

STN	Náklady na životný cyklus (LCC) a hodnotenie životného cyklu (LCA) pre emisie CO₂ v potrubných systémoch z tvárnej liatiny	STN EN 17800 13 8104
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Life cycle cost (LCC) and life cycle assessment (LCA) for CO₂ emissions in ductile iron pipe systems

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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English Version

Life cycle cost (LCC) and life cycle assessment (LCA) for CO₂ emissions in ductile iron pipe systems

Coût du cycle de vie (CCV) et analyse du cycle de vie
(ACV) pour les émissions de CO₂ dans les systèmes de
canalisations en fonte ductile

Lebenszykluskosten (LCC) und Lebenszyklusanalyse
(LCA) der CO₂-Emissionen von Rohrsystemen für
Rohrsysteme aus duktilem Eisen

This European Standard was approved by CEN on 28 November 2022.

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EN 17800:2022 (E)**European foreword**

This document (EN 17800:2022) has been prepared by Technical Committee CEN/TC 203 “Cast iron pipes, fittings and their joints”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

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Introduction

Studies on economic and environmental impacts are important for utility decision-makers as they seek to balance budget concerns over immediate and long-term needs across acquisition, operations, and maintenance, and planned end of life. For authorities and engineers designing pipeline systems, the life cycle cost (LCC) and live cycle assessment (LCA) serve as a tool to study various scenarios to determine the right solution for site-specific conditions and community values, as well as to provide the necessary data to support those decisions. Impacts on the circular economy should be taken into consideration too.

The intention of this document, dedicated to ductile iron pipe systems, is to define objective methodologies for LCC and LCA- carbon footprint, respectively, in order to support customers and users to optimize ductile iron pipe solutions with global cost evaluation, safety requirements and environmental criteria.

EN 17800:2022 (E)

1 Scope

This document specifies the evaluation method of life cycle cost (LCC) and Life cycle assessment (LCA) of ductile iron pipes and fittings used for water applications and which are in compliance with EN 545.

LCC evaluation is based on concepts and methods developed in ISO 15686-5.

LCA evaluation is based on concepts and methods developed in ISO 15686-6, EN 15804:2012+A2:2019, EN ISO 14040 and EN ISO 14044.

In this document, LCA is limited to the evaluation of environmental impact due to CO₂ emissions associated with the consumption of natural resources or energy and waste disposal. The other categories of impacts are not in the scope of this document.

Informative annexes are included in this document as a compilation of references, consensual factors, and scenarios with different DI pipelines.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 545:2010, *Ductile iron pipes, fittings, accessories and their joints for water pipelines — Requirements and test methods*

EN ISO 14044:2006¹, *Environmental management — Life cycle assessment — Requirements and guidelines (ISO 14044:2006)*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN

¹ As impacted by EN ISO 14044:2006/A1:2018 and EN ISO 14044:2006/A2:2020.