Doc: TED 14 (22946)WC
ISO 16694 : 2015
July 2023

For Comments Only

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

भारतीय मानक मसौदा

अंतरिक्ष प्रणालियां — तरल रॉकेट इंजनों की फायरिंग बेंच और उड़ान परीक्षणों में मापे गए पैरामीटर

Draft *Indian Standard*

Space Systems — The measured parameters at firing bench and flight tests of liquid rocket engines

ICS: 49.140

Air and Space Vehicles Sectional Committee, TED 14	**Last date for receipt of comments is 26/09/2023**

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Air and Space Vehicles Sectional Committee, TED 14

NATIONAL FOREWORD

(Formal Clause to be added later)

The text of ISO standard is proposed for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For undated references, the latest edition of the referenced document applies, including any corrigenda and amendment.

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 15864 : 2008 Space systems — General test methods for space craft, subsystems and units	Doc (22939) / ISO 15864 : 2021 Space systems — General test methods for spacecraft, subsystems and units (*under development*)	Identical under dual numbering
ISO 15865 : 2005 Space systems — Qualification assessment	Doc (22362) / ISO 15865 : 2022 Space Systems Qualification Assessment (*under development*)	Identical under dual numbering
ISO 2917 : 2010 Space systems — General test requirements for launch vehicles	Doc (22973) / ISO 24917 : 2010 Space systems — General test requirements for launch vehicles	Identical under dual numbering

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. The Bureau of Indian Standards shall not be held responsible for identifying any or all such patent rights.

SCOPE

This International Standard applies to all types of liquid rocket engines for expendable launch systems and satellites:

a) Combustible fuel (including cryogenic);
b) Large-thrust, multiple component engines, with and without afterburning;
c) Low-thrust engines, one component (mono-propellant) and two-component (bi-propellant).

This International Standard establishes a list of parameters to be measured and registered with the firing stand and flight tests of serial LRE. The order of preparation and carrying out of stand and flight tests, methods of processing, and analysis of tests results of liquid rocket engines, also measurement accuracy requirements are not regulated by this International Standard. Measurement accuracy requirements are established by engine designer.

Parameters listed in this International Standard characterize performance attributes of liquid rocket engines and are used for evaluating of technical state of engines (operative, inoperative), if they correspond to the requirements specified and possibilities of putting them into operation.

There are parameters specified in this International Standard, obligatory for registration and optional ones.

The manufacturer of liquid rocket engines can determine additional list of parameters for specific items taking into account their design and diagrammatical features.

The meaning “optional parameter” denotes (in cases when a proper unit or a component can be the part of an engine) that according to the manufacturer’s decision, measurements are allowed not to be made.

Measurement of parameters at firing stand and flight tests of liquid rocket engines is be made by means of the same sensors if possible.

FOR COMPLETE TEXT OF THE DOCUMENT KINDLY REFER ISO 16694 : 2015 or CONTACT:

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