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

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**Requirements of launch vehicle to electrical ground support
equipment interfaces**

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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 of Standardization Documents"

Drafting.

This document is equivalent to ISO 22772.2020 "Requirements for Electrical Interface between Space System Launch Vehicle and Ground Support Equipment".

The following editorial changes have been made to this document.

--- In order to coordinate with existing standards, the standard name is changed to "Electrical Interface Requirements for Launch Vehicles and Ground Support Equipment."

This document was proposed and managed by the National Aerospace Technology and Application Standardization Technical Committee (SAC/TC425).

Drafting organizations of this document. Beijing Institute of Aerospace Automatic Control, China Academy of Launch Vehicle Technology, China Institute of Aerospace Standardization.

Introduction

This document belongs to the China Aerospace National Standard System. The China Aerospace National Standard System is applicable to the formulation and revision of national standards in the aerospace field.

Management, covering the three major areas of aerospace management, aerospace technology, aerospace applications and services, is to guide the management of spacecraft and launch vehicles, engineering research

The basis for activities such as control, space launch missions, and satellite in-orbit applications.

The electrical interface between the launch vehicle and ground support equipment has always been a design problem faced by rocket electrical engineers.

Complex and diverse, a set of general design procedures, design requirements and verification methods have been summarized in the development practice of my country's new generation of launch vehicles.

It has been successfully practiced in the aerospace field. This document sets out the design principles, interface design requirements,

Environmental requirements, verification analysis and testing, interface inspection and operation requirements are specified, and the interface can be efficiently completed through the implementation of design requirements.

Port design, verification and inspection operations, etc., to provide launch vehicle electrical system engineers with defined interface requirements, interface types, and programming interface control

The document design guide can effectively avoid the matching problem of interface design and improve the design ability.

Launch vehicle and ground support equipment

Electrical interface requirements

1 Scope

This document specifies the design principles, design requirements, environmental requirements, verification analysis and testing of the electrical interface between the launch vehicle and ground support equipment.

Inspection, document requirements, inspection and operation requirements.

This document is applicable to the design, verification and inspection operations of the electrical interface between the launch vehicle and ground support equipment.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Electrical ground support equipment electrical ground support equipment

Non-flight electrical equipment or systems used to support the processing of the launch

process or related launch services.

3.2

Interface control document

Documents used to describe system input and output relationships, interfaces between systems, and interface protocols between electrical equipment.

4 Abbreviations

The following abbreviations apply to this document.

LV. Launch vehicle

EMC. Electromagnetic compatibility (Electromagnetic compatibility)

IRD. Interface requirement document (Interface requirement document)

I/O. Input/Output (Input/Output)

AC. Alternating current

DC. Direct current (Direct current)

RF. Radiofrequency (Radiofrequency)

CAN. Local Control Network (Controller area network)

FC. Fibre Channel (Fiber channel)

TM. Telemetry

TC. Telecontrol