Ordinance on Prevention of Hazards Due to Dust

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In Japanese

The Ordinance on Prevention of Hazards Due to Dust has been enacted conforming to the Industrial Safety and Health Law (Law No. 57 of 1972) and the Enforcement Ordinance of the Industrial Safety and Health Law (Cabinet Ordinance No. 318 of 1972) in order to enforce the said Law.

Contents

Chapter I. General Provisions (Articles 1 through 3)

<u>Chapter II.</u> Standards for Facilities, etc. (Articles 4 through 10)

<u>Chapter III.</u> Performance, etc., of Facilities (Articles 11 through 16)

<u>Chapter IV.</u> Management (Articles 17 through 24)

<u>Chapter V.</u> Working Environment Measurement (Articles 25 through 26-4)

Chapter VI. Personal Protective Equipment (Article 27)

Supplementary Provisions

Attached Table 1

Attached Table 2

Attached Table 3

Chapter I. General Provisions

(Responsibilities of the Employer)

- **Article 1.** The employer shall endeavor to take measures necessary for protecting workers from health impairments resulting from being exposed to dust, such as an improvement of facilities, processes or methods of work and working environment, etc.
- 2. The employer shall endeavor to take proper measures for supervision of workers' health such as providing for medical examination, changing the workshop or work assignment and reducing working hours to protect the workers from health impairments resulting from being exposed to dust, in addition to observing the provisions of the Pneumoconiosis Law (Law No. 30 of 1960)

and its related ordinances and the Industrial Safety and Health Law (hereinafter referred to as the "Law") and its related ordinances.

(Definitions, etc.)

Article 2. In this Ordinance, the terminology in the following shall be as defined in each respective item:

- (1) "Dusty work" shall be defined as that which corresponds to any item listed in <u>Attached Table 1</u>, except, however, the work which has been authorized by the Director General of the Prefectural Labour Bureau having jurisdiction over the district where the workplace to which the workshop concerned belongs is located (hereinafter referred to as the "Director General of the competent Prefectural Labour Bureau") that it is not necessary to take the measures which are stipulated in this Ordinance from the standpoint of the degree of dust dispersion, work processes, etc., of the said workshop.
- (2) "Specific dust source" shall be defined as that listed in Attached Table 2.
- (3) "Specific dusty work" shall be defined as that among dusty work which has been caused by a specific dust source.
- 2. The employer who intends to obtain the authorization stipulated in the proviso in item 1 of preceding paragraph 1 shall submit the Application for the Authorization of Non-dusty work (Form No. 1) to the Director General of the Prefectural Labour Bureau through the Chief of the Labour Standards Inspection Office which has jurisdiction over the district where the workplace to which the workshop concerned of the enterprise is belonged is located (hereinafter referred to as the "Chief of the competent Labour Standards Inspection Office").
- 3. The following materials regarding the said workshop shall be attached to the application for the authorization of non-dusty work as specified in the preceding item.
- (1) Sketch of the workshop
- (2) Records of medical examinations on pneumoconiosis maintained under the provisions of paragraph 2 of Article 17 of the Pneumoconiosis Law.
- (3) Document describing the measurement results of dust concentration, method of measurement and conditions of measurement. (When it is clear that the degree of dust dispersion is low, such a document shall not be necessary).
- 4. When the Director General of the competent Prefectural Labour Bureau received the application for authorization of non-dusty work specified in paragraph 2, he shall decide whether the authorization specified in the proviso in item 1 of paragraph 1 shall be granted or not and shall notify in writing, without delay, the result of the decision to the employer concerned.

- 5. When the employer who has been authorized under the provision of the proviso in item 1 of paragraph 1 alters the contents in the application for the authorization of non-dusty work specified in paragraph 2 or the sketch of the workshop specified in item 1 of paragraph 3, or the worker or workers who have engaged in the authorized work have been diagnosed as a case or suspected case of the disease resulting from inhalation of dust by the medical examination, etc., provided for in paragraph 1 or 2 of Article 66 of the Law, he shall submit the report to the Director General of the competent Prefectural Labour Bureau through the Chief of the competent Labour Standards Inspection Office.
- 6. When the Director General of the competent Prefectural Labour Bureau does not determine that it is not necessary to take measures stipulated in this Ministry Ordinance for the work relating to the authorization specified in the proviso in item 1 of paragraph 1 from the points of view of the degree of dust dispersion, work processes, etc., in the workshop, he shall cancel, without delay, the authorization concerned.

