Energy Resources Regulations (Examining the efficient combustion of Oil or Gas Heaters), 5764-2004

Published in Volume of Regulations 5764, page 136

By virtue of my authority pursuant to section 3 of the Energy Resources Law, 5740 - 1989[1], and with the approval of the Knesset Finance Committee, I hereby enact the following regulations:

[1] Book of Laws 5740, page 28.

Definitions	1.	In these regulations -	
		"Examiner" -	A person whom the commissioner permits to conduct burning efficiency tests in accordance with these regulations;
		"Gas" -	Liquefied petroleum gas, natural gas or gas obtained from fermentation processes that use flammable substances to light a heater;
		"Exhaust gases"	Product of burning substances that ignite the heater;
		"Heater" -	A boiler or generator for hot water, hot air or thermal oil with an output greater than 580 kilowatt (500,000 Kca"l/per hour heated by liquid oil or gas;
		"Standard" -	Israeli Standard 1676 "Heating devices for hot water"[2].
Burning efficiency test	**2.**	(A)	Burning efficiency of a heater must be inspected by an examiner once every 14 months.
		(B)	The test stated in sub regulation (A) (hereinafter - the Test) shall be performed when the burner is operating at a high flame and the amount of soot in the exhaust gases leaving the boiler is minimal; the test data will contain the temperature of the exhaust gases, the surrounding temperature, and the percentage of carbon dioxide.
		(C)	Burning efficiency shall be calculated by the loss of heat in the exhaust gases, according to section 10.1.1 of the Standard. If an inspection system for exhaust gases exists at the site of the heater, then the calculation shall be made according to the system's data.
		(D)	The examiner will send the results of the test to the commissioner within 30 days from the date the test was performed, on the form found in the Schedule.
		(E)	If the findings of the test indicate that the burning efficiency is less than 83% for water heaters and 80% for thermal oil and hot air heaters, the owner of the heater will improve the efficiency and perform a repeat efficiency test by an examiner within three months from the date the previous test was performed.

[2] Official Announcements Gazette 5763, page 1537.

Supervision	3.	The commissioner may enter any site in which a heater is being operated in order to check the burning efficiency and to check the reliability of the test findings.
Duty to comply with the provisions	4.	The owner of the heater is responsible for compliance with regulation 2 as well as any person, who is not an employee of the owner of the heater, whose services were hired in order to operate or maintain the heater.
Effectiveness	5.	These regulations shall enter into effect 3 months from the date of their publication.

State of Israel
Ministry of National Infrastructures
Resources Infrastructure Management Department

Schedule
(Regulation 2(D))

Serial number of the report

Report of a burning efficiency test of a heater

Part 1 - Descriptions

1. Particulars of the energy consumer:

(A) Full name _____

(B) Address where the heater is installed _____

(C) Address of the office _____ Telephone _____ Fax_____ Email ___

2. Description of the heater:

(A) Type of heating element _____ Manufacture date _____
(B) Manufacturer _____Model _____
(C) Manufacturer number _____
(E) Symbol in the factory _____
(F) Type of burner _____

3. Operational details

(A) Heater supply _____ קק"ל /per hour
(B) Temperature of the heating element _____ C^0
(C) Hours of operation per year _____ hours
(D) Type of oil _____
(E) Fuel consumption _____ ton/year

4. Details of the previous test: (was the burner replaced since the last test?: yes/no)

Name of the inspector _____ Date of the test _____
Combustion efficiency _____ Serial number of the report _____
Name of consumer and address where the heater was installed at the time of the previous test: _____

Part 2

5. The test and results

(A) Date of the test _____

(B) Temperature of the surrounding air (entrance to the burner) _____

(C) Temperature of the burning gases (exiting to the chimney) _____

(D) Percentage of CO_2 ____%_____

(E) Amount of soot according to the Bachrach table _____

(F) Combustion efficiency (the combustion efficiency will be calculated as enumerated in section 10.1.1 of the Standard) _____%

Part 3 - <u>Findings and recommendations to improve the combustion efficiency</u>

6. <u>Findings</u>

(A) Actual energy loss (combustion efficiency that was measured minus the desired efficiency) _____%

(B) Energy loss in tons of fuel per year: _____

Desired combustion efficiency: 83% for hot water heaters and 80% for thermal oil and hot air heaters

7. Recommendations to improve the combustion efficiency

_____

_____

_____

<u>Part 4</u>

8. Particulars of the inspector

Name of the inspector _____ Address _____

Telephone _____ Fax _____

Date the report was issued _____ Signature of inspector _____