

საქართველოს სტანდარტი

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Metal bellows expansion joints for pressure applications

Compensateurs de dilatation à soufflets métalliques
pour appareils à pression

Kompensatoren mit metallischen Bälgen für
Druckanwendungen

This European Standard was approved by CEN on 21 June 2021.

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European foreword

This document (EN 14917:2021) has been prepared by Technical Committee CEN/TC 342 “Metal hoses, hose assemblies, bellows and expansion joints”, the secretariat of which is held by SNV.

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of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

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

This document supersedes EN 14917:2009+A1:2012.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

Modifications to EN 14917:2009+A1:2012:

- adaptation to Directive 2014/68/EU;
- general revision and correction;
- complete revision and restructuring of Clause 6, i.a.;
 - addition of design in the creep range;
 - modification of stress calculation for internal pressure capability;
 - reformulation of column instability calculation;
 - modification of in-plane instability calculation;
 - harmonisation of fatigue calculation for all bellows types and introduction of 4 fatigue curves for different material classes;
 - extension of material characteristics for calculating forces and moments on pressurised expansion joints;
- addition of Annex K for stress calculation of hardware;
- revision of Testing, inspection and documentation;
- revision of material properties in Annex B and Annex J;
- correction of Coefficient C_p .

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

EN 14917:2021 (E)

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Introduction

Metal bellows expansion joints are used as parts in pressure vessels or piping components.

If an expansion joint is designed and manufactured covered by EU-Directive 2014/68/EU a risk assessment has to be done. The possible risks of an expansion joint and how they have been dealt in this document are described in Annex I.