

Ordinance on Safety and Health of Work under High Pressure

Latest Amendments:

Ministry of Health, Labour and Welfare Ordinance No. 171 of July 16, 2001

[In Japanese](#)

The Ordinance on Safety and Health of Work under High Pressure shall be enacted conforming to and in order to enforce the Industrial Safety and Health Law (Law No. 57 of 1972).

Contents

- [Chapter I.](#) General Provisions (Article 1)
- [Chapter II.](#) Facilities
 - Section 1. Facilities for Work in Compressed Air (Articles 2 through 7-4)
 - Section 2. Facilities for Diving Operations (Articles 8 and 9)
- [Chapter III.](#) Management of Work
 - Section 1. Operations Chiefs, etc. (Articles 10 through 12)
 - Section 2. Management of Work in Compressed Air (Articles 13 through 26)
 - Section 3. Management of Diving Operations (Articles 27 through 37)
- [Chapter IV.](#) Medical Examination and Prohibition of Work of the Sick (Articles 38 through 41)
- [Chapter V.](#) Recompressing Lock (Articles 42 through 46)
- [Chapter VI.](#) Licenses
 - Section 1. License for Operations Chiefs of Work in Compressed Air (Articles 47 through 51)
 - Section 2. License for Diving Workers (Articles 52 through 55)

Supplementary Provisions

[Attached Table 1](#)

[Attached Table 2](#)

[Attached Table 3](#)

Chapter I. General Provisions

(Definitions)

Article 1. In this Ministry of Health, Labour and Welfare Ordinance, the meanings or significances of the terms or words given below are as defined in their respective items below:

(1) "Work in compressed air" shall be defined as that work related to the indoor work set forth in item 1 of [Article 6](#) of the Enforcement Order of Industrial Safety and Health Law (Cabinet Order No. 318 of 1972, hereinafter called the "Cabinet Order").

(2) "Diving operations" shall be defined as the types of work set forth in item 9 of [Article 20 of the Cabinet Order](#).

(3) "A work chamber" shall be defined as a chamber under barometric pressure levels which are higher than atmospheric pressure for performance of work involving operations using the caisson method and other compressed air methods.

(4) "Man-lock" (Air lock chamber) shall be defined as a room in which workers who are engaged in work in compressed air (hereinafter called "compressed air workers") are depressurized or pressurized due to pressure levels within the room.

Chapter II. Facilities

Section 1. Facilities for Work in Compressed Air

(Cubic Space of Work Chamber)

Article 2. When the employer has workers engage in work in compressed air in a work chamber, the cubic capacity per worker engaged in work in compressed air in the said work chamber shall be 4 m^3 or more.

(Floor Area and Cubic Space of Man-Locks)

Article 3. The employer shall provide man-locks with a floor area and cubic capacity of at least 0.3 m^2 and 0.6 m^3 respectively per compressed air worker who has to be treated with compression or decompression in the said man-lock.

(Piping, etc., of Air Pipelines)

Article 4. In terms of air pipelines for supplying air to the work chamber or the man-lock of caissons or diving bells, the employer shall provide the said pipelines in such a manner that they lead to the said work chamber or the man-lock without passing through a shaft.

2. In terms of an air pipeline to supply air to the said work chamber, the employer shall provide the pipeline with a check valve at a site near the work chamber.

(Air Cleaning Equipment)

Article 5. The employer shall provide devices to clean the air which is supplied to the work chamber and the man-lock at a portion of air pipeline between the air compressor and work chamber or man-lock.

(Exhaust Pipelines)

Article 6. The employer shall provide each work chamber or man-lock with exhaust pipelines exclusively used for the said work chamber or the said man-lock.

2. The exhaust pipeline for the purpose of decompression of the compressed air workers in the man-lock of caissons or diving bells shall be 53 mm or less in inside diameter.

(Pressure Gauges)

Article 7. When the employer provides places by which to operate or adjust valves or cocks thereby to regulate the feeding of air to the said work chamber outside the caissons, diving bells, compressed shields, etc., he shall provide these places with a pressure gauge which indicates gauge pressure (hereinafter called "pressure") which shows pressure levels within the chamber.

2. When the employer provides the said places inside the said caissons, diving bells, compressed shields, etc., the employer shall have the worker who engages in the work thereby to operate or adjust valves, or cocks thereby to regulate the feeding of air to the said work chamber carry a portable pressure gauge.

3. When the employer provides places in which to operate valves or cocks thereby to regulate the feeding of air or exhausting of air for the purpose of applying compression or decompression to the compressed air workers outside the man-lock the employer shall provide the said places with a pressure gauge which indicates the pressure levels within the man-lock.

4. When the employer provides the said places set forth in the preceding paragraphs inside of the man-lock, the employer shall have the worker who engages in the work thereby to operate the valves or cocks by which to regulate the feeding of air or exhausting of air of the man-lock carry a portable pressure gauge.

5. The types of pressure gauges, set forth in the preceding four paragraphs, shall be of an accuracy such that one gradation on its scale represents 0.02 MPa or less.

(Automatic Warning Devices for Abnormal Temperature Levels)

Article 7-2. In case there might occur an abnormal increase in the temperature of the air discharged from the air compressor thereby to send air to the working chamber or to the man-

lock or the air which has passed through cooling devices attached to the said air compressor, , the employer shall install an automatic warning device thereby to quickly inform the workers who are engaging in operating the air compressor or other persons concerned of the abnormal increase in the temperature.

(Peepholes, etc.)

