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

GB/T 43371-2023

Safety general requirements for tethered aerostat

系留气球安全性通用要求

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Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting: Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents: This document is proposed and coordinated by the National Aircraft Standardization Technical Committee (SAC/TC435): This document was drafted by: China Special Aircraft Research Institute, Military Representative Bureau of the Air Force Equipment Department in Xi'an Region and Military Representative in Jingzhou Region Office, the Military Representative Bureau of the Naval Equipment Department of the Chinese People's Liberation Army in Wuhan, the China Aviation Integrated Technology Research Institute, and the Hefei Aerospace Electrophysical Technology ART LIMITED: The main drafters of this document: Li Yanjiang, Tao Wei, Li Wan, Wan Rong, Liu Zongqiang, Lu Fangchun, Wang Daguang, Kang Peifang, Liu Lili, Tian Hong, Duan Zemin: General requirements for safety of tethered balloons

1 Scope

GB/T 43371-2023 sets the general safety requirements for tethered aerostats. A tethered balloon carrying communications or surveillance payloads sits for weeks at altitude on a single cable, and the ways it kills are specific: the tether can part and release a large uncontrolled aerostat into airspace, it can be struck by lightning and conduct it to the ground station, the winch and the mooring handling injure the crew, and the hydrogen or helium inventory is its own hazard. The standard follows system safety practice. It sets the safety work goal, the basic principles and the safety work process, then the detailed requirements: the breakdown of the safety requirements, preliminary hazard analysis, the formulation and implementation of safety design criteria, system hazard analysis, test

safety, and hazard analysis of use and the safeguards, followed by safety verification and safe use. It took effect on 1 March 2024.

This document stipulates the general requirements, detailed requirements, safety verification and use safety of tethered balloons during their life cycle: Require: This document applies to safety work during the design, production, testing and use of tethered balloons: Other aerostat products can refer to use:

2 Normative reference documents

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

GB/T 41885 Classification and classification of aerostats

3 Terms and definitions

The terms and definitions defined in GB/T 41885 and below apply to this document: 3:1 accident An unexpected event or series of events that results in personal injury, occupational disease, product damage, property damage, or environmental damage: 3:2 danger hazard A condition that could lead to an accident: 3:3 safety The ability of a product to not cause casualties, product damage, property damage or endanger human health and the environment: 3:4 risk A comprehensive measure of the hazard likelihood and hazard severity of a hazard: 3:5 residual risk Risks that still exist after implementing all technical means that can reduce risks, such as safety design measures and use of safety measures: 3:6 safetycriticalitem Projects that have a significant impact on product safety:

Note: Usually includes functions, hardware, software, operating procedures and information, etc: