European Welding Association

EWA Statement

This EWA statement concerns the Public consultation on the Eco design Directive for Welding Equipment and Machine Tools.

As we have mentioned previously, the members of EWA (leading manufacturers of welding consumables and welding equipment in Europe) do not understand the inclusion of welding consumables in the proposed Eco design regulation for welding equipment. **In no case are welding consumables related to lower power consumption of Welding Equipment.**

We would like to bring the EWA position to your attention now:

"Arc welding is a technique of metal joining. The performance of the weld (fit for purpose) depends on the specified size of the weld, the composition of the filler wire, shielding gas and the welding parameters. These are defined by the welding procedure specification (WPS), as set by the welding engineer, considering the specific characteristics of the welding equipment and weld joint (based on physics and weld quality). Reduction in the use of welding consumables cannot be reached **without a negative effect on the safety of the construction."**

The paragraph (in the public consultation) on the reduction of welding consumables is undesirable and not acceptable. Welding consumables should not be included in the regulation which aims to reduce the energy consumption of welding equipment.

Therefore, we ask again to consider the principal technical rules of metal joining and modify the text of the regulation accordingly.

This position is completely supported by the national welding associations (ZVEI in Germany, Anasta in Italy, Symop in France and BEAMA in UK.)

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Additionally we want to comment in detail on the final draft eco-design requirements for welding equipment and its Annexes (see attached document):

- Delete consumables from the environmental aspects (see comment EWA1)

- Wording of subject matter and scope (Article 1) and Definitions (Article 2) to bring in line with existing European Standards (see comment EWA2, EWA3, EWA4) to ensure clear interpretation

- Essential definitions for correct measurements (Annex I, (4)) (see comment EWA5)

- Unpractical requirements for displays (Annex I, 2.4, 2.5, 2.6) (see comment EWA 6.0, 6.1, 6.2, 6.3)

- Unpractical information requirements (Annex II (3.1, 3.2)) (see comment EWA7.0, 7.1, 7.2)

- Contradicting information (Annex V) (see comment EWA8)

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Template for comments and secretariat observations

Date: 2019-01-09	Document: **EWA comments**	Project: Eco design requirements for welding equipment

Comment	Line number (e.g. 17)	Clause/ Subclause (e.g. 3.1)	Paragraph/ Figure/ Table/ (e.g. Table 1)	Type of comment[1]	Comments	Proposed change	Observations
EWA1	page 2		(6)	te	Consumables are not variables to be modified in order to improve the efficiency of a welding system. 1. Consumables and their usage are determined by the safety, quality and metallurgical requirements of a weldment. 2. To modify the consumable usage conflicts with the purpose of the Ecodesign regulation stated in (12): "… the proposed ecodesign requirements do not affect the functionality or affordability of welding equipment from the end-user's perspective and do not negatively affect health, safety or the environment."	Delete (6) (c): (6)The environmental aspects of welding equipment that were identified as significant for the purposes of this Regulation are: (a) energy consumption in the use phase, including when the products are in 'idle' mode; (b) resource efficiency issues concerning the equipment per se~~; and~~ ~~(c) the consumables used in welding processes~~.	
EWA2	Page 4	Regulation	Article 1, 2.	Ed	Article 1 clause 2. uses the wording 'welding equipment techniques' followed by a list of different arc welding processes. Annex I clause (4) uses in the same context the wording 'welding process' Propose to change Article 1 clause 2. and clause 3. to align with the Scope of EN 60974-1 (source: https://webstore.iec.ch/preview/info_iec60974-1%7Bed5.0%7Db.pdf): This part of IEC 60974 is applicable to power sources for arc **welding and allied processes** designed for industrial and professional use, and supplied by a voltage not exceeding 1 000 V, battery supplied or driven by mechanical means.	Modify wording to bring in line with existing European Standards to ensure clear interpretation 2. This Regulation shall apply to the following types of welding and allied processes ~~equipment techniques~~: 3. This Regulation shall not apply to the following types of welding and allied processes ~~equipment techniques~~:	
EWA3	page 4		Article 1 (3)	te	Paragraph 1. limits the scope to include electrical mains-operated welding equipment.	Modify wording to bring in line with existing European Standards to ensure clear interpretation For clarity, include new clauses into Article 1, 3.):	

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						(e) engine-driven welding power sources (f) battery-powered welding power sources	
EWA4		Regulation	Article 2, (17)	Te	'Stud welding equipment' may by either drawn arc stud welding or capacitor discharge stud welding (https://en.wikipedia.org/wiki/Stud_welding). Current definition is limited to capacitor discharge stud welding only which does not cover all stud welding processes. Propose to adopt the definition to include all types of stud welding equipment and to use the same structure (wording) as for 'welding equipment' definition). (additional source: https://www.iso.org/obp/ui Search 'Terms and Definitions': stud welding; e.g: ISO/TR 25901-1-2016 clause 2.1.8.39)	Modify wording to bring in line with existing European Standards to ensure clear interpretation 'stud welding equipment' means ~~a form of arc welding where capacitive discharge occurs across the consumable calibrated tip of a welding rod[When the negatively charged tip of the rod is in contact with the positively charged object, the tip explodes and the atmosphere between the rod and object ionises, causing the material of the rod and object to melt~~ products that are used for manual, automated or semi-automated joining a metal stud or similar part to a workpiece using an arc of electricity to heat both parts, and that is stationary or transportable, and consists of linked parts or components, and with or without the use of shielding gas(es), using appropriate tools and techniques;	
EWA5		Annex I	(4)	Te	'highest power consumption': This definition is essential for the efficiency measurement and needs to be precisely specifying the applicable conditions. The first goal is to clarify which welding process setting to be used (if more than one is available). The intent is to select the welding process which is responsible for the highest power consumption. The second goal is to specify the measurements to be recorded. The optimum efficiency is not always at maximum output setting. To allow different Inverter topologies and technologies to be used, the maximum efficiency shall be used. If the extension of the definition by "including any power supply, connected to the welded piece;" intends to be the welding circuit, clarify	Modify definition: 'highest power consumption' means the maximum efficiency at the welding process producing the highest power consumption ~~required by a welding process~~, excluding the power draw from any other device, including any power ~~supply,~~ connected to the weldinged ~~ed~~ circuit~~piece~~;	

