

(GARUDA EMBLEM)

**Ministerial Regulation No. 2**

**B.E. 2535 (1992)**

**Issued pursuant to the Factory Act B.E.2535 (1992)**

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By the virtue of section 5 and sections 8(1), 8(2), 8(3), 8(4), 8(5), 8(6), and 8(8) of the Factory Act B.E. 2535 (1992), the Minister of Industry hereby issues the Ministerial Regulation as follows:

**Chapter I**

**Location, environment, description and interior of the factory**

**Clause 1** A factory of group 1 and group 2 shall not be allowed to situated in the following area:

- (1) houses, condominium, and townhouses for residential purpose;
- (2) within 50 meters from public places such as schools, educational institutions, temples or religious places, healthcare facilities, historical sites or offices of government agencies, including natural resources and environmental conservation places as designated by the Cabinet.

**Clause 2** A factory of group 3 shall not be allowed to situated in the following area:

- (1) houses, condominium, and townhouses for residential purpose;
- (2) within 100 meters from public places such as schools, educational institutions, temples or religious places, healthcare facilities, historical sites or offices of government agencies, including natural resources and environmental conservation places as designated by the Cabinet.

**Clause 3** The offices of government agencies as in clause 1(2) or clause 2(2) shall not include specific office established for the purpose of controlling, supervising, facilitating, or providing services to the such industrial business. Where deems appropriate, the Minister of Industry shall announces in the Government Gazette an adjustment to the prescribed distance in clause 1(2) or clause 2(2), or an exception to the provision under clause 1(2) for certain factory type under the condition specified.

**Clause 4** Besides being in compliance with the provision under clause 2, a factory of group 3 shall be situated in a suitable setting with sufficient area appropriate for undertaking such

industrial business operation and shall not cause danger, nuisance, or damage to public or other properties.

**Clause 5** A factory's building shall possess the following characteristics:

- (1) The building must be strong, steady, appropriate and have a sufficient area for such industrial business operation with the approval of professional engineer or other person prescribed by the Minister of Industry in the Government Gazette.
- (2) The building shall have suitable ventilation by having a total area of doors, windows and vents of a minimum of one tenth of the total room area excluding connecting doors, windows and vents; or the ventilation rate in the building must be at least 0.5 cubic meters per minute per worker.
- (3) The building shall have at least two emergency exits corresponding with the number of worker to provide safe evacuation in case of emergency. The two exits shall be in appropriate distance to one another, and easy to open with size of at least 110 centimeters wide and at least 200 centimeters high. For a case of more than 50 workers using one exit at one time, its width shall be expanded at rate of at least 2 centimeters per person. The building shall also have at least two staircases between each floor, and in appropriate distance to one another.
- (4) A staircase must be secure and steady with the feature, size and quantity suitable for the building and the operation. The steps must not be slippery, and have the same width throughout the length of the staircase. In addition, a walkway, which is 1.50 meters or more from ground level, must have a steady and appropriate handrail. The Minister of Industry, where deems appropriate, shall announces in the Government Gazette other equipment required for preventing danger or exception to the handrail requirement.
- (5) The distance measured vertically from a ceiling to a floor shall be at least 3.00 meters, except there is air conditioning or air ventilation system provided. However, the vertical distance shall not be less than 2.30 meter.
- (6) The building floor must be rigid and steady, without a spot that can collect water or become slippery which could easily cause an accident.
- (7) In working area, there shall be at least 3 square meters per worker, including areas for equipment, machinery, products, or materiel on belt conveyor.

- (8) Materials used for construction shall be appropriate for the type of industrial business operation, and shall not pose a fire hazard.
- (9) A lightning conductor shall be provided where deemed appropriated.
- (10) There shall be a safe storage area for materials of potential danger or fire.
- (11) If there is a use of elevator, safety factor of at least 4 times of allowable weight shall be applied, using the average weight of 70 kilograms per person. An elevator shall be the type that can move up or down only when the door is closed, and the type that have alarm system when there is an emergency in it, and shall have the sign indicating the number of passengers or allowable weight.
- (12) Toilet, urinal, and wash rooms shall be provided as follows:
  - (a) There shall be at least one toilet for 15 workers or less, two toilet for 40 workers or less, three toilet for 80 workers or less, and additional one toilet for additional 50 workers. A factory of less than 15 male and female workers combined shall provide a separate toilet for female worker according to prescribed ratio.
  - (b) A building of many levels where there are worker occupying shall have toilet and urinal provided as necessary.
  - (c) In a toilet, there shall be at least 0.9 square meters per toilet seat.
  - (d) A urinal shall be of the type that uses water to flush down to septic tank. A toilet's floor shall not absorb water.
  - (e) For each toilet, toilet papers or water shall be sufficiently provided.
  - (f) A wash room equipped with materials necessary for workers shall be provided as necessary.
  - (g) Toilet, urinal, and wash room shall have sufficient ventilation.
  - (h) There shall be a scheduled daily cleaning for toilet, urinal, and wash rooms.
  - (i) For a factory manufacturing edible products, there shall be handwash sink, appropriate disinfectant or soap provided and located in a suitable area with the rate of one sink per workers of 15 or less, two sinks per workers of 40 or less, three sinks per workers of 80 or less, and in an additional of one sink per additional 50 workers.

