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Varjenje in sorodni postopki - Kontrolni vprašalnik v zvezi z okoljem

Welding and allied processes - Environmental check list

Schweißen und verwandte Prozesse - Umweltcheckliste

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

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Welding and allied processes - Environmental check list

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

Schweißen und verwandte Prozesse - Umweltcheckliste

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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Contents

Page

Foreword 3
Introduction 4
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 Procedures 6
5 Check lists of possible environmental aspects 7
Annex A (informative) Assessment and recommended actions 10
Annex B (informative) Requirements 14
Bibliography 15

Foreword

This document (EN 14717:2005) has been prepared by Technical Committee CEN/TC 121 “Welding”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

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.

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 have to be 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.

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

Not applicable.

3 Terms and definitions

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

3.1
welding fabrication
welding fabrication includes (for the purpose of this document) 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 under ground, the transformation operations necessary for its re-use, recovery or recycling [Directive 75/442/EEC]

3.3
environment
surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation [EN ISO 14001:2004]

3.4
environmental aspect
element of an organization's activities or products or services that can interact with the environment [EN ISO 14001:2004]

3.5
environmental impact
any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects [EN ISO 14001:2004]

4 Procedures

Requirements for the protection of the environment during welding fabrication can 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 further comments on the possible requirements.

Absolute limits, e.g. emissions, can 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 can be used as a tool for determination of possible problem areas. In general this applies 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.

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 some general guidance for assessment and possible actions.

5 Check lists of possible environmental aspects

Table 1 — Common to welding fabrication

Common to welding fabrication	
Consumables	Check for: - Disposal of containers, packaging material, etc.; - Disposal of used consumables and waste materials.
Equipment	Check for: - 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 of the equipment.
Work operation	Check for: - 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.
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 may e.g. not represent an environmental aspect when working in a large workshop but may be a serious problem when working on site or performing repair work in residential areas.	