(Exemption for Water or Oil Sprinkling by Equipment)

- **Article 3.** When the following types of work are carried out with water or oil sprinkling by equipment, the following Chapter through Chapter 6 shall not be applied to such works:
- (1) Work in places where soil, sand, stones, rocks or minerals (hereinafter referred to as "minerals, etc.") are screened in a pit, from among those specified in item 3 of Attached Table 1.
- (2) Work specified in item 6 of Attached Table 1.
- (3) Work in a place where rocks, minerals or metals are ground or burrs are removed or metals are cut by using power and abrasion, from among those specified in item 7 of Attached Table 1.
- (4) The following types of work from among those specified in item 8 of Attached Table 1:
- a) Work in a place where minerals, etc., or raw materials containing mainly carbon (hereinafter referred to as "carbonic raw material") are screened by power.
- b) Work in a place where minerals, etc., or carbonic raw materials are crushed or pulverized by power outdoors.
- (5) Work in a place where sand is reused, from among those specified in item 15 of Attached Table 1.

Chapter II. Standards for Facilities, etc.

(Measures Relating to Specific Dust Sources)

Article 4. The employer shall take one of the measures listed in the right column of the following table or equivalent or higher measures for the corresponding specific dust sources

listed in the left column of the same table to prevent the dust dispersion in the specific dust sources.

Specific dust source	Measures
1. A place listed in item 1 of Attached Table 2 (but limited to a place where excavation is carried out using percussion drills).	The percussion drill to be used in such a place shall be of a wet type.
2. A place listed in items 1, 3 and 4 of Attached Table 2. (For a place listed in item 1 of Attached Table 2, a place where excavation is carried out using percussion drills shall be excluded.)	A wetting device shall be installed.
3. A place listed in item 2 of Attached Table 2.	 A enclosure facility shall be installed. A wetting device shall be installed.
4. A place listed in items 5, 7 and 13 of Attached Table 2 (For places listed in item 7 of Attached Table 2, places where machinery with revolving parts, such as a grinder or a drum sander, etc., is used to grind or deflash rock, minerals or metals and places where metal is cut shall be excluded.)	 A local exhaust ventilation system shall be installed. A push-pull type ventilation system shall be installed. A wetting device shall be installed.
5. A place listed in items 6, 8, 14 of Attached Table 2.(A place listed in item 8 of Attached Table 2 shall be limited to the crushing, pulverizing or screening of aluminum foils and places listed in item 14 of the same Table shall be limited to the reuse of sand.)	 An enclosure facility shall be installed. A local exhaust ventilation system shall be installed.
	 A local exhaust ventilation system shall be installed. A wetting device shall be installed.
7. A place listed in item 8 of Attached Table 2. (the place where aluminum foils are crushed, pulverized or screened shall be excluded.)	 An enclosure facility shall be installed. A local exhaust ventilation system shall be installed. A wetting device shall be installed.
8. The place listed in items 9 and 12 of Attached Table 2.9. The places listed in items 10 and 11	 A local exhaust ventilation system shall be installed. A push-pull type ventilation system shall be installed. An enclosure facility shall be installed.
9. The places listed in items 10 and 11	1. An enclosure facility shall be installed.

of Attached Table 2.	2. A local exhaust ventilation system shall be installed.
	3. A push-pull type ventilation system shall be installed.
	4. A wetting device shall be installed
10. Places listed in items 14 and 15 of	1. An enclosure facility shall be installed.
Attached Table 2 (Places listed in item	2. A local exhaust ventilation system shall be installed.
14 of Attached Table 2 shall exclude	3. A push-pull type ventilation system shall be installed.
places where sand is reused.)	

(Ventilating, etc.)

Article 5. For an indoor workshop in which dusty work other than specific dusty work is performed, the employer shall ventilate with a general ventilation system or take equivalent or higher measures than the above system to reduce dust produced by the dusty work.

Article 6. For a workshop in a pit in which dusty work other than specific dusty work is operated, the employer shall ventilate with a ventilation device or take equivalent or higher measures than the above device to reduce dust produced by the dusty work.

(Exemption of Application to Temporary Operations of Dusty Work)

Article 7. Provisions of <u>Article 4</u> shall not be applied to any case listed in each item of the following, provided that effective personal respiratory protective equipment is used by each worker who is engaged in specific dusty work:

- (1) Where temporary specific dusty work is carried out.
- (2) Where the period of specific dusty work relating to the same specific dust source is short.
- (3) Where the time of specific dusty work relating to the same specific dust source is short.
- 2. The preceding two Articles shall not be applied to any case listed in each item of the following, provided that effective respiratory protective equipment is used for each worker who is engaged in the dusty work:
- (1) Where temporary dusty work, other than specific dusty work is carried out.
- (2) Where the period of dusty work other than the specific work done in the same workshop is short.
- (3) Where the time of dusty work other than the specific work done in the same workshop is short.

