



NEWS Letter

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Editorial

Welding Fabrication and Environment

In the last years the attention to the environment paid by the industrial world has grown higher and higher. Not even there has been a sort of flourishing of events of any importance devoted to the matter practically all over the world, but some of the most important enterprises have already started asking for their subcontractors to be implementing an environmental management system. In order to make the Companies able to have a correct and homogeneous approach in this specific field, an international standard, the EN ISO 14001 "Environmental management system-Specification with guidance for use", had been prepared, with the aim to provide the needed references for the application of an effective scheme. This standard adopts the general principles of the EN ISO 9001, wherewith it can share an integrated management system and applies to Companies willing:

- to implement, maintain and improve a environmental management system;
- to demonstrate the fitness of their environmental politics to other private or public parties;
- to seek certification of their environmental management system by an external accredited organization.

Even if the fabrication by welding, with the manufacturing and testing processes involved, is not to be mentioned among the most polluting ones, a significant number of precautions are to be taken and the relevant actions enforced, as duly reported in the course of the present Newsletter.

The EN ISO 14001, dealing with the matter on the whole, is of course not oriented to solve the specific environmental problems raised up by the welding fabrication; therefore an interpretation of the standard itself by welding experts is needed. This is precisely what EWF is going through, having set up a working group "Environment" aimed at this purpose. Not only the different fabrication phases are to be singled out and the relevant aspects and impacts are to be defined and quantified as much as possible, but also a specific educational path for the engaged personnel must be identified and pro- posed. Not to double the work, all activities have to be carried out taking into account what is going on in other International organizations, namely the CEN TC 121 "Welding" and the Select Committee "Environment" of IIW.

The purpose of the EWF working group "Environment" is the production of an appropriate scheme for the welding manufacturers to conform with. A certification approach could also be possible, on a voluntary basis, at national or international level, according to the positions shared into EWF or/and other involved organizations.

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Introduction

Environmental Management is now a key issue for manufacturing companies. The International Standard EN ISO 14001 ("Environmental Management System - Specification with Guidance for Use") is the key document in this area and systems that comply with this can be integrated with ISO 9001 QMSs.

Fabrication by welding is a complex process that cannot be limited to the welding part alone. Therefore, a range of activities needs to be considered and dealt with.

EWF has recognised this and is developing special guidelines on Environmental Management "best practices" for companies that use welding as a manufacturing process.

Generic Requirements for an EMS

1.

Preliminary Analysis of the effect on the surrounding environment, namely

- Emissions to air
- Releases to water
- Waste management
- Contamination of land
- Use of raw materials and natural resources
- Other local environmental and community issues



2.

Environmental analysis report where the actual situation is compared with:

- Legislative and regulatory requirements
- Advanced practice applied in the Industrial Sector of the company
- Effectiveness of the resources possibly already devoted to environmental aspects



3.

Environmental management program considering:

- . Technical activities
- . Improvement of the relationship with the environment
- . Review of the environmental policies

Specific Requirements related to the Fabrication of Welded Products

The table shown on the next page gives a comprehensive list of the activities that have to be considered, the aspects which may be relevant and the impact on the environment.

Competence in developing and implementing an Environmental Management System is important, particularly when special processes like welding are involved. The related Personnel must be competent to provide adequate response to the completeness of the environmental analysis, the fitness of the environmental practice (if one exists) and the fitness of the environmental program designed. The same competence is required of the auditors involved in checking the compliance of an EMS to EN ISO 14001.

EWF is developing a guideline for the training and qualification of personnel involved in Environmental Management Systems related to welded products fabrication. Completion of such a course will provide an essential requirement for the company's personnel and for auditors involved in compliance assessments.

Furthermore, EWF is developing the criteria for a certification scheme for fabricators of welded products seeking to demonstrate compliance with EN ISO 14001. These criteria will ensure that the company considers and deals with the environmental matters in the most effective way.



