

**AIR POLLUTION CONTROL (DUST AND GRIT EMISSION) REGULATIONS  
- CHAPTER 311B**

LONG TITLE

Empowering section VerDate:30/06/1997

(Cap 311 section 43)

[1 January 1974]

(Originally L.N. 190 of 1973)

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Note:

These regulations were made under the repealed Clean Air Ordinance and, by virtue of section 36(1) of the Interpretation and General Clauses Ordinance (Cap 1), continue to have the like effect as if they had been made under the present Air Pollution Control Ordinance (Cap 311).

REGULATION 1

Citation VerDate:30/06/1997

These regulations may be cited as the Air Pollution Control (Dust and Grit Emission) Regulations.

(17 of 1983 s. 50; L.N. 262 of 1987)

REGULATION 2

Interpretation VerDate:30/06/1997

In these regulations, unless the context otherwise requires-

"dust" means particles of solid matter which will pass through a sieve of 75 micrometre nominal aperture in conformity with BS 410: 1986 of the British Standards Institution; (L.N. 262 of 1987)

"grit" means particles of solid matter which are retained in a sieve of 75 micrometre nominal aperture in conformity with BS 410: 1986 of the British Standards Institution; (L.N. 262 of 1987)

"person using a liquid fuel" includes a person who is the owner or has possession or control of the burner of the furnace, oven or industrial plant in which the liquid fuel is used;

"rated capacity" in relation to a burner of any furnace, oven or industrial plant means the manufacturer's published capacity rating of the burner or, if such capacity rating is not available, the capacity rating of the burner as measured by a method approved by the Authority; (17 of 1983 s. 50)

"sample" means a gross sample composed of a number of increments taken separately or cumulatively;

"viscosity" in relation to a liquid fuel means the strength or resistance of the liquid fuel offered to shear, such strength or resistance being determined by the rate of flow of the liquid fuel in given circumstances

and at given temperatures expressed in centistokes or by any of the test procedures contained in the First Schedule. (L.N. 262 of 1987)

### REGULATION 3

Provision of sampling points VerDate:30/06/1997

(1) If it appears to the Authority that a sampling point for the purpose of taking samples of dust and grit under regulation 6(1)(a)(i) or

(ii) should be provided he may serve a notice in writing upon the occupier of the premises upon which any furnace, oven, industrial plant, chimney or flue is situated- (L.N. 262 of 1987)

(a) requiring him, within 60 days of service of the notice or such further period as the Authority may grant, to provide and install at his own cost such sampling point as may be specified in the notice; and

(b) specifying the design and position of the sampling point required to be installed which shall, if provided for the purpose of regulation 6(1)(a)(i) and in so far as is reasonably practicable, comply with Reference Method 5 of the United States of America Environmental Protection Agency for determination of particulate emission from stationary sources. (L.N. 262 of 1987)

(2) If any person fails to comply with the requirements or specifications of a notice served on him under paragraph (1), he shall be guilty of an offence and shall be liable on conviction to a fine of \$5000 and, in addition, to a fine of \$50 for each day during which it is proved that the offence has continued: Provided that if an appeal is made under section 31 of the Ordinance, no offence shall be deemed to have been committed until after such appeal is determined or abandoned.

(17 of 1983 s. 50)

### REGULATION 4

Duties of occupier VerDate:30/06/1997

(1) The occupier of the premises upon which a sampling point is installed shall make provision for safe access to the sampling point and shall maintain the sampling point in good condition.

(2) If any person fails to comply with paragraph (1), he shall be guilty of an offence and shall be liable on conviction to a fine of \$1000.

### REGULATION 5

Use of liquid fuel VerDate:30/06/1997

(1) Except with the written permission of the Authority, no person shall use or cause or permit to be used in a burner of a furnace, oven or industrial plant a liquid fuel with a viscosity when delivered to the burner tip or point of ignition exceeding 30 centistokes or an equivalent viscosity. (17 of 1983 s. 50; L.N. 262 of 1987)

(2) The Authority shall not grant permission under paragraph (1) to use a liquid fuel unless he is satisfied that the use of that fuel in a burner of a furnace, oven or industrial plant will not result in the emission of dark smoke from that furnace, oven or industrial plant. (17 of 1983 s. 50)

(3) Any person who contravenes paragraph (1) shall be guilty of an offence and shall be liable on conviction to a fine of \$5000.

#### REGULATION 6

Power to take samples of dust and grit and take samples of liquid fuel VerDate:30/06/1997

(1) The Authority or an authorized officer may- (17 of 1983 s. 50)

(a) take a sample of dust and grit emitted from any furnace, oven or industrial plant, or passing through any chimney or flue, for the purpose of-

(i) determining the concentration of dust and grit emission; or

(ii) size analysis of the dust and grit emission or determining the relative proportion of dust and grit burden in that emission; and (L.N. 262 of 1987)

(b) take a sample of liquid fuel from any burner of any furnace, oven or industrial plant in which liquid fuel is used, for the purpose of determining the temperature and viscosity of the liquid fuel at the burner tip or the point of ignition.

