INTERNATIONAL STANDARD

ISO 1151-8

Second edition
2022-11

Flight dynamics — Vocabulary —

Part 8: Dynamic behaviour of aircraft

Reference number
ISO 1151-8:2022(E)

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Published in Switzerland

Contents

Page

Foreword

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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 8, *Aerospace terminology*.

This second edition cancels and replaces the first edition (ISO 1151-8:1992), which has been technically revised.

The main changes are as follows:

— new terms related to types of aircraft motion have been added.

A list of all parts in the ISO 1151 series can be found on the ISO website.

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.

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Part 8: Dynamic behaviour of aircraft

1 Scope

This document defines terms related to the concepts and quantities characterizing some classes of aircraft motion and their fundamental dynamic characteristics.

The aircraft is assumed to be rigid, of constant mass and of constant inertia. It is not equipped with systems modifying its natural dynamic behaviour. However, most of the definitions can be applied to the case of a flexible aircraft, of variable mass and of variable inertia.

The general concepts defined in this document are applicable to the atmospheric flight phase.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 General

3.1.1
flight variable
physical quantity, the value of which as a function of time characterizes aircraft motion

3.1.2
flight state
set of values of the *flight variables* (3.1.1)

Note 1 to entry: This concept should not be confused with that of *flight point* (ISO 1151-7:1985, 7.5.5).

3.1.3
steady flight state
flight state (3.1.2) in which the *flight variables* (3.1.1) considered remain constant with time

3.1.4
quasi-steady flight state
flight state (3.1.2) in which the *flight variables* (3.1.1) considered vary so slowly with time that their variations can be disregarded in the study

3.1.5
unsteady flight state
flight state (3.1.2) in which at least one of the *flight variables* (3.1.1) considered varies so rapidly with time that its variations cannot be disregarded in the study