(Exemption of Application to Specific Dusty Work Using a Grinding Wheel)

Article 8. The provisions of <u>Article 4</u> shall not be applied to any case listed in each item of the following, provided that effective respiratory protective equipment is used for each worker who

is engaged in specific dusty work. In this case, the employer shall ventilate the indoor workshop with a general ventilation system and the workshop in a pit with a ventilation device:

- (1) Specific dusty work using a grinding wheel having a diameter of less than 300 mm before the use.
- (2) Specific dusty work using a crusher or pulverizer having a maximum crushing capacity of less than 20 kg/hr.
- (3) Specific dusty work using a screening machine having a screen area of less than 700 cm².
- (4) Specific dusty work using a mixer having an inner volume of less than 18 liters.

(Exemption of Application to the Workshop in which no Facility, etc., Can Be Installed Due to the Structure of the Workshop)

- **Article 9.** When the Chief of the competent Labour Standards Inspection Office authorizes that it is excessively difficult to take measures stipulated in <u>Article 4</u> due to the structure of the workshop, nature of the work, etc., in carrying out the specific dusty work, the provisions of Article 4 shall not be applied. In this case, the employer shall let the workers who are engaged in specific dusty work use effective personal respiratory protective equipment and shall ventilate the indoor workshop with a general ventilation system and the workshop in a pit with a ventilation device.
- 2. When the employer intends to obtain the authorization stipulated in the preceding paragraph, the Application for Authorizing the Partial Exemption of the Ordinance on Prevention of Hazards Due to Dust (Form No. 2) along with a sketch of the workshop concerned shall be submitted to the Chief of the competent Labour Standards Inspection Office.
- 3. When the Chief of the competent Labour Standards Inspection Office receives the Application for Authorizing the Partial Exemption of the Ordinance on Prevention of Hazards Due to Dust stipulated in the preceding paragraph, he shall make a decision whether the authorization stipulated in paragraph 1 shall be granted or not and notify in writing, without delay, the result of the decision to the employer concerned.
- 4. When the employer who has been authorized under paragraph 1 alters the contents of the Application for Authorizing the Partial Exemption of the Ordinance on Prevention of Hazards Due to Dust stipulated in paragraph 2 and the sketch of the workshop, he shall submit a report on the change, without delay, to the Chief of the competent Labour Standard Inspection Office.
- 5. When the Chief of the competent Labour Standards Inspection Office does not determine that it is extremely difficult to take measures stipulated in Article 4 due to the structure of the workshop, nature of the work, etc., in carrying out the specific dusty work concerning the authorization under paragraph 1, he shall cancel, without delay, the authorization concerned.

(Installation of a Dust Collector)

- **Article 10.** The employer shall install dust collector for the specific dust sources listed in items 6 through 9 and items 14 and 15 in <u>Attached Table 2</u> from among the local exhaust ventilation systems stipulated in the provisions of <u>Article 4</u>. (With reference to the specific dust sources (in accordance with the provisions in the preceding three Articles, the specific dust source concerning the specific dusty work to which the provision of <u>Article 4</u> is not applied shall be excluded) listed in item 7 in Attached Table 2, only limited to the cases where the number of specific dust sources per one workplace is ten or more.
- 2. The employer shall install dust collector for the specific dust sources listed in items 7, 9, 14 and 15 of <u>Attached Table 2</u> from among the push-pull type ventilation systems stipulated in the provisions of <u>Article 4</u>. For specific dust sources listed in item 7 of <u>Attached Table 2</u>, this shall be limited to cases where there are ten or more specific dust sources in one workplace (under the provisions of the three preceding Articles, specific dust sources related to specific dusty work where the provisions of <u>Article 4</u> do not apply shall be excluded.)

Chapter III. Performance, etc., of Facilities

(Requirements for Local Exhaust Ventilation Systems)

- **Article 11.** The local exhaust ventilation system to be installed in accordance with the provisions of <u>Article 4</u> and the proviso in <u>paragraph 1 of Article 27</u> shall comply with the following provisions:
- (1) A hood shall be installed for each dust source. For a hood of the outside mounting type, it shall be installed as closely to the dust source as possible.
- (2) Ducts shall be designed with the shortest possible length, the fewest possible number of bends and the installation of holes for cleaning in suitable places, etc., for easy cleaning.
- (3) The exhaust fan of the local exhaust ventilation system installed with a dust collector under the provisions of paragraph 1 of the preceding Article shall be installed at the location where cleaned air flows. However, this shall not apply to the case that there is no possibility of an explosion due to dust sucked in and no possibility of corrosion or abrasion of the fan.
- (4) The exhaust outlet shall be installed outdoors. However, this shall not apply to the movable local exhaust ventilation system or the local exhaust ventilation system to be installed in the specific dust source listed in item 7 of <u>Attached Table 2</u> with which a dust collector of the filter dust collecting type or electrical dust precipitation type is provided.
- (5) Requirements specified by the Minister of Health, Labour and Welfare shall be satisfied.
- 2. A push-pull type ventilation system installed under the provisions of <u>Article 4</u> or the proviso of <u>paragraph 1 of Article 27</u> shall comply with the following provisions.
- (1) The ducts shall be designed with the shortest possible length, the fewest possible number of bends and the installation of holes for cleaning in suitable locations, etc., for easy cleaning.