## Chapter II

### Machinery, equipment, or material to be used in the factory

**Clause 6** Machinery, equipment, or material to be used in a factory shall be as follows:

- (1) Must be strong, steady, and appropriate. Where deems necessary, the Minister of Industry shall announce an inspection requirement of machinery, equipment, or materials certified by a licensed professional engineer or a private body in the Government Gazette.
- (2) Shall be of the type that is safe to use and not generate noise, vibration, or signal that may disturb nearby residents.
- (3) Shall be equipped with instrument that prevents danger potentially arises from moving parts of machinery, as necessary.
- (4) For a tank or well with opening, operating in connection with machinery, which may create unsafe working condition, there shall be a steady bund or fence of at least 100 centimeters high from the ground level connected to such tank or well, installed on the side that is accessible.
- (5) Boiler, instrument using pressurized liquid or gas, compressor or reactor, and ducting system operating in connecting with such boiler and instrument, shall be designed, calculated, and constructed according to an acceptable standard, or pass the safety test to be in use, certified by licensed professional engineer or a private body prescribed by the Minister of Industry in the Government Gazette. An installation shall be steady and safe, equipped with safety device and other necessary components, and certified by a licensed professional engineer or a private body prescribed by the Minister of Industry in the Government Gazette.
- (6) A pressure vessel shall meet an acceptable standard, be equipped with safety devices and necessary components with regard to technical requirement, and be certified by a licensed professional engineer or a private body designated by the Minister of Industry as published in the Government Gazette.
- (7) A container for liquid hazardous substance, which may cause danger to person, animal, plants, properties or the environment, with quantity of at least 25,000 liters must be rigid and steady, and must meet an acceptable standard certified by licensed professional engineer or a private body designated by the Minister of

Industry as published in the Government Gazette. A surrounding concrete bund with enough capacity to contain the total quantity of the hazardous substances shall be provided. Where there are more than one container, a dam shall be constructed with the capacity of volume of the largest container to effectively prevent the spillage or leakage of the hazardous substances in case of an accident. An appropriate material or chemical shall be provided to alleviate the dispersion or distribution of the hazardous substance. Where the container is placed outdoors, the lightning conductor according to technical requirement shall be provided. A container with potential static charge shall be grounded.

- (8) Crane and hoist shall be rigid and steady, and in appropriate quantity. A sign of maximum allowable weight must be clearly seen and posted. A wheel stopper, with ability to stop at least twice of the maximum allowable weight, shall be provided. For an electric crane, electricity cutoff instrument shall be equipped and properly functioned when raise the weight to the highest height specified.
- (9) A conveyor with belt moving above the working area or walking path shall be equipped with screening or side sheet to collect any material falling from belt conveyor to ensure safe working condition. For a belt conveyor with an incline or decline belt, it shall be equipped with a controller that can stop the belt when the conveyor stops working.
- (10) Installation of pipe and necessary equipment for material transportation via pipeline shall be done in accordance with acceptable technical requirement.
- (11) Electrical system, electricity connection system, and installation of electric motor, electric switch, and other electric equipment shall be done in accordance with acceptable technical requirement and certified by a licensed professional engineer or a private body designated by the Minister of Industry as published in the Government Gazette.

**Clause 7** Where deems necessary, the Minister of Industry shall announce in the Government Gazette a criteria and testing procedure for safety of machinery, equipment, or materials to be used in a factory as prescribed in clauses 6(2), 6(3), 6(5), 6(6), 6(7), 6(8), 6(9), 6(10), or 6(11).

### **Chapter III**

#### **Factory worker**

**Clause 8** A factory using boiler or instrument using pressurized liquid or gas as heat transmitting media, shall have an operator for such boiler or such instrument. The operator shall possess a high vocational certification in industrial mechanical technician, mechanical technician, or specialized technician who passes the training course on boiler operator organized by Ministry of Industry or other institutions certified by Ministry of Industry.

