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IRISH STANDARD

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ICS 27.060.30
27.200

**HEAT EXCHANGERS - METHOD OF
MEASUREMENT AND EVALUATION OF
THERMAL PERFORMANCES OF WET
COOLING TOWERS**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales
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English version

Heat exchangers - Method of measurement and evaluation of thermal performances of wet cooling towers

Echangeurs de chaleur - Méthode de mesure et évaluation des performances thermiques des aérorefrigérants humides

Wärmeaustauscher - Verfahren zur Messung und Bewertung der wärmetechnischen Leistungsdaten von Nasskühltürmen

This European Standard was approved by CEN on 24 March 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Management Centre: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard (EN 14705:2005) has been prepared by Technical Committee CEN/TC 110 “Heat exchangers”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2005, and conflicting national standards shall be withdrawn at the latest by December 2005.

This document includes a Bibliography.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EN 14705:2005 (E)

1 Scope

This European Standard specifies requirements, test methods and acceptance tests for thermal performances pumping head verification of wet cooling towers and plume abatement for wet/dry cooling towers.

This European Standard is applicable to natural draught wet cooling towers (see in 3.1.2.2) fan assisted natural draught cooling tower (see 3.1.2.3), wet/dry cooling towers (see 3.1.2.4) and "Mechanical draught cooling towers", except series ones.

It specifies the test methods, the apparatus required, the limitation of errors and the method for results examination.

The acceptance testing covers the verification of the thermal performance data and pumping head of the cooling tower as specified in the contract between the supplier and the purchaser. If these tests are required then this should be recognized at the time of the contract, as additional fittings, and preparations for the test may be required.

Deviations from the rules laid down below as well as additions need special agreement between purchaser and supplier and should be documented.

This standard does not apply to mechanical draught series wet cooling towers which are dealt with in EN 13741.

NOTE Terms like "design", "values", "guarantee" and "acceptance" used in this standard should be understood in a technical but not in a legal or commercial sense.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 306, *Heat exchangers - Methods of measuring the parameters necessary for establishing the performance*

EN 872, *Water quality - Determination of suspended solids - Method by filtration through glass fibre filters*

EN 60751, *Industrial platinum resistance thermometer sensors (IEC 60751:1983 + A1:1986)*

EN ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 1: General principles and requirements (ISO 5167-1:2003)*

ISO 1438-1, *Water flow measurement in open channels using weirs and Venturi flumes - Part 1: Thin-plate weirs*

ISO 2975-3, *Measurement of water flow in closed conduits - Tracer methods - Part 3: Constant rate injection method using radioactive tracers*

ISO/TR 3313, *Measurement of fluid flow in closed conduits - Guidelines on the effects of flow pulsations on flow-measurement instruments*

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