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PEOPLE'S REPUBLIC OF CHINA**

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Gas turbine applications - Requirements for power generation

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Foreword

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

This standard uses the translation method equivalent to ISO 19859..2016 "Requirements for Gas Turbine Applications for Power Generation Equipment".

Chinese documents that have a corresponding correspondence with the international documents referenced normatively in this standard are shown in Appendix NA.

For ease of use, the following editorial changes have been made to this standard.

- Errata the English name of the original standard normative reference document IEC 60079-11;
- Erratum to formula (1) in the original standard 13.1.2;
- Correction of formula (8) in the original standard 13.2.2;
- Correction of formula (10), formula (11), formula (12) in the original standard 13.2.3;
- MMI errata in the instrument data sheet as HMI;
- Added informative appendix NA.
- Combine the original standard data sheet into this standard as an informative appendix NB.

This standard is proposed by China Machinery Industry Federation.

This standard is under the jurisdiction of the National Gas Turbine Standardization Technical Committee (SAC/TC259).

This standard was drafted. Nanjing Gas Turbine Research Institute, Institute of Engineering Thermophysics, Chinese Academy of Sciences, Zhejiang Electric Power Design Institute Co., Ltd.

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Ltd., and Guodian Science and Technology Research Institute.

Introduction

This standard is used to purchase gas turbines and auxiliary systems for power generation, and to provide technical support.

This standard provides basic specifications for tendering, which are applicable to different environmental and safety requirements, and also regulates the conditions for meeting the requirements.

This standard gives basic information for buyers and sellers, such as fuel and other matters. This standard does not cover all of the gas turbine procurement contracts

Information, but should include necessary installation information. Especially in the case where the responsibilities of the buyer and the seller can be distinguished, this standard is a technical agreement between the buyer and the seller.

The manufacturer has given attention to ensure the applicability of the equipment provided.

Due to the different actual operation modes of gas turbines, the performance under the corresponding "standard" operating conditions is also different. Performance in this standard is based on

Environmental reference conditions under ISO standards.

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Requirements for gas turbine applications for power generation equipment

1 Scope

This standard specifies the minimum technical and data requirements for the evaluation and procurement of gas turbines for power generation.

This standard applies to land and sea simple cycle and combined cycle gas turbines, as well as cogeneration gas turbines (see

(ISO 11086..1996, Appendix B). The test for gas turbine generator sets is also applicable.

This standard does not apply to all gas turbines as power propulsion, including aviation aircraft, mobile barges, floating ships and ship propulsion.

Into the gas turbines and micro gas turbines used.

This standard specifies the requirements for gas turbine generator sets based on the existing ISO , IEC standards and actual conditions. But does not exclude industry

With other regulations and standards, some of them are also included in this standard. As long as the use requirements, functional design and security meet the needs of the buyer and the seller

Requirements to allow the use of other similar regulations and standards documented.

Attention should be paid to applying or using standards in the following order. international standards; regional standards; national standards; local standards.

This standard specifies requirements for buyers and sellers when designing and purchasing gas turbine generator sets.

The scope of supply of a gas turbine generator set, unless it is indicated that it is not included in the scope of supply, includes at least the following equipment and related options

(See 3.14), the list is as follows.

- Gas turbine unit;
- load couplings and clutches, if applicable;
- Intake system;
- Exhaust system;
- Fuel equipment;
- controlling device;
- Electrical Equipment;
- Auxiliary systems, including starting, lubricating oil, cranking, water washing, interconnected pipes and sewage drainage systems;
- Fire and flammable gas detection systems;
- Cooling water equipment.

Considering the integrity of the gas turbine unit, the interfaces of the equipment, utilities and gas turbine units and their design requirements should also be included.

The following equipment is not included in the scope of supply, but can be used for interface and performance testing.

- Generator and its auxiliary system, without control module;
- Steam turbines and their auxiliary systems;
- External equipment for gas turbine units.

The data sheet in Appendix A of this standard determines the requirements and information of the buyer and the seller.

The buyer completes the data form in the bidding documents and forwards it to the supplier. Suppliers need to respond to data sheets when bidding.

Appendix A identifies the different types of data sheets and how they are used.

If the supplier fails to meet the requirements specified in this standard, the referenced standard terms and differences and their alternatives need to be listed in the document.

If the supplier cannot provide the procedures and operation, maintenance and commissioning information or equipment required by this standard due to patent confidentiality, the supplier shall list

Out, and prepare personnel and equipment to undertake the resulting tasks.

The mark "*" at the beginning of this paragraph indicates optional items (see A.3).