(2) The Authority or an authorized officer- (17 of 1983 s. 50)

(a) when taking a sample under paragraph (1)(a)(i), shall use the method set out in the Second Schedule;

(b) when taking a sample under paragraph (1)(a)(ii), shall use the method set out in the Third Schedule;

(c) when taking a sample under paragraph (1)(b), shall use the method set out in the Fourth Schedule; and

(d) when determining the temperature of a sample taken under paragraph (1)(b), shall use the method set out in the Fifth Schedule.

(3) The occupier of the premises upon which a sample is taken under paragraph (1)(a) shall be entitled to witness the taking of such sample.

(4) The person using the liquid fuel shall be entitled to witness the taking of a sample under paragraph (1)(b) and the determination of the temperature of such sample.  
(L.N. 262 of 1987)

#### REGULATION 7

Weighing of a sample VerDate:30/06/1997

Where the Authority or an authorized officer takes a sample under regulation 6(1)(a)(ii), he shall weigh the sample as soon as is reasonably practicable and the occupier of the premises upon which the sample is

taken shall be entitled, upon request made to the Authority or authorized officer and at such place and time as the Authority may determine, to witness the weighing of the sample and be informed of the weight.(L.N. 262 of 1987)

#### REGULATION 8

Division of sample VerDate:30/06/1997

(1) The Authority or an authorized officer who takes a sample under regulation 6(1)(a)(ii) or (b) shall divide the sample into three equal parts, each part to be marked and sealed or fastened up in such manner as its nature will permit and if the sample taken is dust or grit or both, it shall not be divided until it has been weighed in accordance with regulation 7. (17 of 1983 s. 50; L.N. 262 of 1987)

(2) When a sample is being divided under paragraph (1)-

(a) the occupier of the premises upon which the sample is taken, if it is dust or grit or both; or

(b) the person using the liquid fuel, if the sample is liquid fuel, shall be entitled to witness the division and thereafter, shall be permitted to select and retain one of the three parts of the sample.

(3) Of the remaining two parts of the sample, the Authority or officer shall submit one to the Government Chemist for- (17 of 1983 s. 50)

(a) size analysis, if it is a sample of dust or grit or both; or

(b) determination of viscosity, if it is a sample of liquid fuel, and shall retain the other.

#### REGULATION 9

Size analysis and viscosity determination of sample VerDate:30/06/1997

When a sample is submitted to the Government Chemist under regulation 8(3), the Government Chemist shall-

(a) if the sample is dust or grit or both-

(i) analyse it for size by such method as he thinks fit;

(ii) issue to the Authority or authorized officer who has submitted the sample, a certificate specifying the results of the size analysis of the sample, which certificate shall be in Form 1 in the Schedule to the Evidence Ordinance (Cap 8); and

(iii) send, free of charge, to the occupier of the premises upon which the sample was taken, a copy of the certificate issued under sub-paragraph (ii); and

(b) if the sample is liquid fuel-

(i) determine its viscosity in accordance with any of the test procedures set out in the First Schedule;

(ii) issue to the Authority or authorized officer who has submitted the sample, a certificate specifying the result of the viscosity determination, which certificate shall be in Form 1 in the Schedule to the Evidence Ordinance (Cap 8); and

(iii) send, free of charge, to the person using the liquid fuel a copy of the certificate issued under sub-paragraph (ii).

(17 of 1983 s. 50)

#### REGULATION 10

Emission of dust or grit VerDate:30/06/1997

If dust or grit is emitted from any furnace, oven, chimney, flue or industrial plant in excess of the limits set out in the Sixth Schedule, the occupier of the premises upon which the furnace, oven, chimney, flue or industrial plant is situated shall be guilty of an offence and shall be liable on conviction to a fine of \$5000 and, in addition, to a fine of \$50 for each day during which it is proved that the offence has continued.

(L.N. 262 of 1987)

#### SCHEDULE 1

TEST PROCEDURES FOR THE DETERMINATION OF VISCOSITY VerDate:30/06/1997

[regulations 2 & 9(b)]

The viscosity of any liquid fuel shall be determined in accordance with-

(a) in the case where it is to be expressed in centistokes, the test procedure laid down under IP 71/84 of the Institute of Petroleum; or

(b) in the case where it is to be expressed in Saybolt Universal seconds, the test procedure laid down under ASTM D88-81 of the American Society for Testing and Materials; or (80 of 1997 s. 102)

(c) in the case where it is to be expressed in Degrees Engler, the test procedure laid down under BS 434: 1984 of the British Standards Institution.

(L.N. 262 of 1987)

#### SCHEDULE 2

METHOD OF TAKING SAMPLE OF DUST AND GRIT VerDate:30/06/1997

[regulation 6(2)(a)]

1. Any sample required to determine the grit or dust burden from any furnace, oven, chimney, flue or industrial plant shall be taken when the appliance or plant is operating under normal running conditions and the period during which the sample is taken may include any period when customary peak loads are experienced.

