

ECS operational staff meeting household appliances decision sheet			OSM HA N° 317
Sub cl.	Meeting	Agenda item	Document
21.1	17	8.3	(DE)02/03
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>In clause 21 of EN 60335-2-6 is stated, that part1 is applicable. That means the spring hammer test with an energy of 0,5 Nm has to be performed and in addition the drop test of sub-clause 21.102 of EN 60335-2-6 for hobs having a complete surface in one piece.</p> <p>Is the spring hammer test with 0,7 Nm applicable on the hob surface if it consists in a complete surface in one piece?</p>		
Decision	<p>No, the spring hammer test with 0,7 Nm is not applicable on hob surface if it is in one piece.</p> <p>For this part the test with 0,5 Nm is applicable, as stated in part 1</p>		
Explanatory notes			

ECS operational staff meeting household appliances decision sheet			OSM HA N°334
Sub cl.	Meeting	Agenda item	Document
19.13	18	4.2	OSM/CTL /Ist.2004
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>Is the requirement that temperature in the centre of the pyrolytic self-cleaning oven shall not exceed 425 °C applicable during the test of clause 19.11 with a fault applied?</p> <p>Clause 19.13 reads: “19.13 Addition: - The temperature rise limit of 150 K also applies to wooden cabinets and rectangular boxes. - The temperature in the centre of pyrolytic self-cleaning ovens during the test of 19.4 shall not exceed 425 °C whenever the oven door can be opened. - The temperature rise of the windings of induction hob elements shall not exceed the values specified in 19.7. - The electric strength test of induction hob elements is carried out immediately after switching off the appliance.”</p>		
Decision	<p>If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test (including the test of clause 19.4 of IEC 60335-2-6) is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2.</p>		
Explanatory notes	<p>This decision is identical to CTL decision n. 552, approved at the 41st CTL meeting 2004.</p>		

ECS operational staff meeting household appliances decision sheet			OSM HA N°344
Sub cl.	Meeting	Agenda item	Document
3.1.6	18	6.4	(SE)02/04
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>According to EN 60335-2-6:2003 sub-clause 3.1.6, a diversity factor is applied for appliances having more than three heating units per phase.</p> <p>Since there are different opinions in application of diversity factor we think a clarification is needed.</p> <p>a) Is the diversity factor (F) applicable in case 1 below</p> <p>b) Is the diversity factor (F) applicable in case 2 with and without the optional heating unit</p> <p>Legenda: X = heating unit O = optional heating unit</p>		
Decision	<p>For the case 1 presented it was considered that is under the conditions requested by 3.1.6 to apply the factor. For the case 2, it was considered that is under conditions requested by 3.1.6 (4 units per phase) when the optional unit is connected. In case that the optional unit is not connected, 1 phase (L3 in the drawing) may use the factor (4 units/phase) and the others cannot use it (3 units/phase).</p>		
Explanatory notes	<p>Case 1, 400V 2AC</p> <p>Case 2, 400V 3AC</p>		

ECS operational staff meeting household appliances decision sheet			OSM HA N°363
Sub cl.	Meeting	Agenda item	Document
3.1.9.101	19	6.3	(ES)2/05
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>According to sub-clause 3.1.9.101 of part 2-6, the amount of oil to be used in normal operation for induction hob elements is approximately half of the vessel capacity. The height of the standard vessel (figure 102) is not specified and consequently the capacity is not well defined in this requirement.</p> <p>In 3.1.9.101 it is also indicated that for all kind of hob elements the quantity of oil to be use shall be according to table 101 (depending of the hob element diameter)</p> <p>As both requirements seem to be contradictory, or at least difficult to comply with them simultaneously, because it is difficult to find commercially vessels with a height that comply with both criteria and the the amount of oil and the diameter of the vessel are the factors that mainly affect the heating test, and much less the height of the vessel, which vessel should be used for the tests?</p>		
Decision	It shall be used a vessel with the amount of oil indicated in table 101 although it doesn't correspond to half the capacity of the vessel.		
Explanatory notes			

ECS operational staff meeting household appliances decision sheet			OSM HA N°368
Sub cl.	Meeting	Agenda item	Document
19.11.2/	19	8.4	(DE)2/05
22.123/22.124	30		Update standards
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>During the simulation of the fault conditions, it shall be possible to switch off any energized hob element</p> <p>The fault conditions are also simulated with all hob elements switched off, the appliance being supplied at rated voltage. If a pan detector is incorporated, a suitable vessel is placed on the cooking zone002E</p> <p>The hob elements shall not become energized.</p> <p>Considering that it is stated by the wording of clause 19.11.2 of part 2- 6 "....off, the appliance being supplied at rated voltage"</p> <p>shall all hob elements shall be switched off by a switch which is a part of the appliances and not a part of the supply installation, if any installation fuse or other protective device in the fixed wiring does not provide the necessary protection of the appliance?</p>		
Decision	<p>If during test of 19.11.2 the hob can not be disconnected by any of the controls of the appliance then it is not allowed to comply with the requirements of this sub-clause using external switches not provided with the appliance nor with the specific interconnection cables.</p>		
Explanatory notes			