- (2) The exhaust fan of the push-pull type ventilation system installed with a dust collector under the provisions of paragraph 2 of the preceding Article shall be installed at the location where cleaned air flows. However, this shall not apply to the case that there is no possibility of an explosion due to dust sucked in and no possibility of corrosion or abrasion of the fan.
- (3) The exhaust outlet shall be installed outdoors. However, this shall not apply to a push-pull type ventilation system to be installed in the specific dust source listed in item 7 of <u>Attached</u> <u>Table 2</u> with a filter dust collecting type or an electrical dust precipitation collecting type of dust collector.
- (4) Requirements specified by the Minister of Health, Labour and Welfare shall be satisfied.

(Operation of Local Exhaust Ventilation System)

- **Article 12.** With reference to the local exhaust ventilation system which has been installed in accordance with the provisions of <u>Article 4</u> and the proviso in <u>paragraph 1 of Article 27</u>, the employer shall operate such a system during the period of the dusty work concerning the local exhaust ventilation system concerned so as to satisfy the requirements of the Minister of Health, Labour and Welfare.
- 2. The provisions of the preceding paragraph shall apply mutatis mutandis to push-pull type ventilation systems installed under the provisions of <u>Article 4</u> or the proviso in <u>paragraph 1 of Article 27</u>.

(Dust Collection)

Article 13. The dust collector to be installed in accordance with the provisions of <u>Article 10</u>, shall be any one of the types listed in the right column of the following Table or those having the equivalent or higher performance corresponding to each type of dust listed in the left column of the same Table.

Kind of dust	Type of dust exclusion system
Fumes	Filter type dust collection
	Electrical dust precipitation type
Dust other than fumes	Cyclone type dust collection
	Scrubber type dust collection
	Filter type dust collection
	Electrical dust precipitation type

2. With reference to the dust collectors specified in the preceding paragraph, the employer shall install, as necessary, a front placed dust collector to collect the dust having a large diameter.

(Operation of Dust Collector)

Article 14. The employer shall operate effectively the dust collector which has been installed in accordance with the provisions of <u>Article 10</u> while the local exhaust ventilation system or the push-pull type ventilation system relative to the dust collector concerned is operated.

(Water Feeding to Wet Type Percussion Drill)

Article 15. The employer shall effectively feed water to the wet type percussion drill which has been installed in accordance with the provisions of <u>Article 4</u> while specific dusty work relative to the percussion type drill concerned is being carried out.

(Wetting by Wetting Device)

Article 16. The employer shall keep the dust source wet by using a wetting device for dust sources which has been installed in accordance with the provisions of <u>Article 4</u> or the proviso in <u>paragraph 1 of Article 27</u> while the dusty work related to the wetting device concerned is being carried out.

Chapter IV. Management

(Periodical Voluntary Inspection of Local Exhaust Ventilation Systems, etc.)

- **Article 17.** The local exhaust ventilation system, push-pull type ventilation system and dust collector provided for by the Ministry of Health, Labour and Welfare Ordinance based on item 8 of paragraph 1 of Article 15 of the Enforcement Order of the Industrial Safety and Health Law (hereinafter referred to as the "Cabinet Order") (limited to those relating to dusty works) shall be defined as the local exhaust ventilation system and push-pull type ventilation system to be installed in accordance with the provisions of Article 4 and the provisions of Article 10.
- 2. The employer shall make a periodical voluntary inspection at least once a year of the local exhaust ventilation system, push-pull type ventilation system and dust collector stipulated in the preceding paragraph on each item of the following in conformity with the type of equipment described in each item. However, this provision shall not apply to equipment not in use for a period exceeding one year, but this shall be limited to the term during which the equipment has not been used:
- (1) Local exhaust ventilation system
- a) Wear, corrosion, dents and other damage and their degree in the hood, ducts and fan.
- b) Accumulation of dust in ducts and exhaust fan.
- c) Loosening of duct joints.
- d) Operating status of belts which link motors with fans.

- e) Air suction and exhaust capacity.
- f) In addition to the items listed in a) through e), other items necessary for maintaining performance.
- (2) Push-pull type ventilation system
- a) Wear, corrosion, dents and other damage and its extent in the hood, ducts and fan.
- b) Accumulation of dust in ducts and exhaust fan
- c) Loosening of duct joints
- d) Operating status of belts which link motors with fans.
- e) Air supply, air suction and exhaust capacity
- f) In addition to the items listed in a) through e), other items necessary for maintaining performance.
- (3) Dust collector
- a) Wear, corrosion and breakage and their degrees in the parts of the structure.
- b) Accumulation of dust inside of the device.
- c) For the filter type dust collector, breakage of the filter material and loosening at their fixing parts.
- d) dust collection capacity
- e) In addition to the items listed in a) through d), other items necessary for maintaining performance.
- 3. The employer, before resuming the operation of the equipment stipulated in the proviso of the preceding paragraph, shall make a voluntary inspection of the equipment on each item listed in each item of the same paragraph in conformity with the type of equipment described in each item.

