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**GB**

NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

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## **Specifications for aviation jet fuel filter/separators**

喷气燃料过滤分离器通用技术规范

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**Standardization Administration of the PRC.**

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## Foreword

This Standard modifies and adopts API/IP 1581:2002 “Specifications and qualification procedures for aviation jet fuel filter/separators” (English version).

This Standard, according to API/IP 1581:2002, is redrafted. For comparison purposes, a table for comparison of the clauses of this Standard and the clauses of API/IP 1581:2002 is listed in informative Appendix A.

Due to the legal requirements of China and the special needs of industry, this Standard, when adopting API/IP 1581:2002, makes some modifications. A table of detailed technical differences and their causes is given in Appendix B for reference.

For ease of use, the following editorial changes have been made to this Standard:

- The word “this Specifications” is changed to “this Standard”;
- REPLACE the comma “,” as a decimal point with the decimal point “.”;
- DELETE the foreword of API/IP 1581:2002 standard.

Appendix A and Appendix B of this Standard are informative appendixes. The Appendix C, Appendix D, Appendix E, Appendix F, and Appendix G are normative appendixes.

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Separation Machinery of Standardization Administration of China.

Drafting organizations of this Standard: China National Aviation Fuel Group Limited, Beijing Chengtian Beida Filtration Technology Co., Ltd.

Main drafters of this Standard: Zhang Hu, Liang Lijie, Zhao Zhong, Bai Jing, Li Ming, Hou Hairui, Deng Binghua.

This Standard is issued for the first time.

## Specifications for aviation jet fuel filter/separators

### 1 Scope

This Standard specifies the terms and definitions, classification, technical requirements, inspection methods, quality evaluation procedures, marking, packing, transport, storage, and performance test methods for aviation jet fuel filter/separators.

This Standard applies to aviation jet fuel filter/separators with a flow rate of not more than 6000 L/min.

### 2 Normative references

The clauses in the following documents, by reference in this Standard, constitute the clauses of this Standard. For the dated references, the subsequent amendments (not including errata content) or revisions do not apply to this Standard. However, parties which have reached an agreement according to this Standard are encouraged to study whether the latest version of these documents can be used. For the undated references, the latest version is applicable to this Standard.

GB 150 Steel pressure vessels

GB/T 1793 Standard test method for water reaction of aviation fuels

GB/T 2828.1 Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection (GB/T 2828.1-2003, ISO 2859-1:1999, IDT)

GB/T 3555 Petroleum products - Determination of Saybolt color - Saybolt chromometer method

GB 6537 No.3 jet fuel

GB/T 6539 Standard test methods for electrical conductivity of aviation and distillate fuels

GB/T 8019 Motor gasoline and aviation fuels - Determination of existent gum - Jet evaporation method (GB/T 8019-1987, neq ISO 6246:1981)

GB/T 13306 Plates

GB/T 21357-2008 Specification for similarity jet fuel filter/separators

JB/T 4711 Coating and packing for pressure vessels transport

SH/T 0766 Antiwear additive for jet fuels T1602

ISO 12103-1 Road vehicles - Test contaminants for filter evaluation - Part 1: Arizona test dust

ASTM D 1655 Specification for Aviation Turbine Fuels

ASTM D 2276 Test Method for Particulate Contaminant in Aviation Fuel by Line Sampling

ASTM D 2624 Test Methods for Electrical Conductivity of Aviation and Distillate Fuels

ASTM D 3240 Test Method for Undissolved Water in Aviation Turbine Fuels

ASTM D 3948 Test Method for Determining Water Separation Characteristics of Aviation Turbine Fuels by Portable Separometer

ASTM D 4171 Standard Specification for Fuel System Icing Inhibitors

MIL-PRF-25017 Inhibitor, corrosion/lubricity improver, fuel soluble

### 3 Terms and definitions

The following terms and definitions apply to this Standard.

#### 3.1 Filter/separator

A vessel containing filter/coalescer and separator elements which can continuously remove dirt and water from aviation jet fuel.

Note 1: A filter/separator can have either a vertical or a horizontal configuration.

Note 2: A filter/separator can be two or multiple stages. A two-stage system consists of filter/coalescer and separator elements contained within a vessel. The fuel flows through the filter/coalescer element(s) into the vessel and then flows through the separator element(s) to exit the vessel. A multi-stage system, based on the two-stage system, adds one or more additional stages. Additional stages may include devices (or adsorption stage) installed within separator element capable of shutting off fuel flow if the water content exceeds the specified value. Additional stages may also include prefilter devices installed within coalescer element capable of removing particulate contaminant.

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