ECS operational staff meeting household appliances decision sheet			OSM HA N° 370
Sub cl.	Meeting	Agenda item	Document
19.11.2	21	5.2	OSM/HA(Sec)02/07
19.11.1/19.11.2	19	8.7	(DE)5/05
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>According to the wording of cl 19.11 of part 2- 6, electronic circuits are checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of the circuits, unless they comply with the conditions specified in 19.11.1.</p> <p>Some test houses are of the opinion that the fault conditions a.) to f.) specified in 19.11.2 are not applied to the controller of the hob elements, if the hob has an additional mechanical protector,</p> <p>Considering that the dangerous malfunctions of the switches of hob elements, shall be tested according to the addition of cl. 19.11.2 of part 2- 6, shall sub-clause 19.11.2 be performed?</p> <p>(In the most cases, the same switches of the hobs will be used for the "off-position" of the hob. The intention of the "Addition of cl. 19.11.2 part 2- 6" was to prevent a new "Toaster case").</p>		
Decision	Even if there are no protective electronic circuits, the "off" electronic disconnection or the "stand by" mode shall be tested according 19.11.4 and 19.11.2		
Explanatory notes	<p>However, it is proposed to move the additional test in 19.11.2 to clause 22 as additional subclasses (see below extracted from 61/3164/DC).</p> <p>19 Abnormal operation 19.11.2 Delete the addition. Add the following new subclauses:</p> <p>22 Construction 22.123 Appliances incorporating at least one hob element shall be designed so that it is possible to switch off any energized hob-element in case of any single fault. Compliance is checked by the following test. The appliance is operated under the conditions specified in Clause 11 but supplied at rated voltage. Any power switching means of each individual hob-element is short circuited in turn. It shall be possible to switch off any energized hob-element. NOTE If a pan detector is incorporated, a suitable vessel is placed on the cooking zone.</p> <p>22.124 Appliances incorporating at least one hob element shall be designed so that the hob element does not become energized in case of any single fault. Compliance is checked by the following test. The appliance is operated under the conditions specified in Clause 11 with all individual hob elements switched off, the appliance being supplied at rated voltage. Any power switching means of each individual hob-element is short circuited in turn. The hob elements shall not become energized. NOTE If a pan detector is incorporated, a suitable vessel is placed on the cooking zone. This decision is the same of CTL DSH 615</p>		

ECS operational staff meeting household appliances decision sheet			OSM HA N°385
Sub cl.	Meeting	Agenda item	Document
3.1.6	20	10.7	(FR)07/06
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>Taking into account the definitions stated in clause 3:</p> <p>3.1.6 Note 101: "For appliances having more than three heating units per phase, a diversity factor is applied to the rated current or rated power input when determining the current used to establish the size of the terminals and the nominal cross-sectional area of the supply cord. The diversity factor F is calculated from the following formula, where N is the number of heating units per phase that can be energized together :</p> $F = 0,35 + 0,65/\text{square root } N$ <p>3.108 induction hob: hob containing at least one induction hob element 3.112 induction hob element: hob element that heats metallic vessels by means of eddy currents 3.109 heating unit: any part of the appliance that fulfils an independent cooking or warming function</p> <p>How to consider the application of diversity factor to the following induction appliance (see schematic circuit) where:</p> <ul style="list-style-type: none"> - the induction hob is composed of 2 induction generators which fulfil an independent cooking and - each induction generator is composed of 2 induction hob elements which are not independent together. (Distribution of the power input of the induction generator between 2 induction hob elements) ? 		
Decision	<p>For this case, the diversity factor is not applicable if the power input do not vary when the hob elements of the same generator are working together or separate, but it is applicable if the power input with both operating is the sum of each unit operating alone.</p>		
Explanatory notes	<p>The diagram shows a power supply with two lines, L (Live) and N (Neutral). Two 'Heating Induction generator' blocks are connected to this supply. The top generator is connected to the L line and has two 'Induction hob element' coils connected to it. The bottom generator is also connected to the L line and has two 'Induction hob element' coils connected to it. To the right of the top generator, the text reads: 'Induction hob element (P(HE1) + P(HE2)= Induction hob element'. To the right of the bottom generator, the text reads: 'Induction hob element (P(HE3) + P(HE4)= Induction hob element'.</p>		

ECS operational staff meeting household appliances decision sheet			OSM HA N°410
Sub cl.	Meeting	Agenda item	Document
24.1	21	7.1	(ES)05/07
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>The note 1 of Clause 24.1 of EN 60335-1 indicates that the compliance of the component with the relevant standard does not necessarily ensure the compliance with the requirements of this standard, but if the reference to EN 60335-2-6 is done in the certificate it should be assumed that the test report shall cover all the relevant requirements of the appliance and a clear information shall be given. For this reason we propose that for the acceptance of the previous test performed in electronic controls with separate certification according to the appliance standard, the following conditions shall be met:</p> <ul style="list-style-type: none"> - The control shall have a test report according the relevant appliance standard issued by the relevant HA laboratory (including for example clauses 19, 22, 24, 29, 30 and 32) - Clear reference in the certificate that the compliance with the appliance standard is limited to those aspects and constructions included in the relevant test report. - Clear reference in the test report to the protections included in the control for the compliance with the appliance standard, the test conditions and results obtained. - Information about the test performed in the control that has to be repeated in the appliance (i.e.19.11.4 and others) - Indication of the separate protection means that has to be included in the appliance for the compliance with the appliance standard. 		
Decision	The proposal is accepted only for electronic controls in Part 2-6.		
Explanatory notes			