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					the definition by using welding circuit (refer to EN 60974-1:2018 clause 3.1.11 for definition or http://www.electropedia.org/iev/iev.nsf/display?openform&ievref=851-14-10)		
EWA 6.0		Annex II	2.4, 2.5, 2.6	Te	Paragraph 2.4, 2.5 and 2.6 are design requirements and incorrect for Repair, reuse and recyclability requirements	Delete requirements under “Repair, reuse and recyclability”	
EWA 6.1		Annex II	2.4	Te	The welder is using a welding helmet with protection glasses during welding and it is technically not possible to monitor a display on the welding power source. Furthermore there are welding torches lengths of 3.5m and more welding positions in defined spaces which make it impossible to read a display from this distance. The requirement for display visibility is unnecessary and redundant. 1. Display visibility is fundamental for set up purposes and does not require an obvious statement. 2. Determination of conformity to the requirement is subjective. 3. Users may be a great distance away from the display during operation.	Requirement does not meet practical use. Delete requirement. ~~2.4 Where a display is provided on a welding equipment product it shall be readily visible to the user of welding equipment during its operation.~~	
EWA 6.2		Annex II	2.5	Te	Shielding gas adjustment is usually done on the pressure device on the gas bottle or gas supply. In many cases gas routing is directly to the weld spot and not via the welding power source. Indication of use of shielding gas would request an adjustable gas valve with sensing function which would add additional costs. This is in contradiction with paragraph	Delete 2.5: ~~2.5 Where present, a display shall provide a clear indication of the use of shielding gas, in litres per minute; the display shall also indicate whether the shielding gas use is normal or excessive for the type of operation, with reference to the welding type, schedule and programme.~~	

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					(1) of the eco-design requirements ("improvement of design without cost"). The parameters to specify a quality weld are specified in a Welding Procedure Specification (WPS) and are presently monitored by the user. 1. The local quality system must control the shielding gas flow rate to obtain a high quality weld. 2. The user is not permitted to increase or reduce gas flow rates beyond the specification of the WPS. 3. Eco requirements regarding shielding gas flow rate are unnecessary and redundant.		
EWA 6.3	-	Annex II	2.6	te	The parameters to specify a quality weld are specified in a Welding Procedure Specification (WPS) and are presently monitored by the user. 1. The local quality system must control the welding wire or filler material feed rate to obtain a high quality weld. 2. The user is not permitted to increase or welding wire or filler material feed rates beyond the specification of the WPS. 3. WPS typically indicate deposition rates and the user is not permitted to increase or decrease deposition rates beyond the specification of the WPS. 4. Eco requirements regarding material feed rates are unnecessary and redundant.	Delete 2.6: ~~2.6 Where present, a display shall provide a clear indication of the use of welding wire or filler material in grams per minute or equivalent standardised unit of measurement; the display shall also indicate whether the welding wire or filler material use is normal or excessive for the type of operation, with reference to the welding type, schedule and programme.~~	
EWA 7.0		Annex II	3.1		"Manufacturers shall provide information in instruction manuals for installers and end-	Modify time period to 10 years.	

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					users for at least 15 years after welding product is placed on the market…" The period of 15years does not match other similar requirements which are usually 10years.		
EWA 7.1		Annex II	3.1		In clause 3.1, the welding machine and instruction manual does not always keep with specific pair. (we cannot guarantee this.) I think the "year of manufacture" information is no meaning in the instruction manual, it is enough to include the year of manufacture information in the rating plate.	Delete 3.1 (d)	
EWA 7.2		Annex II	3.2		"…following information shall be made available free of charge by manufacturers…for at least 15 years after a welding equipment product is placed on the market…" The period of 15 years does not match other similar requirements which are usually 10years.	Modify time period to 10 years.	
EWA 8		Annex V	Table 4	Te	Table 4 is in contradiction with the Regulation and the findings in the Impact assessment study. Regulation (13) states that eco-design takes account of cost impacts on manufacturers: - idle state power reduction from 30 W to 10 W is not possible with current technology and requires additional 'cold state' power supply including redesign of equipment. According to 'Annex 7_Summary of BAT energy savings identified in the Preparatory study' Idle power consumption of less than 10 W does not yield quantifiable savings.	Delete Annex V Delete Regulation Article 7	

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					- efficiency improvent like outlined in Annex V is in contradticon to 'Annex1_BNAT' of the Impact assessment study: "The power electronics components and circuitry of welding power sources are subject to research and continuous improvement at several research institutions, but the related publications do not provide an outlook on achievable efficiency improvements."		

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