(Records of Periodical Voluntary Inspection)

Article 18. The employer, upon making the voluntary inspection stipulated in paragraph 2 or 3 of the preceding Article shall make a record of the following matters and keep the records for three years:

(1) Date of the inspection

- (2) Method of the inspection
- (3) Parts of the equipment inspected
- (4) Results of the inspection
- (5) Name of the person who made the inspection
- (6) Description of repair, etc., or adjusting steps if such steps were taken as the result of the inspection.

(Inspection)

Article 19. When the local exhaust ventilation system, push-pull type ventilation system or dust collector stipulated in <u>paragraph 1 of Article 17</u> is set in operation for the first time or after modification or repairing by disassembling, the employer shall make an inspection on each item listed in paragraph 2 of the same Article in conformity with the type of equipment described in the said each item.

(Records of Inspection)

Article 20. The employer, upon making the inspection stipulated in the preceding Article shall make a record of the following matters and keep the records for three years:

- (1) Date of the inspection
- (2) Method of the inspection
- (3) Parts of the equipment inspected
- (4) Results of the inspection
- (5) Name of the person who made the inspection
- (6) Description of the repair, etc., or adjusting steps if such steps were taken as the result of the inspection.

(Repair, etc.)

Article 21. The employer, if upon conducting the voluntary inspection stipulated in <u>paragraph 2</u> or 3 of <u>Article 17</u> or inspection stipulated in <u>Article 19</u>, he finds any abnormality, shall take immediately necessary measures, such as repair, etc.

(Special Education)

- **Article 22.** The employer shall, when he is to place workers regularly in specific dusty work, conduct special education on the following subjects:
- (1) Methods of preventing the dispersion of dust and ventilating the workshop
- (2) Management of the workshop
- (3) Method of using the respiratory protective equipment
- (4) Diseases relative to dust and supervision of health
- (5) Related laws and ordinances.
- 2. In addition to the items stipulated in <u>Articles 37 and 38 of the Ordinance on Industrial Safety and Health</u> (Ministry of Labour Ordinance No. 32 of 1972, hereinafter referred to as the "Safety and Health Ordinance") and the preceding Article, other items necessary for conducting the special education described in the same Article shall be provided for by the Minister of Health, Labour and Welfare.

(Rest Facilities)

- **Article 23.** The employer shall, when he is to place workers in the dusty work, provide rest facilities outside the workshop where the dusty work is carried out. However, this provision shall not apply to a case when there is an inevitable reason that the above cannot be satisfied because the workshop is located in a special place, such as a pit, etc.
- 2. The employer shall provide the rest facilities stipulated in the preceding Article with an appliance which can remove dust from overalls, etc., of workers.
- 3. When workers were engaged in dusty work, they shall remove dust from their overalls, etc., before using the rest facilities stipulated in paragraph 1.

(Cleaning)

- **Article 24.** The employer shall clean the indoor workshop where dusty work is carried out at least once a day.
- 2. To remove accumulated dust, the employer shall clean periodically at least once a month the floor of the indoor workshop where dusty work is carried out, equipment, etc., and the floor (only limited to the inside of a building) of the place where rest facilities stipulated in paragraph 1 of the preceding Article are installed by using a means which does not disperse dust, such as a vacuum cleaner, washing by water, etc. However, other cleaning measures may be used when it is difficult to take means which do not disperse dust and effective respiratory protective equipment is used for each worker who is engaged in the cleaning.

Chapter V. Working Environment Measurement

(Indoor Workshop Requiring Working Environment Measurement)

Article 25. The indoor workshop which disperses excessively dust of soil, stone, rock, mineral, metal or carbon provided for by the Ministry of Health, Labour and Welfare Ordinance based on item 1 of <u>Article 21 of the Cabinet Order</u> shall be defined as an indoor workshop in which specific dusty work is regularly carried out.

(Measurement of Dust Concentration, etc.)

Article 26. The employer shall measure the concentration of dust in the air periodically at least once in every six months in the indoor workshop stipulated in the preceding Article.

- 2. The employer shall, when conducting the measurements stipulated in the preceding paragraph in an indoor workshop where dusty work related to soil, stones, rocks or minerals from among the workshops stipulated in the preceding article is concerned, measure the free silica content in the dust. However, this provision shall not apply to the case where the free silica content in the soil, stones, rocks or minerals is clearly known.
- 3. The employer shall, when he conducts the measurement stipulated in preceding two paragraphs make a record of the following matters each time and keep the records for seven years:
- (1) Date and time of measurements
- (2) Method of measurement
- (3) Places of measurement
- (4) Conditions of measurement
- (5) Results of the measurements
- (6) Name of person who made the measurements
- (7) Description of the improvement measures if such measures were taken as the results of the measurements.

