



SLOVENSKI STANDARD SIST EN 14717:2024

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Nadomešča:
SIST EN 14717:2005

Varjenje in sorodni postopki - Okoljski kontrolni vprašalnik

Welding and allied processes - Environmental check list

Schweißen und verwandte Prozesse - Umweltcheckliste

Soudage et techniques connexes - Liste de vérification relative à l'environnement

Ta slovenski standard je istoveten z: **EN 14717:2024**

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13.020.01	Okolje in varstvo okolja na splošno	Environment and environmental protection in general
25.160.01	Varjenje, trdo in mehko spajkanje na splošno	Welding, brazing and soldering in general

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EUROPEAN STANDARD

EN 14717

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 14717:2005

English Version

Welding and allied processes - Environmental check list

Soudage et techniques connexes - Liste de vérification
relative à l'environnement

Schweißen und verwandte Prozesse -
Umweltcheckliste

This European Standard was approved by CEN on 22 April 2024.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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EN 14717:2024 (E)

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European foreword

This document (EN 14717:2024) has been prepared by Technical Committee CEN/TC 121 “Welding and allied processes”, 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of an identical text or by endorsement, at the latest by December 2024, and conflicting national standards shall be withdrawn at the latest by December 2024.

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 14717:2005.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

The main changes compared to the previous edition EN 14717:2005 are as follows:

- a) the document was editorially reviewed;
- b) new terms (ecodesign and improvement of the environmental performance) under Clause 3 added;
- c) the options in Clause 4 were changed to requirements;
- d) all checklist items in Clause 5 were changed to requirements;
- e) new Annex ZA regarding relationship between this document and the ecodesign requirements of Commission Regulation (EU) No 2019/1784.

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.

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

EN 14717:2024 (E)

Introduction

Protection of the environment is a key political issue in Europe and elsewhere. Protection of the environment is taken in a very broad sense. What is meant is the total life cycle aspects of, e.g. a product on the environment, including expenditure of energy and during all phases from mining of raw materials, fabrication, packaging, distribution, use, scrapping, recycling of materials, etc. However, assessment of all aspects of the welded product or structure during its entire lifetime cycle is beyond the scope of the present document. The document is limited to aspects directly related to welding fabrication.

The design of the fabricated structures puts a lower limit on the expenditure of energy during joint preparation and welding, on the consumption of consumables and consequently on emissions of fumes and gases during welding, etc. but the design phase is not covered by the document.

Welding fabrication has many environmental aspects. This document provides for a checklist, which may be used for identification of environmental aspects during welding fabrication.

Provisions are restricted to a general guidance. Limit values are specified in national laws.

Some of the environmental aspects also have an implication for occupational health and safety, but the check list in this document is incomplete for this use.

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1 Scope

This document provides check lists for the assessment of the environmental aspects of welding fabrication of metallic materials including site and repair work. Informative annexes indicate recommended actions for avoiding and reducing the possible environmental impacts outside the workshop.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

welding fabrication

includes the following activities and associated processes:

- joint preparation including thermal cutting and grinding;
- surface preparation including sand blasting, shot blasting, shot peening, chemical pickling and cleaning;
- welding, including grinding and back gouging;
- soldering and brazing;
- thermal spraying;
- preheating and heat treatments;
- flame straightening and mechanical straightening;
- inspection and testing of welds and thermal sprayed surfaces

3.2

disposal

collection, sorting, transport and treatment of waste as well as its storage and tipping above or underground, the transformation operations necessary for its re-use, recovery or recycling

[SOURCE: Directive 75/442/EEC]

3.3

ecodesign

integration of environmental aspects into product design with the aim of improving the environmental performance of the product throughout its whole life cycle

[SOURCE: Directive 2009/125/EC]

EN 14717:2024 (E)**3.4
environment**

surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation

[SOURCE: EN ISO 14001:2015, 3.2.1, modified – Note 1 to entry and Note 2 to entry have been deleted.]