2. Not less than 8 increments comprising a sample are to be taken from points uniformly distributed across the section of the chimney or flue.

3. The sample is to be taken in accordance with the isokinetic principle.
4. The sample is to be collected in compliance with Reference Methods 5 of the United States of America Environmental Protection Agency for determination of particulate emission from stationary sources. (L.N. 262 of 1987)
5. When 8 or more increments are taken from sampling points at any one cross section of the chimney or flue, the combined increments are to be placed together in one container. (L.N. 262 of 1987)

SCHEDULE 3  
METHOD OF TAKING SAMPLES OF DUST AND GRIT FOR SIZE ANALYSIS OR  
DETERMINATION OF THE RELATIVE PROPORTION OF DUST AND GRIT BURDEN  
VerDate:30/06/1997

[regulation 6(2)(b)]

1. Any sample required for size analysis or determination of the relative proportion of dust and grit burden from any furnace, oven, chimney, flue or industrial plant shall be taken when the appliance or plant is operating under normal running conditions and the period during which the sample is taken may include any period when customary peak loads are experienced.
2. The sample is to be taken in accordance with the isokinetic principle.
3. Not less than 2 increments comprising a sample are to be taken from points across the section of a chimney or flue where the velocity of the dust and grit emission is substantially equal.
4. The sample is to be collected in an inertial separator and followed by an efficient filter to retain the finer particles of dust and grit. (L.N. 262 of 1987)

SCHEDULE 4  
METHOD OF TAKING SAMPLE OF LIQUID FUEL VerDate:30/06/1997

[regulation 6(2)(c)]

1. Before any sample of liquid fuel is taken, a quantity of liquid fuel not less than the fuel consumption of the burner at its full rated capacity for 5 minutes shall be run off or consumed.
2. A sample may be taken-
  - (a) at the burner tip or point of ignition with the furnace, oven or industrial plant not in operation, but with the preheater in commission and fully warmed up; or
  - (b) when the furnace, oven or industrial plant is in operation, from a suitable test draw-off cock situated at the fuel supply line as close as practicable to the point of ignition.

## SCHEDULE 5

### METHOD OF DETERMINING TEMPERATURE OF LIQUID FUEL VerDate:30/06/1997

[regulation 6(2)(d)]

1. The temperature of liquid fuel at the burner tip or point of ignition may be determined by-
  - (a) a mercury-in-glass bulb thermometer;
  - (b) a resistance bulb thermometer; or
  - (c) any other means approved by the Authority. (17 of 1983 s. 50)
2. In the event of dispute, it shall be sufficient to prove accuracy of measurement to a tolerance of not more than one degree Centigrade-
  - (a) in either direction at the operative temperature; or
  - (b) by reference to 2 fixed temperatures such as the temperature of melting ice procured from distilled water and the temperature of boiling distilled water corrected for atmospheric pressure.

## SCHEDULE 6

### LIMITS OF EMISSION OF DUST AND GRIT VerDate:30/06/1997

[regulation 10]

1. If a furnace, oven or industrial plant is burning solid fuel at a rate not exceeding 1000 kg per hour, or if any boiler has a maximum continuous rating not exceeding 7600 kg of steam per hour-
  - (a) the total grit burden shall not exceed 33% of the total dust and grit burden; and
  - (b) the total emission of dust and grit shall not exceed 1.0% of the total fuel fired.
2. If a furnace, oven or industrial plant is burning solid fuel at a rate exceeding 1000 kg per hour, or if any boiler has a maximum continuous rating exceeding 7600 kg of steam per hour-
  - (a) the total grit burden shall not exceed 20% of the total dust and grit burden; and
  - (b) the total emission of dust and grit shall not exceed 0.5% of the total fuel fired.
3. A furnace, oven or industrial plant shall not emit during each hour when the furnace, oven or industrial plant is consuming liquid fuel at the rate specified in the first column of the Table, dust or grit in excess of the percentage of the total fuel fired specified opposite thereto in the second column of that Table.

4. If more than one furnace, oven or industrial plant is connected to a common chimney or flue the total permitted limit of dust and grit burden shall not exceed the sum of the permitted limits for each furnace, oven or industrial plant so connected.

TABLE [paragraph 3]		
Rate of liquid fuel consumption in kilograms per hour		Permitted percentage of total fuel fired
exceeding	0- 1800	0.40
“	1800- 2700]	0.38
“	2700- 4100	0.37
“	4100- 4550	0.36
“	4550- 5000	0.35
“	5000- 6350	0.34
“	6350- 6800	0.33
“	6800- 7700	0.32
“	7700- 8600	0.31
“	8600- 9050	0.30
“	9050-10000	0.29
“	10000-10450	0.28
“	10450-11350	0.27
“	11350-12250	0.26
“	12250	0.24
exceeding over		

(L.N. 262 of 1987)