

INTERNATIONAL STANDARD

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Gas turbines — Procurement —

Part 1: General introduction and definitions

*Turbines à gaz — Spécifications pour l'acquisition —
Partie 1: Introduction générale et définitions*

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ISO 3977-1:1997(E)**Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 3977-1 was prepared by Technical Committee TC 192, *Gas turbines*.

This first edition of ISO 3977-1, together with subsequent parts, cancels and replaces ISO 3977:1991, which has been technically revised.

ISO 3977 consists of the following parts, under the general title: *Gas turbines – Procurement*

- *Part 1: General introduction and definitions*
- *Part 2: Standard reference conditions and ratings*
- *Part 3: Basic requirements for mechanical drive and electric drive*
- *Part 4: Packaging and auxiliary equipment*
- *Part 5: Controls and instrumentation*

Further parts are in preparation.

Annex A of this part of ISO 3977 is for information only.

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Introduction

ISO 3977 provides technical information to be used for the procurement of gas turbine systems, including combined-cycle systems and their auxiliaries, by a purchaser from a manufacturer.

NOTE — Where the term "manufacturer" is used in this International Standard, it is deemed to mean the gas turbine manufacturer or the appropriate responsible contractor.

This International Standard provides a basis for the submission of proposals in line with the different environmental and safety requirements. It also specifies, wherever possible, criteria to establish whether these are met. It does not attempt to deal with local or national legal requirements to which the installation may be required to conform.

Because of the very widely varying operating modes for gas turbines in practice, distinct categories of operating modes are specified with which a "standard" rating can be associated. These ratings are made on the basis of the ISO standard ambient reference conditions.

The various parts of ISO 3977 define a standard framework for dealing with questions of fuel and other matters, such as the minimum information to be provided by both the purchaser and the manufacturer. They do not, however, purport to include all necessary information for a contract and each gas turbine installation should be considered in its entirety. Attention is drawn to the need for technical consultation between the manufacturer and the purchaser to ensure compatibility of equipment being supplied, particularly where the responsibility for supply is divided.

ISO 3977 is applicable to open-cycle gas turbine power plant using combustion systems, and to closed-cycle, semiclosed-cycle and combined-cycle gas turbine power plants. In the case of turbines using free piston gas generators or special heat sources (e.g. chemical process, nuclear reactors, furnaces for super-charged boilers), it may be used as a basis but will need to be suitably modified.

This International Standard is not applicable to gas turbines used to propel aircraft, road construction and earth-moving machines, agricultural and industrial types of tractors and road vehicles.