(Evaluation of Result of Measurement)

Article 26-2. When the measurement conforming to the provision of paragraph 1 or paragraph 2 of the preceding article or provision of <u>paragraph 5 of Article 65 of the Law</u> has been made as to the indoor workplace designated in <u>Article 25</u>, the employer shall promptly evaluate the result of the measurement by rating the condition of such workplace into the Control Class 1, Control Class 2 and Control Class 3 depending on the condition of the control of the working environment for each of such measurement.

- 2. When the measurement conforming to the provision of the preceding paragraph has been made, the employer shall make the records of the following matters and keep them at least seven years:
- (1) Date and time of evaluation
- (2) Place where the evaluation was made
- (3) Result of evaluation
- (4) Name of the evaluator.

(Measures Based on the Result of Evaluation)

- **Article 26-3.** For the area of the workplace rated as a Control Class 3 as the result of the evaluation conforming to the provision of paragraph 1 of the preceding article, the employer shall promptly review the facilities, equipment, work process and work procedure and take the measures necessary for the installation of the facilities and equipment, improvement of the work processes and procedure and other measures for improving the working environment based on the result of such a review in order to upgrade the condition of said section of workplace to Control Class 1 or Control Class 2.
- 2. When the measures conforming to the provision of the preceding paragraph have been taken, the employer shall measure the concentration of the dust in the area designated in the said paragraph and evaluate the result of the measurement in order to evaluate the effect of the said measures.
- 3. Other than conforming to what is provided for in the preceding two paragraphs, the employer shall have the workers who are to work in the place designated in paragraph 1 use the effective respiratory protective equipment and take the measures necessary for maintaining the health of the workers such as medical examinations, etc.
- **Article 26-4.** For the area of the workplace rated as a Control Class 2 workplace based on the result of the evaluation conforming to the provision of <u>paragraph 1 of Article 26-2</u>, the employer shall endevour to review the existing facilities, equipment, work processes and work procedure and take the measures necessary for the installation of the facilities and equipment, improvement of the work processes and work procedures and other measures for improving the working environment based on the results of the review.

Chapter VI. Personal Protective Equipment

(Use of Respiratory Protective Equipment)

Article 27. The employer whose workers engage in the work designated in Table 3 (not including the cases falling under the categories of the items of paragraph 1 or paragraph 2 of <u>Article 7</u>) shall have such workers use effective respiratory protective equipment (restricted to

air-supplied respirators or air respirators for workers to engage in the work designated in item 5 of <u>Table 3</u>) except where a dust source enclosure system or local exhaust ventilation system or push-pull type ventilation system or a humidifying system for dust sources related to the said work is provided which effectively prevents the dispersal of dust related to said work.

2. Workers shall, when they are instructed to use respiratory protective equipment in accordance with the provisions of <u>Articles 7</u>, <u>8</u>, <u>paragraph 1 of Article 9</u>, the proviso of <u>paragraph 2 of Article 24</u> and the preceding paragraph, use this respiratory protective equipment.

Attached Table 1 (Refer to Article 2)

- 1. Work at an operation site involving excavation of minerals, etc. (except wet soil and sand). The work listed below is excluded.
- a) Work at an operation site, out of a pit, involving boring by the wet method of minerals, etc.
- b) Work at an operations site, in the open air, involving excavation of minerals, etc., without employing motive power or blast.
- 2. Work at an operations site involving unloading of minerals, etc. (except wet ones) by tipping or tipping over the rack of a truck loaded with minerals, etc. (except wet ones) (except work listed in item 3, 9 or 18).
- 3. Work at an operations site involving cutting, crushing, screening, loading or unloading of minerals, etc., in a pit. Work listed below is excluded.
- a) Work at an operations site involving loading or unloading of wet minerals, etc.
- b) Work at an operations site involving cutting, crushing or screening in water.
- 4. Work on the conveying of minerals, etc.(except wet ones) in a pit. Work on the driving of a traction engine of trucks loaded with minerals, etc. is excluded.
- 5. Work at an operations site involving filling up of excavations with mineral, etc. (except wet ones) or sprinkling dust in a pit.
- 5-2. Work of removing, evacuating, checking or repairing machines or electric equipment attached or accumulated with dust in a pit close to the places as provided for in item 1 to 3 and the preceding item.
- 6. Work at an operations site involving cutting, chiseling or finishing of rocks or minerals (except work listed in item 13), excluding work at an operations site involving cutting or finishing with flames.

