

ANNEX III

INSCRIPTIONS, INSTRUCTIONS, DEFINITIONS AND SYMBOLS

1. CE marking and inscriptions

- 1.1. Vessels of which the product of $PS \times V$ exceeds 50 bar.L must bear the CE marking provided for in Annex II of Regulation (EC) No 765/2008 and the last two digits of the year in which the CE marking was affixed.
- 1.2. Vessels or their data plates shall bear at least the following information:
 - (a) the maximum working pressure (PS in bar);
 - (b) the maximum working temperature (T_{max} in °C);
 - (c) the minimum working temperature (T_{min} in °C);
 - (d) the capacity of the vessel (V in L);
 - (e) the name, registered trade name or registered trade mark and the address of the manufacturer;
 - (f) the type and serial or batch identification of the vessel.
- 1.3. Where the data plate is used, it shall be so designed that it cannot be reused and shall include a vacant space to enable other information to be provided.

2. Instructions and safety information

The instructions shall contain the following information:

- (a) the particulars given in point 1.2 except for the vessel's serial or batch identification;
- (b) the intended use of the vessel;
- (c) the maintenance and installation requirements for vessel safety.

3. Definitions and symbols

3.1. Definitions

- (a) The design pressure 'P' is the gauge pressure chosen by the manufacturer and used to determine the thickness of the vessel's pressurised parts.
- (b) The maximum working pressure 'PS' is the maximum gauge pressure which may be exerted under normal conditions of use of the vessel.
- (c) The minimum working temperature T_{min} is the lowest stabilised temperature which the wall of the vessel may attain under normal conditions of use.
- (d) The maximum working temperature T_{max} is the highest stabilised temperature which the wall of the vessel may attain under normal conditions of use.
- (e) The yield strength 'R_{eT}' is the value at the maximum working temperature T_{max} of any of the following:
 - (i) the upper yield point R_{eH}, for a material with both a lower and an upper yield point;

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- (ii) the 0,2 % proof strength $R_{p0,2}$;
 - (iii) the 1,0 % proof strength $R_{p1,0}$ in the case of non-alloy aluminium.
- (f) Families of vessels:
- Vessels form part of the same family if they differ from the prototype only in diameter, provided that the permissible requirements referred to in points 2.1.1 and 2.1.2 of Annex I are complied with, and/or in the length of their cylindrical portion within the following limits:
- (i) where a prototype has one or more shell rings in addition to the ends, variants shall have at least one shell ring;
 - (ii) where a prototype has just two dished ends, variants shall have no shell rings.
- Variations in length causing the apertures and/or penetrations to be modified shall be shown in the drawing for each variant.
- (g) A batch of vessels consists at the most of 3 000 vessels of the model of the same type.
- (h) There is series manufacture within the meaning of this Directive if more than one vessel of the same type is manufactured during a given period by a continuous manufacturing process, in accordance with a common design and using the same manufacturing processes.
- (i) Inspection slip: document by which the producer of the materials certifies that the products delivered meet the requirements of the order and in which he sets out the results of the routine in-plant inspection test, in particular chemical composition and mechanical characteristics, performed on products made by the same production process as the supply, but not necessarily on the products delivered.

3.2. Symbols

A	elongation after fracture ($L_o = 5,65\sqrt{S_o}$)	%
$A_{80\text{ mm}}$	elongation after fracture ($L_o = 80\text{ mm}$)	%
KCV	bending rupture energy	J/cm^2
P	design pressure	Bar
PS	maximum working pressure	Bar
P_h	hydrostatic or pneumatic test pressure	Bar
$R_{p0,2}$	0,2 % proof strength	N/mm^2
R_{eT}	yield strength at maximum working temperature	N/mm^2
R_{eH}	upper yield point	N/mm^2
R_m	tensile strength	N/mm^2

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$R_{m, \max}$	maximum tensile strength	N/mm^2
$R_{p1,0}$	1,0 % proof strength	N/mm^2
T_{\max}	maximum working temperature	$^{\circ}\text{C}$
T_{\min}	minimum working temperature	$^{\circ}\text{C}$
V	capacity of the vessel	L