**3.5
environmental aspect**

element of an organization's activities or products or services that can interact with the environment

[SOURCE: EN ISO 14001:2015, 3.2.2, modified – Note 1 to entry and Note 2 to entry have been deleted.]

**3.6
environmental impact**

any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects

[SOURCE: EN ISO 14001:2015, 3.2.4.]

**3.7
improvement of the environmental performance**

process of enhancing the environmental performance of a product over successive generations, although not necessarily in respect of all environmental aspects of the product simultaneously

[SOURCE: Directive 2009/125/EC]

4 Procedures

Requirements for the protection of the environment and improvement of the environmental performance of welding equipment during welding fabrication shall originate from a number of sources such as:

- legal requirements, often at the national level;
- commercial requirements (customer requirements);
- economical requirements, e.g. related to insurance.

Annex B provides additional considerations for control of environmental impacts.

Absolute limits, e.g. emissions, shall apply but protection of the environment is, as a general rule, a continuous process for which gradual improvements are aimed.

The check lists in the document shall be used as a tool for determination of possible problem areas applicable to the following situations:

- when planning a fabrication, the application of new methods of fabrication or new equipment;
- for identification of procedures for monitoring or checks of actual environmental aspects;
- for specification of procedures for handling, storage and disposal of environmentally harmful substances.

NOTE All check lists state possible environmental aspects. Many aspects can be identified during the planning stage as having no environmental impact. Others can be shown to be of no significance by monitoring or checking the production processes. A few can result in further action to comply with the requirements. Annex A provides general guidance for assessment and possible actions.

5 Check lists of possible environmental aspects

The checklist shall be used to identify a series of potential environmental problematic areas during welding fabrication as listed in Table 1 to Table 7.

Table 1 — Common to welding fabrication

Common to welding fabrication	
Consumables	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — consumption of welding consumables during welding (filler material, shielding gas, backing gas, electrode coating); — disposal of containers, packaging material, etc.; — disposal of used consumables and waste materials.
Equipment	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — energy and fuel efficiency; — generation of physical aspects, e.g. noise, heat and radiation; — requirements for spare parts and consumables for maintenance; — procedures for disposal and recycling of equipment.
Work operation	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — disposal of scrap; — emission of fumes, gases and aerosols; — energy and fuel consumption; — fire hazards and explosion risks whenever there is a risk of ignition; — generation of physical aspects, e.g. heat, light, noise, radiation.
<p>NOTE Several of the aspects listed above have a limited range of influence. It depends on the circumstances whether they represent an environmental aspect or not. Noise can e.g. not represent an environmental aspect when working in a large workshop but can be a serious problem when working on site or performing repair work in residential areas.</p>	

Table 2 — Joint and surface preparation, weld dressing, surface treatment and cleaning

Joint and surface preparation, weld dressing, surface treatment and cleaning	
Cleaning, pickling and other chemical treatment	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — disposal of cleaning agents and other chemicals; — vapours; — leakage of consumables, cleaning agents, etc. from storage vessels representing a risk of contamination of soil, drains, watercourses or groundwater; — emission of hazardous substances in the air.
Grinding and gouging	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — disposal of dust, used grinding wheels and other tools for grinding; — dust explosions; — emission of dust ^a; — noise.
Sandblasting, shot blasting, shot peening, etc.	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — disposal of dust and used sand/shot; — emission of dust ^a; — noise.
Thermal cutting	<p>The following shall be checked:</p> <ul style="list-style-type: none"> — disposal of scrap, slag or mud; — emission of UV-/IR-radiation; — emission of dust ^a; — noise; — use of coolants; — emission of hazardous gases, e.g. nitrogen oxide (if relevant).
<p>^a Un-controlled emission of dust (not least when working on site) could represent a risk of contamination of soil, drains, watercourses or groundwater, e.g. by heavy metals.</p>	