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Gas turbine applications — Requirements for power generation

Applications des turbines à gaz — Exigences relatives à la production d'energie

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 19859 was prepared by Technical Committee ISO/TC 192, *Gas turbines*, Subcommittee SC , .

Introduction

ISO 19859 provides technical information to be used for the procurement of gas turbine systems for power generation and the associated auxiliaries, by a Purchaser from a 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.

ISO 19859 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 Contractor. 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 Contractor and the Purchaser to ensure compatibility of equipment being supplied, particularly where the responsibility for supply may be divided.

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 IS0 standard ambient reference conditions.

Gas turbine applications — Requirements for power generation

1 Scope

This international standard specifies the minimum technical and documentation requirements for the evaluation and procurement of gas turbine systems for power generation.

It is applicable to simple cycle (ISO 11086:1996 clause 1.8) and combined cycle (ISO 11086:1996 clause 1.12) gas turbines. It is also applicable for gas turbines used in cogeneration (ISO 11086:1996 Annex B). It is not applicable to gas turbines used to propel aircraft, mobile barges, floating production vessels and marine propulsion applications and gas turbines under 1MW in power output. In cases of gas turbines using special heat sources (e.g. chemical processes, nuclear reactors) this standard may provide a basis. Testing of the gas turbine in combination with a generator is included in the scope.

1.1 Boundary/scope of supply

The scope of this document is bounded by the following but includes elements of the interface that impacts the gas turbine:

– Civil foundations
– Exhaust duct or inlet to heat Recovery Steam Generator (HRSG)
– Coupling to generator
– Coupling to steam turbine
– Electrical systems
– Generator oil system
– Cooling water systems
– Fuel system upstream of emergency shut off valve
– Drains downstream of local drain manifolds
– Enclosures and building containing the gas turbine or serving the gas turbine (workshops)
– Control system Function and local instrumentation

A bullet ● at the beginning of a paragraph indicates an optional requirement that may be specified by the purchaser and recorded on the associated equipment data sheet..

Where the content of the text indicates that either the Purchaser or Contractor shall provide additional information this shall be provided on the associated information data sheet.

Where the content of the text indicates a requirement for instrumentation the requirement shall be indicated on the associated instrumentation data sheet.