

ICS 49.020
CCS V 04



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

GB/T 14410.5-2008

Replacing GB/T 14410.5-1993

**Flight mechanics -- Concepts, quantities and symbols -- Part 5:
Flight measurements**

飞行力学 概念、量和符号 第5部分：飞行测量

(English Translation)

Issued on: July 18, 2008

Implemented on: January 1, 2009

Issued by: Standardization Administration of China

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Foreword

GB/T 14410 "Flight mechanics - Concepts, quantities and symbols" is divided into nine sections.

- Part 1. Axis systems and motion state variables;
- Part 2. Forces, moments, their coefficients and derivative;
- Part 3. aircraft stability and control;
- Part 4. flight performance;
- Part 5. flight measurement;
- Part 6. Aircraft geometry;
- Part 7. Flight points and flight envelope;
- Part 8. dynamic characteristics of the aircraft;
- Part 9. atmospheric disturbance model.

This section GB/T 14410 Part 5.

The partial modification of the use of ISO 1151-5. 1987 "the amount of flight dynamics - Concepts, quantities and symbols used in the measurement." This portion ISO 1151-5. 1987 increase compared to the term "dynamic input pitot pressure" and added the symbol of the unit.

This Part replaces GB/T 14410.5-1993 "Flight mechanics - Concepts, quantities and symbols - Part 5. Measurement of flight." Section compared with the GB/T 14410.5-1993 The main changes are as follows.

- a) increased "pressure", "airspeed" and other terms;
- b) delete the words "3.3 and about standard atmospheric equivalent height", 3.4 "and planes in the air sports-related physical quantities," he explained, "3.5 and measuring the amount of movement of the aircraft in the air about the," and "3.7 onboard accelerometer

indicates" explained the term before Statements;

c) Modify the "static pressure 3.4.1", "3.4.2 static temperature," "total pressure 3.4.4", "3.4.5 normal shock after the total pressure," " 3.4.7 total temperature " Name "dynamic pressure 3.4.8", "3.5.1 Input static" and other terms;

d) modify the terms and definitions has a reference number of the other clauses marked;

e) increasing the dimension of the unit, and indicated in the symbol bar;

f) an increase in the English index.

This part is proposed by the China Aviation Industry Corporation.

This part of the jurisdiction of the China Aviation Industry Corporation.

This section is drafted. Beijing University of Aeronautics and Astronautics, China Aviation Technology Institute Comprehensive, China Aviation Industry Research Institute of air power, in State Aviation Industry Development Research Center.

1 Scope

This section sets out the terms and symbols used in flight measurements.

This section applies to fixed-wing aircraft, other aircraft can use the reference.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to this part of the research agreement Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 14410.1-2008 Flight mechanics - Concepts, quantities and symbols - Part 1. Axis systems and motion state variables

3 Terms, definitions and symbols

The following terms, definitions and symbols apply to this section.

No terms are defined or explained symbols and units 3.1.1 the air pressure (pressure) airpressure Pressure specified point on the atmosphere, it is stationary relative to the air Ideal instrument measured.

Unit is Pa

3.1.2

Air temperature

airtemperature

Atmospheric thermodynamic temperature specified point on, it is relative to the air Ideal instrument still measured.

Note: Formerly known as thermodynamic temperature absolute temperature.

Kelvin units

Text or Celsius

(K or °C)

3.1.3

Air density

airdensity

Air atmosphere within a specified point on the infinitesimal volume contained in addition to being the volume mass quotient.

Units of kilograms /M 3 (kg/m³) 3.1.4 Relative air density Ratio of air density and the density of the reference point specified atmosphere.

Typically, the reference density in the mean sea in the selected standard atmosphere Air density plane.

The use of standard atmosphere, the relative density of the air $\sigma = \rho / \rho_0$ where.

$\rho_0 = 1.225 \text{ kg} \cdot \text{m}^{-3}$.