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STATUTORY INSTRUMENTS

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**2021 No. 745**

The Ecodesign for Energy-Related Products  
and Energy Information Regulations 2021

PART 2

Ecodesign for Energy-Related Products

CHAPTER 1

WELDING EQUIPMENT

**Application and interpretation**

3.—(1) Subject to paragraph (2), this Chapter applies to welding equipment using one or more of the following welding processes—

- (a) flux cored arc welding;
- (b) manual metal arc welding;
- (c) metal active gas and metal inert gas welding;
- (d) plasma arc cutting;
- (e) self-shielded flux-cored welding;
- (f) shielded metal arc welding;
- (g) tungsten inert gas welding.

(2) Nothing in this Chapter applies to welding equipment using the following welding processes—

- (a) limited-duty arc welding;
- (b) resistance welding;
- (c) stud welding;
- (d) submerged arc welding.

(3) In this Chapter and Schedules 1 and 2—

“flux cored arc welding” means a welding process that uses, with or without external shielding gases, composite tubular filler metal electrodes consisting of a metal sheath and a core of various powdered materials, producing an extensive slag cover on the face of a weld bead;

“limited-duty arc welding” means arc welding processes that are not for industrial and professional applications and that—

- (a) use single-phase public low-voltage input;
- (b) if engine driven, do not exceed an output power of 7.5 kilovolt-amperes (“kVA”); and
- (c) do not require arc-striking and stabilising devices, liquid cooling systems or gas consoles for operation;

“manual metal arc welding” means an arc welding process with a coated electrode where the operator’s hand controls the travel speed of the welding operation and the rate at which the electrode is fed into the electric arc;

“metal active gas welding” means a gas metal arc welding process in which—

- (a) coalescence is produced by heating with an arc between a continuous filler metal (consumable) electrode and the workpiece area; and
- (b) shielding is obtained entirely from an externally supplied gas, or gas mixture, that is active;

“metal inert gas welding” means a gas metal arc welding process in which—

- (a) coalescence is produced by heating with an arc between a continuous filler metal (consumable) electrode and the workpiece area; and
- (b) shielding is obtained entirely from an externally supplied gas, or gas mixture, that is inert;

“plasma arc cutting” means an arc cutting process that uses a constricted arc and removes the molten metal in a high velocity jet of ionised gas (plasma gas) issuing from the constricting orifice, and which is a direct-current electrode-negative process;

“plasma gas” (also referred to as “orifice gas” or “cutting gas”) means a gas directed into the torch to surround the electrode, which becomes ionised by the arc to form a plasma and issues from the torch nozzle as the plasma jet;

“resistance welding” means a thermo-electrical process in which—

- (a) heat is generated at the interface of the parts to be joined by passing an electrical current through the parts for a precisely controlled time and under a controlled pressure; and
- (b) no consumables such as welding rods or shielding gases are required;

“self-shielded flux-cored welding” means a wire welding process in which—

- (a) a continuous hollow-wire electrode is fed through the welding gun into the weld joint without the need to use an external shielding gas to protect the weld pool from contamination; and
- (b) instead of an external shielding gas, a flux compound within the hollow wire reacts with the welding arc to form a gas that protects the weld pool;

“shielding gas” (also referred to as “secondary gas”) means a gas that does not pass through the orifice of the nozzle, but instead passes around the nozzle and forms a shield around the electric arc;

“shielded metal arc welding” means an arc welding process in which—

- (a) coalescence is produced by heating with an electric arc between a covered metal electrode and the workpiece and work area;
- (b) shielding is obtained from decomposition of the electrode covering; and
- (c) pressure is not used and filler metal is obtained from the electrode;

“stud welding” means a welding process in which a metal stud or a similar part is joined (manually, in automated or in semi-automated way) to a workpiece using an arc of electricity to heat both parts;

“submerged arc welding” means an arc welding process—

- (a) which uses an arc or arcs exceeding 600 amperes between a bare metal electrode or electrodes and the weld pool;
- (b) in which the arc and molten metal are shielded by a blanket of granular flux on the workpieces; and

- (c) in which no pressure is applied and the process uses filler metal from the electrode and sometimes from a supplementary source such as a welding rod, flux or metal granules; “tungsten inert gas welding” means an arc welding process in which—
  - (a) coalescence is produced by heating with an arc between a single tungsten (non-consumable) electrode and the workpiece area;
  - (b) shielding is obtained from a gas or gas mixture;
  - (c) pressure may or may not be used and filler metal may or may not be used;“welding equipment” means products that—
  - (a) are used for manual, automated or semi-automated welding, brazing, soldering or cutting (or all of the above);
  - (b) are stationary or transportable; and
  - (c) consist of linked parts or components, at least one of which moves and which are joined together to produce coalescence of metals by heating them to the welding temperature (with or without the application of pressure) or by the application of pressure alone, with or without the use of filler metal, and with or without the use of shielding gases, using appropriate tools and techniques, resulting in a product of defined geometry.

#### **Ecodesign requirements**

4.—(1) Welding equipment must conform to the ecodesign requirements set out in Schedule 1 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of welding equipment must comply with paragraphs 3 and 4 of Schedule 1 (resource efficiency and information requirements).

#### **Conformity assessment**

5.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations(1), a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of the product must contain—

- (a) a copy of the product information provided in accordance with paragraph 4 of Schedule 1;
- (b) the information specified in paragraph 5 of Schedule 1;and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 7.

#### **Verification procedure for market surveillance purposes**

6. The market surveillance authority(2) must use the verification procedure set out in Schedule 2 when verifying the compliance of a product with the requirements of these Regulations.

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(1) Schedule 1A was inserted by [S.I. 2019/539](#), as amended by [S.I. 2020/1528](#).

(2) The meanings of “market surveillance” and “market surveillance authority” are set out in Article 2(17) and (18) respectively of EU Regulation 765/2008 (RAMS), and are amended by paragraph 3 of Schedule 33 to [S.I. 2019/696](#). Definitions in RAMS are applied to the 2010 regulations by regulation 2(2) of those regulations (as amended by [S.I. 2019/539](#)).

### Measurements and calculations

7.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards<sup>(3)</sup>, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which —

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

### Circumvention and software updates

8.—(1) The manufacturer, authorised representative or importer must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation<sup>(4)</sup> or included in any documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

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(3) See regulation 2A of the 2010 regulations for the meaning of “designated standard”. Regulation 2A was inserted by [S.I. 2019/539](#), and amended by paragraph 4 of Schedule 4 to the European Union (Future Relationship) Act 2020 (c.29).

(4) See paragraph 1(2) of Schedule 1A to the 2010 Regulations for the meaning of “technical documentation”. Schedule 1A was inserted by [S.I. 2019/539](#).