehicle-mounted device of the vehicle transportation safety monitoring system for explosive hazardous chemicals Pre-installation preparations, clarify the general installation requirements and various The specific installation requirements for the main equipment of the constituent units determine the installation acceptance method:

--- Part 4: Monitoring client: The purpose is to provide monitoring customers in the safety monitoring system for explosive hazardous chemicals automobile transportation The composition and classification of terminals, and the basic requirements of monitoring terminals, industry management terminals, enterprise operation management terminals and drivers and passengers are clarified: The specific functional requirements of the monitoring client, specifying the performance requirements, information security requirements and corresponding monitoring clients of different levels: test method:

--- Part 5: Data interface between the on-board device and the communication center: The purpose is to provide safety supervision for the transportation of explosive hazardous chemicals by vehicle The data interface for wireless data transmission and data exchange between the vehicle-mounted device and the communication center in the control system, and the structure of the data interface is clarified It specifies the classification of communication protocols and data formats:

1 Scope

GB/T 42474.6-2023 covers the second link in the chain: from the communication centre to the people watching. Part 5 gets the data off the vehicle; this part specifies how it reaches the monitoring client - the screens in a transport company's control room, in a regulator's

office, and in the emergency services that need it when an incident happens. The distinction matters because the audiences differ: a carrier watches its own fleet continuously, an authority watches many carriers' vehicles across a region, and a responder needs one vehicle's full picture immediately and has never used the system before. All three are served from the same centre, so the interface has to carry not just positions but alarms, vehicle and cargo details, and historical playback, with the access control that determines who may see whose vehicles. This part specifies the composition of the data interface between the communication centre and the monitoring client and its communication requirements. Under ICS 13.320 and CCS A91, it is written for platform and client software vendors, for transport enterprises and for the safety supervision authorities. It is the companion to GB/T 42474.5-2023.

This document specifies the data transmission and data transmission between the communication center and the monitoring client in the monitoring system for explosive hazardous chemicals vehicle transportation: The composition of the exchanged data interface and its communication mode, general requirements, data interaction process and data format: This document is applicable to the application of various monitoring clients and communication centers of the explosive hazardous chemicals vehicle transportation safety monitoring system: other Dangerous goods vehicle transport safety monitoring system can refer to this document:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 2260-2007 Administrative division codes of the People's Republic of China GB/T 42474:

1 Safety monitoring system for vehicle transportation of explosive hazardous chemicals Part 1: General technical requirements GB/T 42474:

5 Explosive Hazardous Chemical Vehicle Transportation Safety Monitoring System System Part 5: Between Vehicle Devices and Communication Center Data interface JT/T 697:

7 Basic Data Elements of Traffic Information Part 7: Basic Data Elements of Road Transport Information JT/T 808-2019 Communication protocol and data format of satellite positioning system terminal for road transport vehicles

3 Terms and Definitions

GB/T 42474:1, GB/T 42474:5 and the following terms and definitions apply to this