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COMMISSION

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COMMUNICATION FROM THE COMMISSION

in the framework of the implementation of Commission Regulation (EU) No …/… implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for solid fuel boilers, and of the implementation of Commission Delegated Regulation (EU) No …/… supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of solid fuel boilers and packages of solid fuel boiler, supplementary heater, temperature control and solar device

(Text with EEA relevance)

COMMUNICATION FROM THE COMMISSION

on transitional measurement and calculation methods for the implementation of Commission Regulation (EU) No …/… implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for solid fuel boilers, and for the implementation of Commission Delegated Regulation (EU) No …/… supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of solid fuel boilers and packages of a solid fuel boiler, supplementary heaters, temperature controls and solar devices

(Text with EEA relevance)

Titles and references of transitional methods of measurement and calculation[1] for the implementation of Regulation (EU) No …/…, and in particular Annexes III and IV thereof, and for the implementation of Regulation (EU) No …/…, and in particular Annexes VII and IX thereof.

1. References

Parameter	**Organisation**	**Reference/Title**	**Notes**
Solid fuel boilers, including solid fuel cogeneration boilers			
Test	CEN	EN303-5:2012 Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW — Terminology, requirements and marking*, 5.7 Conducting the boiler performance test, 5.8 Determination of the heat output and efficiency of the boiler, 5.9 Determination of emission values	Except for elements otherwise specified in Regulations [solid fuel boiler ecodesign and energy labelling]. Condensing boilers are to be tested in condensing mode.
Test fuel specifications for log wood, moisture content ≤ 25 %	CEN	EN303-5:2012, Table 7 — test fuels, water content and ash content for Wood logs	
Test fuel specifications for chipped wood, moisture content 15-35 %	CEN	EN303-5:2012, Table 7, water content and ash content for Chipped wood B1	
Test fuel specifications for chipped wood, moisture content > 35 %	CEN	EN303-5:2012, Table 7, water content and ash content for Chipped wood B2	
Test fuel specifications for	CEN	EN303-5:2012, Table 7, water	

[1] It is intended that these transitional methods will ultimately be replaced by one or more harmonised standards. When available, references to the harmonised standards will be published in the Official Journal of the European Union in accordance with Articles 9 and 10 of Directive 2009/125/EC.

Parameter	Organisation	Reference/Title	Notes
compressed wood		content and ash content for Compressed wood	
Test fuel specifications for sawdust, moisture content ≤ 50 %	CEN	EN303-5:2012, Table 7, water content and ash content for Saw-dust	
Test fuel specifications for bituminous coal	CEN	EN303-5:2012, Table 7, water content, ash content and volatiles for Bituminous coal	
Test fuel specifications for brown coal	CEN	EN303-5:2012, Table 7, water content, ash content and volatiles for Brown coal	
Test fuel specifications for coke	CEN	EN303-5:2012, Table 7, water content, ash content and volatiles for Coke	
Test fuel specifications for anthracite	CEN	EN303-5:2012, Table 7, water content, ash content and volatiles for Anthracite	
Rated heat output P_r	CEN	EN303-5:2012, 3.7 nominal heat output	Corresponds to nominal heat output Q_N, but for the preferential fuel only and expressed in gross calorific value.
Useful heat output at rated heat output P_n	CEN	EN303-5:2012, 3.6 heat output	Corresponds to heat output Q measured at rated heat output P_r, but expressed in gross calorific value.
Useful heat output at applicable part load P_p	CEN	EN303-5:2012, 3.6	Corresponds to heat output Q measured at applicable part load, but expressed in gross calorific value.
Useful efficiency η	CEN	EN303-5:2012, 3.15 boiler efficiency	Corresponds to η_K, but with Q and Q_B expressed in gross calorific value
Useful efficiency at rated heat output η_n	CEN	EN303-5:2012, 3.15	η measured at $P_{r,}$
Useful efficiency at applicable part load η_p	CEN	EN303-5:2012, 3.15	η measured at P_p
Electrical power consumption at rated heat output *elmin*	CEN	EN15456:2008-06, Heating boilers — Electrical power consumption for heat generators — System boundaries — Measurements, 3.4.1 electrical power consumption for heat generation	Corresponds to $P_{aux\ 100}$
Electrical power consumption at	CEN	EN303-5:2012, 5.8.5 and	Corresponds to $P_{aux,g}$ measured at applicable

