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Industrial furnaces and associated processing equipment — Method of measuring energy balance and calculating efficiency —

Part 1: General methodology

Fours industriels et équipements associés — Méthode de mesure du bilan énergétique et de calcul de l'efficacité —

Partie 1: Méthode générale

Reference number
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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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 13579-1 was prepared by Technical Committee ISO/TC 244, *Industrial furnaces and associated thermal processing equipment*.

ISO 13579 consists of the following parts, under the general title *Industrial furnaces and associated processing equipment — Method of measuring energy balance and calculating efficiency*:

— *Part 1: General methodology*

— *Part 3: Reheating furnaces for steel*

— *Part 2: Batch-type aluminium melting furnaces*

— *Part 4: Furnaces with protective or reactive atmosphere*

Introduction

Prevention of global warming is a significant issue which needs to be solved on the world scale. For this purpose, it is necessary not only to reduce energy consumption dramatically, but at the same time also ensure a convenient and comfortable daily life for everyone.

It is critical to use energy as efficiently as possible to fulfil these requirements.

Although industrial furnaces play an important role in maintaining everyone's life, on the other hand, they consume a great amount of energy. In order to tackle the above-mentioned issues, it is important to

— establish an International Standard (i.e. the ISO 13579 series), which specifies the energy efficiency of industrial furnaces in a reasonable manner,

— control energy consumption by using the collected measurement data based on ISO 13579 (all parts), and

— improve efficiency.

Furthermore, this part of ISO 13579 can be applied as a fair guideline for utilizing the Clean Development Mechanism (CDM), which was developed under the Kyoto Protocol[24] for measures used to prevent global warming.

All calculations within ISO 13579 (all parts) are based on the location of equipment under reference conditions.

NOTE For equipment intended to be installed above or below sea level, it is expected that the impact of the elevation be calculated for that location.