Other than a boiler operator, a factory using a boiler with capacity of at least 20 tons per hour shall also have a licensed professional engineer or a private body designated by the Minister of Industry as published in the Government Gazette as an engineer who supervise the use and operation of such boiler.

**Clause 9** A factory manufacturing or repairing boiler or instrument using pressurized liquid or gas as heat transmitting media shall have a licensed professional engineer or a private body designated by the Minister of Industry as published in the Government Gazette as a supervisor for such manufacture or such repair.

**Clause 10** A factory shall have control procedure for a release of waste, pollutants, or other materials affecting the environment as prescribed by the Minister of Industry in the Government Gazette, and shall have a supervisor and an operator for pollution control system who possesses qualifications as prescribed by the Minister of Industry in the Government Gazette.

**Clause 11** A factory using radioactive material shall have a technician with qualifications as prescribed by the Minister of Industry in the Government Gazette for operating such matter specifically.

**Clause 12** A worker of any factory under this chapter shall never violate the provision under the law on factory, except for a case prescribed by the Minister of Industry in the Government Gazette.

### **Chapter IV**

#### **Control of a release of waste, pollutants, or other materials affecting the environment**

**Clause 13** Disposal of wastes, sewage, and unusable materials shall be as follows:

(1) A factory shall be kept clean and a waste container or waste disposal facility shall be provided as necessary and appropriately.

(2) Wastes shall be collected and stored separately, especially for wastes that are mixed with toxic substance or piece of cloth contaminated with flammable substance shall be collected separately in a closed container. Such material shall be disposed of in such a safe way and not generating nuisance.

(3) A factory having wastes and unusable materials as prescribed by the Minister of Industry in the Government Gazette shall manage its wastes and unusable materials as follows:

- (a) Shall not take its wastes or unusable materials out off the premise unless given permission from Director General of Department of Industrial Works or the appointee to take the wastes or unusable materials offsite to be disposed of by methods and facility according to criteria and methods as prescribed by the Minister of Industry in the Government Gazette.
- (b) Shall report on details of types, quantity, characteristics, and storage facility of wastes or unusable materials, including methods of detoxification, disposal, discard, landfill, transfer and transportation according to criteria and methods as prescribed by the Minister of Industry in the Government Gazette.

**Clause 14** Discharge of wastewater effluent from a factory shall be prohibited unless there is any treatment, other than dilution, applied to such wastewater so that its characteristics meets what prescribed by the Minister of Industry in the Government Gazette.

**Clause 15** A factory having wastewater treatment system shall be in compliance with the following:

(1) Shall install a meter measuring power consumption of wastewater treatment system in an easily inspected location, and shall keep a record on meter unit and numbers of power unit consumed each day.

(2) In case where there is a use of chemical or biological substances in wastewater treatment system, a record of such use shall be kept daily, and prove of supply for such chemical or biological substances shall be available.

**Clause 16** Discharge of polluted air from a factory shall be prohibited unless there is any treatment, other than dilution, applied to such polluted air so that its characteristics meets what prescribed by the Minister of Industry in the Government Gazette.

**Clause 17** Noise generating from factory operation shall not exceed a standard prescribed by the Minister of Industry in the Government Gazette.

## **Chapter V**

### **Safety in operating a factory**

**Clause 18** A factory shall have safety measures as appropriate according to criteria and methods as prescribed by Minister of Industry in the Government Gazette.

**Clause 19** Machinery, equipment, or other materials to be used in a factory shall accompany with safety measures as appropriate according to criteria and methods as prescribed by Minister of Industry in the Government Gazette.

### **Transitional Provisions**

**Clause 20** The provisions under clause 1, clause 2, and clause 3 of chapter 1 shall not be applied to a factory with a license issued before that date this Regulation becomes enforceable.

Given on the 24<sup>th</sup> September B.E. 2535 (1992)

(Signed)

Sippanon Katetat  
(Mr. Sippanon Katetat)  
Minister of Industry

(Published in the Government Gazette, Volume 109, Part 108, dated 16<sup>th</sup> October B.E. 2535 (1992))

Note: This Regulation is issued by the virtue of section 8 of the Factory Act B.E. 2535 (1992) which empower the Minister to prescribe criteria regarding location, environment, interior, and description of the factory; description, category, or type of machinery and equipment to be used in the operation of the factory business; workers; procedures for the control of release of waste, pollution, or other materials arising from factory operations which may affect the environment; and safety procedure for factory operation.