ACTIVITY	ASPECTS	IMPACTS
Material Management and Preparation		
Stocking and handling of various products	Spilling of oils, laboratory reagents, diluents, scraps, etc	Ground pollution with various organic and inorganic products
Heat treatments	Emission of combustion products Letting out of cooling liquids	Atmospheric pollution with gas combustion products and particulate substances Ground pollution with liquids and particulate substances
Sand blasting	Discharging of sands Emission of noise	Ground pollution Acoustic pollution
Cutting	Emission of cutting fumes Emission of radiant energy (light, heat) Production of cutting slag	Atmospheric pollution with metallic oxides Environment pollution Ground pollution
Edge preparation	Spilling of cooling waters and machining oils Emission of noise Production of exhausted oils and metallic residual products (showings, chips, scraps, etc)	Ground pollution with oils Acoustic pollution Ground pollution with oils and metals
Calendering / Pressing	Emission of noise	Acoustic pollution
Welding Process		
Welding	Emission of welding fumes and gases Emission of radiant energy (light, heat) Production of slags and residuals of welding materials	Atmospheric pollution with metals, vapours, gases and particulate substances Environment pollution Ground pollution with metals and their components
Tests		
Chemical and Physical tests	Emission of gases and vapours Production of analysis residuals	Atmospheric pollution Ground pollution
Radiographic tests	Emission of radiant energy Production of film developing, fixing and washing liquids	Releasing of c and g radiations Ground pollution with liquids containing acids, salts, etc
Magnetic test	Production of liquids and powders	Ground pollution with organic liquids and metallic particulate substances
Penetrant test	Letting out of liquids and particulate substances	Ground pollution with organic liquids and particulate substances (pigments, talc, etc)
Hydraulic Test	Letting out of liquids	Ground pollution with oils, oxides etc
Final Treatments		
Pickling	Emission of acid and basic liquids and vapours	Ground and air pollution
Heat treatment	Emission of combustion products (gases, fumes, powders) Letting out of cooling fluids	Atmospheric pollution with gas combustion products and particulate substances Ground pollution with oils and particulate substances
Painting	Letting out of solvents with or without pigments	Ground and air pollution

ETCETERA

Essen Fair. Germany

15th World Trade Fair

Joining. Cutting. Surfacing

12-18 September 2001

We will be there at the DVS stand. Come and visit us!

EFW PERSONNEL QUALIFICATION GUIDELINES:

- European Welding Engineer
- European Welding Technologist
- European Welding Specialist
- European Welding Inspection Personnel
- European Welding Practitioner
- European MMA Welder
- European Thermal Sprayer
- European Adhesive Bonder
- European Adhesive Specialist
- European Adhesive Engineer
- European Manual Metal Arc (MMA)-Diver-Welder
- European Thermal Spraying Practitioner

EFW SPECIAL COURSES' GUIDELINES:

- Special Courses in Laser Welding (Engineer, Technologist and Specialist Levels)
- Special Course for Robot Welding at the Specialist Level
- Special Course for Welding Reinforcing Bars at the Specialist Level

WELDICTION

The Welding Multimedia Dictionary in 7 European Languages has been finalised. The dictionary covers the most relevant welding terms with definition and multimedia support, in English, French, German, Hungarian, Polish, Portuguese and Spanish.

Look for a demo of the software in our website very soon!

EFW MEMBERS' WEBSITE

Austria
Belgium <http://bil-ibs.be>
Bosnia and Herzegovina
Croatia <http://hdtz.fsb.hr>
Czech Republic <http://www.grisoft.cz>
Denmark <http://www.force.dk>
Finland <http://www.shy-hitsaus.net>
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Luxembourg
Netherlands <http://www.nil.nl>
Norway <http://www.sveis.no>
Poland <http://www.is.gliwice.pl>
Portugal <http://www.isq.pt>
Romania <http://www.isim.ro>
Slovakia <http://www.vuz.sk>
Slovenia
Spain <http://www.cesol.es>
Sweden <http://www.svets.a.se>
Switzerland <http://www.svsxass.ch>
Russia
Ukraine
United Kingdom <http://www.twi.co.uk>

<http://www.ewf.be>



The only Welding Education and Training Scheme recognised by the EOTC under the scope of the European Commission.

