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Interested committees:

Title: Draft BS ISO 16694 Space systems - The measured parameters at firing bench and flight tests of liquid rocket engines.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

DRAFT INTERNATIONAL STANDARD

ISO/DIS 16694

ISO/TC 20/SC 14

Secretariat: ANSI

Voting begins on:
2023-09-25

Voting terminates on:
2023-12-18

Space systems — Measured parameters at firing bench and flight tests of liquid rocket engines

ICS: 49.140

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This document is circulated as received from the committee secretariat.



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

This second edition cancels and replaces the first edition (ISO 16694:2015), which has been technically revised.

The main changes compared to the previous edition are as follows:

1. [Sections 4](#) and [5](#) are amended;
2. List of measured parameters is expanded;
3. In [Tables 1](#) and [3](#) parameter "...pressure pulsation..." is split into two parameters: "...vibration amplitude..." and "...vibration frequency..."; parameter "vibro-overloads..." is split into "vibration acceleration amplitude..." and "vibration acceleration frequency...".
4. Certain parameters are moved from the category "mandatory parameters" to the category "optional".
5. Superscripts and subscripts of parameter "Letter Symbols" are corrected.

Introduction

The document provides users, designers, and manufacturers of liquid rocket engines with guidelines for parameters, measured during firing bench and flight tests. Parameters to be measured are used for reliability analysis and quality control of liquid rocket engines.

Definitions, developed for uniform requirements to the parameters, measured during firing bench and flight tests of liquid rocket engines, ensure the following:

- quality and reliability of developed and operated liquid rocket engines;
- comparison of liquid rocket engine test results;
- end product safety and environmental protection.

This document makes it possible to develop uniform criteria for performance evaluation and comparison of liquid rocket engines, created by different countries, based on firing bench and flight tests results.