ECS operational staff meeting household appliances decision sheet			OSM HA N°433
Sub cl.	Meeting	Agenda item	Document
19.13/19.14	23	8.1	(ES)01/09
Standard	EN 60335-2-06:2003 +A1 :2005 + A2 :2008 + A11 :2010 + A12 :2012 + A13 :2013 EN 60335-2-6 :2015	Date	2017-02-08
Question	<p>There is the following requirement: "The temperature of the centre of the ovens during the test of 19.4 shall not exceed 425 °C whenever the oven door can be opened." In sub-clause 19.4 the controls are made inoperative (for instance: thermostat short-circuit). In this case, depending on the initial conditions when the short-circuit happens (cold oven, hot oven) the result may be compliant or not compliant. See the 3 cases shown below for the same oven with comments regarding the conditions of the tests.</p> <ul style="list-style-type: none"> - In case 1 the short circuit of the thermostat happens after cycling many times and the temperature is stabilised. The limit of 425°C is not reached. - In case 2 the short circuit of the thermostat happens after a few cycles (around 30 minutes) and the temperature is not stabilised. The limit of 425°C is not reached. - In case 3 the short circuit of the thermostat happens just after its first operation. The limit of 425°C is exceeded by a maximum of 50 °C during an interval of around 4 minutes. The rest of cycles are within the limit. <p>As there is no indication in the standard about the specific moment to perform the short-circuit in clause 19.4, different conclusions can be obtained by different labs regarding compliance. We'd like to know the opinion of the OSM members about that.</p>		
Decision	<p>This construction is considered acceptable when the following conditions are met:</p> <ul style="list-style-type: none"> a) When the thermostat is short circuit during normal operation the limit is not passed b) Even if the thermostat is short circuited from cold conditions the limit is only passed in a short time (i.e. one cycle) 		
Explanatory notes	<p>The explanatory notes section contains three graphs labeled Case 1, Case 2, and Case 3, each showing oven temperature (T(°C)) on the y-axis (ranging from 0 to 425) against time on the x-axis (ranging from 0 to 1200 seconds). - Case 1: A red line shows the temperature rising to approximately 350°C, stabilizing, and then short-circuiting. The temperature remains below 425°C. - Case 2: A red line shows the temperature rising and short-circuiting while still increasing. The temperature remains below 425°C. - Case 3: A blue line shows the temperature rising to 425°C immediately after short-circuiting, then cooling down, and repeating the cycle. The temperature exceeds 425°C during the initial peak.</p>		

ECS operational staff meeting household appliances decision sheet			OSM HA N°06/2019
Sub cl.	Meeting	Agenda item	Document
19.13. 19.14 19.11.4 22.123 22.124	5.4.2	OSMHA ES/03/2018
Standard	EN 60335-2-6:2014 EN 60335-1 : 2012 +A11 :2014+A13 :2017+A1 :2019+A2:2019+A14:2019	Date	2019/11/21
Question	<p>HOB with 2 relays (one for thermostat function and another with the function of switch on and off the appliance).§19.14 (60335-1) the relay with thermostat function is short-circuited. A requirement in 19.13 (60335-2-6) is that it must be possible to switch off the appliance during the test of 19.14. The HOB can comply with the requirement if the on/off relay is controlled by a micro-controller .</p> <p>Q1) The microcontroller + on/off relay + the driver of the relay is a PEC? Q2) If PEC, then 19.11.4 would be applicable. Q3) § 22.123 and 22.123, the requirement is the same it must be possible to switch off the appliance but with faults in electronic components instead of short circuiting contacts of relay. In these clauses software class B is requested, but not tests with 19.11.4. If a manufacturer instead of using a relay as a thermostat uses a triac, then 19.14 is not applicable and there is no need to perform 19.14 and then 19.11.4 is not applicable.It seems to be different test condition for a similar requirement. Usually manufacturers interpret the requirement in 19.13 to mean that they have to include an additional relay to the one used as a thermostat.</p>		
Decision	<p>Q1: Yes, it is PEC (combination of driver, on/off relay and programmable electronic circuit for example).</p> <p>Q2: 19.11.4 is applied to the PEC to check if the off condition can be obtained during and after each EMP test.</p> <p>Q3: If no relay is used for energized heating element in Clause 11, only 22.123 is applicable to check if appliance can be switched off during the test.</p>		
Explanatory notes	MT23 concluded that the possibility of 22.123 and 22.124 should be considered to be amended with EMC test.		