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Tryckluft – Energieffektivisering – Bedömning (ISO 11011:2013)

Compressed air – Energy efficiency – Assessment (ISO 11011:2013)

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The European Standard EN ISO 11011:2015 has the status of a Swedish Standard. This document contains the official English version of EN ISO 11011:2015.

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Denna standard är framtagen av kommittén för Kompressorer, SIS/TK 245.

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EUROPEAN STANDARD

EN ISO 11011

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2015

ICS 23.140

English Version

Compressed air - Energy efficiency - Assessment (ISO 11011:2013)

Air comprimé - Efficacité énergétique - Évaluation (ISO 11011:2013)

Druckluft - Energieeffizienz - Bewertung (ISO 11011:2013)

This European Standard was approved by CEN on 19 March 2015.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

The text of ISO 11011:2013 has been prepared by Technical Committee ISO/TC 118 “Compressors and pneumatic tools, machines and equipment” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11011:2015 by Technical Committee CEN/TC 232 “Compressors, vacuum pumps and their systems” the secretariat of which is held by SIS.

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of an identical text or by endorsement, at the latest by September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

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

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Endorsement notice

The text of ISO 11011:2013 has been approved by CEN as EN ISO 11011:2015 without any modification.

Introduction

This International Standard has been developed with reference to available documentation¹⁾ (see Bibliography) relating to energy assessment of compressed air systems.

This International Standard is produced to support the objectives of energy management for those organisations utilizing compressed air and wishing to improve the energy efficiency of such systems. Remembering the words of Lord Kelvin who said in 1883, “If you cannot measure it, you cannot improve it”, this International Standard aims to assist with measurement and provide the knowledge to enable improvement.

The prime consideration for any compressed air system is the ability to generate air with the least amount of energy. Having done this, the next consideration is to transmit energy from the point of generation to the point of use with the least loss. The final consideration is to eliminate waste and use the least amount of air for the production process.

This International Standard uses speciality terms which relate the needs of assessment activities to those of compressed air systems. Many terms will appear new to the users of this International Standard who are familiar with general compressed air terms.

A general introduction to energy assessment is given in [Annex A](#).

1) Extracts from ASME EA-4-2010 were used with permission from ASME. The core elements used are from Scope and Introduction, Organizing the Assessment, Analysis of Data From the Assessment, Reporting and Documentation, and Mandatory Appendices — I, Preliminary Data Collection Matrix.

Compressed air — Energy efficiency — Assessment

WARNING — Users of this International Standard are advised that energy-related judgements should not compromise safety issues.

1 Scope

This International Standard sets requirements for conducting and reporting the results of a compressed air system assessment (hereafter referenced as an “assessment”) that considers the entire system, from energy inputs to the work performed as the result of these inputs.

This International Standard considers compressed air systems as three functional subsystems:

- supply which includes the conversion of primary energy resource to compressed air energy;
- transmission which includes movement of compressed air energy from where it is generated to where it is used;
- demand which includes the total of all compressed air consumers, including productive end-use applications and various forms of compressed air waste.

This International Standard sets requirements for

- analysing the data from the assessment,
- reporting and documentation of assessment findings, and
- identification of an estimate of energy saving resulting from the assessment process.

This International Standard identifies the roles and responsibilities of those involved in the assessment activity.

This International Standard provides indicative information in [Annexes B, C, D](#), and E of the type of data to be collected to assist in a successful assessment. The information provided is not exhaustive and therefore is not intended to restrict the inclusion of other data. The form and presentation of the information given in the annexes is also not intended to restrict the manner of presentation of the reporting to the client.

2 Normative references

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

ISO 1217, *Displacement compressors — Acceptance tests*

ISO 5598, *Fluid power systems and components — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1217 and ISO 5598 and the following apply.