Parameter	Organisation	Reference/Title	Notes
applicable part load *elmax*		EN15456:2008-06, §3.4.1	part load operation
Standby mode power consumption P_{SB}	CEN	EN303-5:2012, 5.8.5 and EN15456:2008-06, 3.4.1	Corresponds to $P_{aux\ sb}$
Gross calorific value moisture free GCV_{mf}	CEN	EN 14918:2009 Solid biofuels — Determination of calorific value, 10.4 Expression of results	Corresponds to $q_{V,gr,d}$
Moisture content of the fuel *M*	CEN	EN 14918:2009, 10.4	Corresponds to M_{ar}, but expressed as fraction instead of as percentage
Emissions of particulate matter	CEN	TS 15883:2010, Residential solid fuel burning appliances — Emission test methods, Annex A1, Austrian and German particle test methods	Also referred to as *dust*
Emissions of organic gaseous compounds	CEN	TS 15883:2010, 4.3 Calculation of organic gaseous compounds (OGC)	
Emissions of carbon monoxide	CEN	EN 15058:2006, Determination of the mass concentration of carbon monoxide (CO) — Reference method: Non-dispersive infrared spectrometry	
Emission of nitrogen oxides	CEN	EN 14792:2006, Stationary source emissions — Determination of mass concentration of nitrogen oxides (NO_x), Reference method: Chemiluminescence	For test fuels with a nitrogen content higher than 1000 mg/kg the measured value shall be corrected according to point 2 of this Communication
Emissions at 30 % of the rated heat output	CEN	EN303-5:2012, 5.10.4.1, Emissions at nominal heat output and minimum continuous heat output, 5.10.4.2 Emissions at minimum heat output at intermittent operation	To be measured in continuous operation mode or alternatively in intermittent operation mode
Emissions at 50 % of the rated heat output	CEN	EN303-5:2012, 5.10.4.1	
Intermittent operation mode	CEN	EN303-5:2012, 3.13 Intermittent operation	Only complete on-off phases shall be considered
Heat loss	CEN	EN303-5:2012, 5.10.3.2 Indirect method	Corresponds to q_S, but relative to the heat input expressed in gross

Parameter	Organisation	Reference/Title	Notes
			calorific value
Solid fuel cogeneration boilers			
Electrical capacity	CENELEC	EN50465:2008, Gas appliances — Combined Heat and Power appliance of nominal heat input inferior or equal to 70 kW, 3.5.2.4 nominal electric output	Corresponds to $P_{el\,n}$

* all references to EN303-5:2012 also apply to solid fuel boilers with a rated heat output of higher than 500 kW up to 1000 kW and condensing boilers, even though these do not fall within the scope of that standard.

2. Correction for the influence of the nitrogen content of the fuel for the purposes of NO_x emissions

$$NO_x = NO_{x,\,meas} - (0.1 \bullet N_{meas} \bullet (N_{meas}/10000)^{-0.5} - 0.1 \bullet N_{ref} \bullet (N_{ref}/10000)^{-0.5}) \bullet 0.4$$

where:

(1) NO_x is the emission of nitrogen oxides, expressed in mg/m^3;

(2) $NO_{x,\,meas}$ is the measured emission of nitrogen oxides, expressed in mg/m^3;

(3) N_{meas} is the nitrogen content of the fuel, measured in mg/kg dry fuel;

(4) N_{ref} is the reference value for nitrogen content of solid fuel; N_{ref} = 1000 mg/kg dry fuel.