- 7. Work at an operations site involving grinding by spraying abrasives or work at an operations site involving grinding or deflashing of rocks, minerals or metals, or cutting of metal by motive power with abrasives (except work listed in the preceding item).
- 8. Work at an operations site involving cutting, crushing or screening of minerals, etc., carbonic raw material, or aluminum foil, by motive power (except work listed in item 3, 15 or 19), excluding work at an operations site involving cutting, crushing or screening by motive power in the water or oil
- 9. Work at an operations site involving drying, packing into bags, loading or unloading of cement, fly-ash, or pulverized ore, carbonic raw materials or carbonic products (except work listed in item 3, 16 or 18).
- 10. Work at an operations site involving packing of pulverized aluminum or titanium oxide into bags.
- 11. Work at an operations site involving mixing, adding or sprinkling of pulverized ore, carbonic raw materials or any other material containing them in the process of manufacturing or processing products for which pulverized ore or carbonic raw material is used as raw material or material (except work listed in items 12 to 14).
- 12. Work at an operations site involving mixing raw material, or supplying a melting furnace with raw material or mixture, in the process of manufacturing glass or enamel. Work at an operations site involving mixing raw materials in water is excluded.
- 13. Work at an operations site involving mixing or shaping raw materials, drying raw materials or unfinished products, loading carts with unfinished products or unloading from the carts, finishing or packing unfinished or manufactured products, or work of entering into a kiln, in the process of manufacturing ceramic ware, refractory materials, diatomaceous earthenware or abrasives. Work listed below is excluded:
- a) Work at an operations site involving pouring and shaping raw materials, finishing unfinished products before being placed into the kiln, or packing manufactured products, in the process of manufacturing ceramic ware;
- b) Work at an operations site involving mixing raw materials in water.
- 14. Work at an operations site involving mixing or shaping carbonic raw materials, placing unfinished products into kilns, removing unfinished or manufactured products from kilns or finishing those products, in the process of manufacturing carbonic products. Work at an operations site involving mixing raw materials in water is excluded.
- 15. Work at an operations site involving breaking of sand-molds, cleaning of castings, reclaiming of sand, tempering of sand or scraping off of flashes (except work listed in item 7) in the process of manufacturing castings with sand-molds. Work at an operations site involving reuse of sand in the water is excluded.

- 16. Work of scraping off minerals, etc. (except wet ones) or scratching them off in the hatch of a ship which carries minerals, etc. (except wet ones).
- 17. Work at an operations site involving supplying a blast furnace with soil, sand, ores or minerals, reducing of them, steaming or casting in, in the process of smelting or melting metals or other inorganic material. Work at an operations site involving steaming out of a converter or casting in a metal mold is excluded.
- 18. Work at an operations site involving scraping off, scratching up, loading or unloading or putting into vessels slag or ash adhering to or accumulating inside a furnace, flue, chimney, etc., or in the process of the combustion of pulverised ores or in the process of smelting or melting metals or other inorganic material.
- 19. Work of building or repairing of kilns, furnaces, etc., with refractory materials, or of dismantling or destroying kilns, furnaces, etc., built with refractory materials.
- 20. Work of cutting metals by means of melting, arc welding of metals or gouging metals with an arc indoors, in a pit or inside of the tank, vessel, pipes or vehicles, etc. Work of cutting automatically by means of melting, or of automatic welding indoors is excluded.
- 21. Work at a site of metal spraying operations.
- 22. Work at a site of operation involving warehousing of rushes covered with soil for dyeing, taking it out from the warehouse, selecting or regulating it, or weaving with it.
- 23. Work at an operations site involving unloading of ballast from hopper cars, or tamping of soil of a road with a multiple-tamper, in a long and large tunnel (meaning the one stipulated in item 23 of the Attached Table of the Enforcement Ordinance of the Pneumoconiosis Law (Ministry of Labour Ordinance No. 6 of 1960); also applicable to the case in item 17 of Attached Table 3).

Attached Table 2 (Refer to Article 2, 4, 10 and 11)

- 1. Place where minerals, etc., are power-excavated in a pit from among those dust sources relating to the works stipulated in item 1 of Attached Table I.
- 2. Place where minerals, etc., are cut, crushed, or screened by power (excluding hand-held type power tools) from among those dust sources relating to the works stipulated in item 3 of Abashed Table 1.
- 3. Place where minerals, etc., are loaded on or unloaded by vehicle-type construction machines, such as muck loaders, etc., from among those dust sources relating to the works stipulated in item 3 of Attached Table 1.
- 4. Place where minerals, etc., are loaded on conveyers (excluding portable ones, hereinafter, same applies in this item) or unloaded from conveyers (excluding the places which are stipulated

in the preceding items from among those dust sources relating to the works stipulated in item 3 of Attached Table 1.

