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

GB/T 16638.1-2008

Replacing GB/T 16638.1-1996

**Aerodynamics - Concepts, quantities and symbols - Part 1:
Aerodynamic terms in common use**

空气动力学 概念、量和符号 第1部分：空气动力学常用术语

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Quarantine of the People's Republic of China;
Standardization Administration of China**

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3.1.5 Air density airdensity Mass per unit volume of air. ρ units of kg/m^3 (kg/m^3)

Foreword

GB/T 16638 "Aerodynamics - Concepts, quantities and symbols" is divided into four parts.

--- Part 1. aerodynamics common terms;

--- Part 2. Axis systems and aircraft motion state quantity;

--- Part 3. aircraft geometrical properties;

--- Part 4. aerodynamic aircraft, moments, their coefficients and derivative. This section GB/T 16638 Part 1. This part of the aerodynamics of common terms used in our country for many years has been collection and screening, and as far as possible with the international most countries Habits consistent air aircraft dynamics in this section some of the terminology and symbols with the national standard GB/T 14410-2008 "flying force Learn concepts, quantities and symbols "in harmony. This Part replaces GB/T 16638.1-1996 "Aerodynamics - Concepts, quantities and symbols - Part 1. aerodynamics common surgery language". Section compared with the GB/T 16638.1-1996 The main changes are as follows:

a) increased supercharging wind tunnel, a light sheet flow visualization techniques, laser Doppler velocimetry definition of technology, coherent structure;

b) deleted by the total static pressure sensors, resistance and other waste definitions;

c) modify the vortex, trace, turbulence, total pressure sensors, etc. by definition. 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. The main drafters of this section. YANGTZA, Shao arrows, Zhou Li Fu, Chen, Wang Zhichuan, Hao Weidong, Jiao Zhiqiang, Chen Yan Qing, Fan Jiechuan, Yao Min Fei, Chenbing Yong, Feng Yanan, Chen Yongkui Medicine]. This part of the standard replaces the previous editions are.

--- GB/T 16638.1-1996. Aerodynamics - Concepts, quantities and symbols Part 1. aerodynamics common terms

1 Scope

GB/T 16638.1-2008 is the Chinese national standard on aerodynamics - concepts, quantities and symbols - part 1: aerodynamic terms in common use, in the field of aircraft and space vehicle engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 18 July 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 January 2009. Classification: ICS 49.020, CCS V04. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section provides common aerodynamic terms, definitions or descriptions and symbols. This section applies to aerodynamics research and applications.

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 16638.4-2008 Aerodynamics - Concepts, quantities and symbols - Part 4.
aerodynamic aircraft, moments, their coefficients And Derivatives

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 aerodynamics aerodynamics Study them with the air movement and relative motion of objects When the interaction rules and disciplines.

3.1.2 Standard Atmosphere standardatmosphere According to a large number of actual measurement data by authorities Formulated and promulgated by the average weather conditions in latitudes Atmospheric temperature, pressure, density and other physical parameters with height Variation.

3.1.3 Air pressure (pressure) airpressure Vertical air in the air micelle surface or object table Force per unit area on the surface. Units of Pa (Pa)

3.1.4 Air temperature airtemperature Characterization of a physical quantity of hot and cold air level. Common degrees Celsius (° C)