
Space systems — General test methods for space craft, subsystems and units

*Systèmes spatiaux — Méthodes d'essai générales pour véhicules
spatiaux, sous-systèmes et équipements*



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Contents

Page

Foreword.....	iv
Introduction	v
1 Scope.....	1
2 Normative references	1
3 Terms, definitions and abbreviated terms.....	1
3.1 Terms and definitions.....	1
3.2 Abbreviated terms.....	2
4 General requirements	3
4.1 Testing philosophy.....	3
4.2 Tailoring of requirements	3
4.3 Development tests	3
4.4 Qualification tests	4
4.5 Acceptance tests.....	4
4.6 Proto-flight tests	4
4.7 Prelaunch validation tests.....	4
4.8 Retest	4
4.9 Test documentation.....	5
4.10 Tests facilities and other requirements.....	7
5 Spacecraft system tests	7
5.1 Test items and sequence	7
5.2 Test levels and duration	7
6 Subsystem/unit tests	7
6.1 Test items and sequence	7
6.2 Test levels and duration	7
7 Test requirements	12
7.1 General	12
7.2 Functional test.....	12
7.3 Electromagnetic compatibility (EMC) test.....	13
7.4 Magnetic field test.....	14
7.5 Antenna pattern test	14
7.6 Optical alignment measurement	15
7.7 Physical property measurement	15
7.8 Dynamic balance.....	16
7.9 Launcher/spacecraft interface test	17
7.10 Static load test.....	17
7.11 Acceleration test	18
7.12 Modal survey	19
7.13 Sinusoidal vibration test	20
7.14 Random vibration test	21
7.15 Acoustic test.....	22
7.16 Shock test	23
7.17 Thermal balance test	23
7.18 Thermal vacuum test	24
7.19 Thermal cycle test.....	26
7.20 Pressure test	26
7.21 Leakage test	28
7.22 Burn-in and wear-in test.....	28
7.23 Tracking and control system/spacecraft compatibility test	29

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 15864 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 14, *Space systems and operations*.

Introduction

Throughout this International Standard, the minimum essential criteria are identified by the use of the key word “shall”. Recommended criteria are identified by the use of the key word “should”, and while not mandatory are considered to be of primary importance in providing serviceable, economical and practical designs. Deviations from the recommended criteria should occur only after careful consideration, extensive testing and thorough service evaluation have shown alternative methods to be satisfactory.

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1 Scope

This International Standard provides the baseline standard on the subject of testing at the system, subsystem and unit levels for applicable unmanned spacecraft programmes. It also provides the requirements for documentation associated with testing activities.

The acceptance criteria, specifications or procedures, and other detail test requirements applicable to a particular programme are defined in the applicable technical specifications and statement of work. When requirements have to be verified by measuring product performance and function under various simulated environments, the method is referred to as "Test". The requirements of this International Standard may be tailored for each specific space programme application.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14302, *Space systems — Electromagnetic compatibility requirements*

ISO 14303, *Space systems — Launch-vehicle-to-spacecraft interfaces*

ISO 14623, *Space systems — Pressure vessels and pressurized structures — Design and operation*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

development model

representative of spacecraft, subsystem or unit dedicated to increase confidence in design and subjected to development tests

3.1.2

flight model

spacecraft, subsystem or unit model dedicated to be launched and operated in orbit and subjected to acceptance testing

3.1.3

limit load

maximum predicted load or combination of loads that a structure may experience during its service life in association with the applicable operating environments