- 5. Place where rocks or minerals are cut, chiseled or finished indoors by power (excluding handheld or portable type power tools) from among those dust sources relating to the works stipulated in item 6 of Attached Table 1.
- 6. Place where grinding is made by blowing abrasions or rocks or minerals are chiseled indoors from among those dust sources relating to the works stipulated in item 6 or 7 of Attached Table 1.
- 7. Place where rocks, minerals or metals are ground or deburring is made or metals are cut by using abrasions and power (excluding hand-held or portable type power tools) indoors from among those dust sources relating to the works stipulated in item 7 of Attached Table 1.
- 8. Place where minerals, etc., carbonic materials or aluminum foils are cut, crushed or screened indoors by power (excluding hand-held or portable type power tools) from among those dust sources relating to the works stipulated in item 8 of Attached Table 1.
- 9. Place where cement, fly-ash or pulverized ore, carbonic raw materials, carbonic products, aluminum or titanium dioxide are bagged indoors from among dust sources relating to the works stipulated in item 9 or 10 of Attached Table 1,
- 10. Place where pulverized ore, carbonic raw materials or materials containing the above are mixed, added or spread indoors from among dust sources relating to work stipulated in item 11 of Attached Table 1.
- 11. Place where raw materials are mixed indoors from among dust sources relating to the work stipulated in items 12 through 14 of Attached Table 1.
- 12. Place where raw materials (excluding wet ones) are formed by power during the processes to manufacture fire bricks or tiles indoors from among dust sources relating to the work stipulated in item 13 of Attached Table 1.
- 13. Place where unfinished products or manufactured products are finished by power (except hand-held type power tools) indoors from among dust sources relating to the work stipulated in item 13 or 14 in Attached Table 1.
- 14. Place where sand molds are crushed or sand is removed with a mold crushing device or sand is reused, mixed and kneaded, or casting fins are removed with power (excluding hand-held type power tools) indoors from among dust sources relating to the work stipulated in item 15 of Attached Table 1.
- 15. Place where metals are sprayed by means other than hand-held type sprayer indoors from among dust sources relating to the work stipulated in item 21 of Attached Table 1.

Attached Table 3 (relating to Article 27)

- 1. From among the work stipulated in item 1 of Attached Table 1, work to excavate with a percussion drill outside a pit.
- 2. From among the work stipulated in item 2 or 3 of Attached Table 1, work in a place where minerals, etc., are unloaded from a vehicle by overturning or tilting a loading bed of the vehicle indoors or in a pit.
- 3. The work stipulated in item 5 of Attached Table 1.
- 3-2. The work stipulated in item 5-2 of Attached Table 1.
- 4. From among work stipulated in item 6 of Attached Table 1, the work to cut, chisel or finish rocks or minerals by using hand-held or portable type power tools in a building or pit.
- 5. From among work stipulated in items 6 or 7 of Attached Table 1, the work in a place where grinding is made by blowing abrasions, or rocks or minerals are chiseled outdoors.
- 6. From among work stipulated in item 7 of Attached Table 1, the work to grind rocks, minerals or metals or remove burrs from them or cut metals by , hand-held type or portable power tools (only limited to those using abrasions) indoors , in a pit , tank, ship, pipe, vehicle, etc.
- 7. From among works stipulated in item 3 or 8 of Attached Table 1, the work to cut or crush minerals, etc., carbonic raw materials or aluminum foils by using hand-held type power tools indoors or in a pit.
- 8. From among work stipulated in item 9 of Attached Table 1, the work to enter into an industrial dryer for the purpose of drying cement, fly-ash or pulverized ore, carbonic raw materials or carbonic products, or to load or unload the above materials indoors.
- 9. From among work stipulated in item 13 of Attached Table 1, the work to enter into an industrial dryer or kiln for the purpose of drying raw materials or unfinished products.
- 10. From among work stipulated in item 14 of Attached Table 1, the work to enter into a kiln for the purpose of charging unfinished products into the kiln or discharging unfinished products or manufactured products from the kiln.
- 11. From among work stipulated in item 15 of Attached Table 1, the work to crush sand molds or remove sand by means other than use of mold crushing device, reuse sand by means other than the use of power, or remove casting fins by using hand-held type power tools.
- 12. The work stipulated in item 16 of Attached Table 1.

- 13. From among work stipulated in item 18 of Attached Table 1, the work to scrape off, collect, load, unload or put in vessels the slag or ash which has stuck to or been accumulated on furnaces, flues, stocks, etc.
- 14. The work stipulated in items 19 and 20 of Attached Table 1.
- 15. From among work stipulated in item 21 of Attached Table 1, the work to spray metals by using a hand-held type metal sprayer.
- 16. From among work stipulated in item 22 of Attached Table 1, the work of warehousing or taking the rushes with dyed soil out from a warehouse .
- 17. From among works stipulated in item 23 of Attached Table 1, the work to unload ballast from hopper cars or compact the ballast with multiple tampers in a long and large tunnel.