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First edition
2017-10

Gas turbine combined cycle power plants — Thermal performance tests

Turbines à gaz — Centrales à cycle combiné — Essais de performance thermique



Reference number
ISO 18888:2017(E)

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ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
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Foreword

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This document was prepared by Technical Committee ISO/TC 192, *Gas turbines*.

Introduction

This document specifies standard rules for preparing, conducting, evaluating and reporting thermal performance tests in order to determine and/or verify the power output, the thermal efficiency (heat rate) and/or other performance test parameters for gas turbine driven combined cycle power plants. It provides information on methods of measurement considering uncertainties and on methods for corrected results obtained under test conditions in order to compare to guaranteed or specified conditions.

The objective of testing conducted per this document is to determine combined cycle thermal performance characteristics in accordance with any previously drawn up agreements such as the purchase agreements, test criteria documents, engineering, procurement and construction (EPC) requirements, power purchase agreements, power and water purchase agreements, contractual services agreements.

The document also provides guidelines for comparative tests designed to check performance differentials of the combined cycle and cogeneration power plants, for testing before and after modifications, upgrades or overhauls. Improvements to achieve additional performance of the combined cycle may include modification/substitutions of main components and additions of components inside test boundary. This comparative testing philosophy may also be used for "periodic testing" of the plant in order to monitor overall plant performance degradation, while giving due consideration to the relative testing uncertainty.