

ICS 75.100

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

GB 11120-2011

Replacing GB 11120-1989

**Lubricating oils for turbines
(English Translation)**

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Foreword

The standard 3.2 and Chapter 4 are mandatory, the rest are recommended.

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB 11120-1989 "L-TSA turbine oil."

This standard compared with GB 11120-1989 main changes are as follows.

- Increasing the L-TSE, L-TGA, L-TGE, L-TGSB and L-TGSE varieties;
- Increased compatibility with rubber index and its assessment (see Appendix A);
- Increasing the product classification and labeling (see Chapter 3);
- Increased inspection rules chapter (see Chapter 5);
- L-TSA main technical differences between classes and GB 11120-1989 See Appendix B.

The standard reference method using redrafted ISO 8068.2006 "Lubricants, industrial oils and related products (L class) - turbine

(T group) - turbine lubricant specifications "(in English) establishment, and ISO 8068.2006 is equivalent to the degree of non-uniformity.

This standard by the National Standardization Technical Committee of petroleum products lubricants oil and lubricants and fuels Technical Committee (SAC / TC280/SC1) centralized.

This standard was drafted. China Research Institute of Petroleum Corp. Petrochemical, China National Petroleum Corp.

Oil company, oil company China Petroleum & Chemical Corporation, Xi'an Thermal Power Research Institute Co., Ltd.

Drafters of this standard. dragon Li, Meng Yuchan, Wang Hui, Yi Mei Rong, Li Xinhua.

This standard was first published in 1989, this is the first revision.

Turbine oil

Warning. If you do not observe proper precautions, this product may be hazardous to your standard in the production, storage and use of the process.

This standard is not intended to present all of the safety issues related to the product recommendations. Before using this standard has the responsibility to establish appropriate safety

Full and preventive measures, and determine the applicability of regulatory limitations related.

1 Scope

This standard specifies the product variety and marking, requirements and test methods, inspection rules turbine oils, marking, packaging, transportation and storage.

This standard applies to refined mineral oil or synthetic oil-based raw materials, adding antioxidants, corrosion inhibitors and anti-wear additives, etc.

Made in the power plant turbine lubrication and control systems, including steam turbine, turbine, gas turbine and having a common lubrication system -

Turbine oil steam turbine combined cycle use. Also suitable for other industrial purposes or ship turbine drive lubricating system

Turbine oils used.

This standard does not apply to fire-resistant turbine oils and turbine oils have special

requirements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein

Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 261 Flash Point by Pensky - Martens closed cup method

GB/T 265 Petroleum products - Determination of kinematic viscosity and calculation of dynamic viscosity

GB/T 1884 crude oil and liquid petroleum products - Laboratory determination of density (density meter method)

GB/T 1885 Petroleum Measurement Tables

GB/T 1995 Petroleum products - Calculation of viscosity index

GB/T 2541 Petroleum products viscosity index Sheets

GB/T 3141 Industrial liquid lubricants - ISO viscosity classification

GB/T 3535 Petroleum products - Determination of pour point

GB/T 3536 Petroleum products - Determination of flash point and ignition point Cleveland open cup method

GB/T 4756 petroleum liquids hand sampling method

GB/T 4945 Petroleum products and lubricants - Determination of acid and base number (Color Indicator Method)

GB/T 5096 petroleum products copper corrosion test

GB/T 6540 Petroleum products - Determination of color

GB/T 7304 Petroleum products and lubricants - Determination of acid (potentiometric titration)

GB/T 7305 water separability of petroleum oils and synthetic liquid assay

GB/T 7600 in transformer oil and turbine oil Determination of water content (coulometry)

GB/T 11133 Liquid petroleum products - Determination of water (Karl Fischer method)

GB/T 11143 inhibited mineral oil in the presence of water rust resistance test method

GB/T 12579 Determination of foaming characteristics lubricants

Determination of oxidation characteristics GB/T 12581 Inhibited mineral oils

GB/T 14039 Hydraulic fluid level of contamination by solid particles

GB/T 14832 standard elastomeric material and hydraulic fluid compatibility test

GB/T 18854 Hydraulic fluid automatic particle counter calibration

GB/T 19936.1 gear FZG test procedures - Part 1. FZG scuffing load capacity relative to oil
Test Method

A/8.3/90

GJB563 light aviation lubricants corrosion and oxidation stability assays (metal sheet
method)

DL/T 432 Power in oil particle pollution measurement methods

SH/T 0163 Petroleum products - Determination of total acid (Semi-micro color indicator
titration)

SH0164 petroleum product packaging, storage and delivery acceptance rules

SH/T 0193 Determination of oxidation stability of lubricants

SH/T 0207 insulating water content determination (Karl Fischer method)

SH/T 0306 Determination of carrying capacity lubricant (CL-100 Gear machine method)

SH/T 0308 Determination of lubricating air release value

Sludge trend SH/T 0565 Inhibited mineral oil assay

SH/T 0604 crude oil and petroleum products densitometry (U-tube vibration method)

SH/T 0805 lube filtration assays

ASTMD4636 hydraulic oil, aviation turbine engine lubricants and other refined lubricating oil
corrosion and oxidation stability assays

(Standardtestmethodforcorrosivenessandoxidationstabilityofhydrauliccoils, aircraftturbine
enginelubricants, andotherhighlyrefinedoils)

3.1.1 L-TSA and L-TSE turbine oil

L-TSA as a refined mineral oil turbine oil containing a suitable antioxidant and corrosion
inhibitors; L-TSE for gear lubrication system

While representing an increase of L-TSA turbine oil extreme pressure requirements.
Suitable for steam turbine.