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

**中华人民共和国国家标准**

GB 11120-2011

Replacing GB 11120-1989

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**Lubricating oils for turbines**

**涡轮机油**

[ISO 8068: 2006, Lubricants<sup>9</sup> industrial oils and related products (class L)— Family

T(Turbines)—Specification for lubricating oils for turbines, NEQ]

Issued on December 05, 2011

Implemented on June 01, 2012

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Issued by General Administration of Quality Supervision, Inspection  
and Quarantine of the People's Republic of China

Standardization Administration of the People's Republic of  
China

## Contents

Foreword.....	3
1. Scope .....	4
2. Normative references .....	4
3. Product variety and mark.....	6
4. Requirement and test method .....	7
5. Inspection rule .....	16
6. Logo, package, transport, and storage .....	17
Annex A (Normative) Rubber compatibility index .....	18
Annex B (Normative) Major changes of TSA variety in this standard, compared to GB 11120-1989.....	20

## Foreword

This standard 3.2 and Chapter IV is compulsory and the remaining part is recommended.

This standard is drafted according to rules given by GB/T 1.1-2009.

This standard shall replace GB 11120-1989 L-TSA *Steam Turbine Oil*.

Compared to GB 11120-1989, this standard has the following main changes:

Add varieties, such as L-TSE, L-TGA, L-TGE, T-TGSB and L-TGSE;

Add index of rubber compatibility and its assessment (see Annex A);

Add product category and mark (see Chapter III);

Add a chapter for inspection rule (see Chapter V);

See Annex B for main technical difference between category L-TSA and GB 11120-1989.

This standard is formulated using redrafting method and with reference to ISO 8068: 2006 *Lubricants, industrial oils and related products (class L)- Family T(Turbines)- Specification for lubricating oils for turbines* (in English version), and not equivalent to consistency of ISO 8068:2006.

This standard is under jurisdiction of national petroleum products and lubricant standardized technology committee petroleum fuel and lubricant sub-technology committee (SAC/TC 280/SC 1).

The drafting unit of this standard: China Petroleum and Chemical Co., Ltd., Petroleum and Chemical Industry Research Institute, China Petroleum and Natural Gas Co., Ltd., Lubricating oil Company, China Petroleum and Chemical Co., Ltd., Lubricating Oil Company, and Xi'an Thermal Power Research Institute Co., Ltd.

The main drafters of this standard are: Long Huali, Meng Yuchan, Wang Hui, Yi Meirong and Li Xinhua.

This standard was initially issued in 1989, and it's revised for the first time.

## **Lubricating oils for turbines**

Warning: If proper preventive measures are not followed, the belonging products of this standard may be endangered in production, storage, transport and use. This standard is unintentionally put forward suggestions for all safety issues related to this product. Before the users use this standard, they are responsible to build appropriate safe and preventive measures and confirm applicability of rules and restrictions.

### **1. Scope**

This standard specifies product variety, mark, requirement and test method, inspection rule, logo, package, transport and storage of lubricating oil for turbines.

This standard applies to oil based on refined mineral oil or synthetic raw materials made from antioxidant, corrosion inhibitor, anti-wear agent and many other additives, to lubricate and control system in power plants, including turbine oil used in steam turbine, water turbine, gas turbine and combined cycle turbine (gas and steam) with public lubrication system. It also applies to turbine oil used for other industries or turbines driving gear lubrication system with ship purpose.

This standard does not apply to flame resistant type turbine oil and water turbine lube oil with special requirements.

### **2. Normative references**

Following documents are indispensable for application of this document. For the dated documents so quoted, only dated versions apply to this document. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this document.

GB/T 261 Determination of flash point--Pensky--Martens closed cup method

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

GB/T 1884 Crude petroleum and liquid petroleum products--Laboratory determination of density--Hydrometer method

GB/T 1885 Petroleum measurement tables

GB/T 1995 Petroleum products--Calculation of viscosity index



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