Article 7-3. The employer shall assume measures by which to make it possible to confirm or understand the conditions inside of the man-lock from outside of the said man-lock, comprising a peephole, etc., thereby to enable the person concerned to observe the inside of the man-lock.

(Evacuation Devices, etc.)

Article 7-4. When the employer has workers engage in work in compressed air, the employer shall provide devices necessary to make it possible to have the compressed air workers evacuated or be rescued in case of emergency, comprised of respiratory protective equipment or fiber ropes, etc.

Section 2. Facilities for Diving Operations

(Air Reservoir)

Article 8. When the employer feeds air to workers engaged in diving operations (hereinafter called diving workers) using an air compressor, the employer shall provide one air reservoir thereby to regulate the volume of fed air and one more air reservoir therein to store the air necessary in case of an accident (hereinafter called the "emergency air reservoir") per diving worker being fed with air by the said air compressor.

2. The emergency air reservoir shall comply with the requirements given in the following:

(1) The infra-air-reservoir pressure levels shall be regularly 1.5 times as high as the pressure levels at the maximum diving depth or more.

(2) The inside volume of the air reservoir shall of a value equal to that obtained by the formula of (a) or (b), or higher.

a When the employer has the diving workers use pressure regulator.

$$V = \frac{40(0.03D + 0.4)}{P}$$

P

where V = The inside volume of the air reservoir (liter)

D = Maximum diving depth (m)

P = Pressure of air within the air reservoir (MPa)

b In the case other than described in preceding paragraph a.

$$V = \frac{60(0.03D + 0.4)}{P}$$

3. When the air reservoir thereby to regulate the air set forth in paragraph 1 complies with the requirements as provided by the respective items of the preceding paragraph, the said emergency air reservoir can be omitted in spite of the provisions of paragraph 1.

(Air Cleaning Device and Flow Meter)

Article 9. When the employer feeds air to the diving workers using the air compressor, the employer shall provide devices thereby to clean the air fed to the said diving workers and also flow meters thereby to measure the flow volume of the air fed to the said diving workers.

Chapter III. Management of Work

Section 1. Operations Chiefs, etc.

(Operations Chief)

Article 10. In terms of the work in compressed air in compliance with item 1 of [Article 6 of the Cabinet Order](#), the employer shall appoint one operations chief responsible for each work chamber, out of those who are licensed as operations chiefs of work in compressed air.

2. The employer shall make the said operations chief carry out the matters given below:

(1) Make a decision on how to carry out the work, and supervise directly the compressed air workers.

(2) Check the devices used to measure the concentrations of carbon dioxide and harmful gases (which correspond to carbon monoxide, methane, hydrogen sulfide, and other gases other than carbon monoxide, which may induce explosion, fire, other dangerous situations, or damage to health, similarly as in the following).

(3) Check the number of compressed air workers, when the workers are made to enter or leave the work chamber room for the said work.

(4) Maintain the pressure within the work chamber in a proper state by contacting those who engage in the work there to operate valves or cocks by which to regulate the volumes of the air fed to the said work chamber.

(5) Assume appropriate measures thereby to apply compression or decompression to the compressed air workers, in compliance with the provisions of [Article 14](#) or [Article 18](#) by contacting those who are engaged in the work thereby to operate valves or cocks to regulate the air fed to or exhausted from the man-lock.

(6) To assume necessary measures in case the compressed air workers should become health impairment in the work chamber or the man-lock.

(Special Education)

Article 11. When the employer has workers engage in the work as described below, the employer shall give the said workers special education concerning the said work:

(1) Operating the air compressor by which air is fed to a work chamber or to a man-lock.

(2) Operating the valves or cocks by which to regulate the air supplied to the work chamber.

(3) Operating the valves or cocks by which to regulate the air fed to or exhausted from the man-lock.

(4) Operating the valves or cocks which regulate the air fed to the diving workers.

(5) Operating the recompressing lock.

(6) Work in compressed air.

2. The education as said above shall be carried out in terms of the items given in the right columns of the Table below, depending upon the type of work as shown in the left column of the said Table.

Type of work	Items to be taught
Work to operate an air compressor by which air is fed to a work chamber or to a man-lock	1. Items concerning knowledge of compressed air methods. 2. Items concerning structure and operation of air feeding equipment. 3. Items concerning knowledge of compressed air hazards.

Type of work	Items to be taught
	<ol style="list-style-type: none"> 4. Related laws and ordinances. 5. Actual techniques to operate an air compressor.
<p>Work to operate valves or cocks by which air is fed to work chamber</p>	<ol style="list-style-type: none"> 1. Items concerning knowledge of compressed air methods. 2. Items concerning air feeding and air exhausting. 3. Items concerning knowledge of compressed air hazards. 4. Related laws and ordinances. 5. Actual techniques to regulate feeding of air.
<p>Work to operate valves or cocks by which air is fed to or air is exhausted from a man-lock.</p>	<ol style="list-style-type: none"> 1. Items concerning knowledge of compressed air methods. 2. Items concerning how to apply compression and decompression and also how to make ventilation. 3. Items concerning knowledge of compressed air hazards. 4. Related laws and ordinances. 5. Actual techniques concerning how to apply compression and decompression and also how to make ventilation of air.
<p>Work to operate valves and cocks by which air is fed to diving workers.</p>	<ol style="list-style-type: none"> 1. Items concerning knowledge of diving operations. 2. Items concerning air feeding. 3. Items concerning knowledge of compressed air hazards. 4. Related laws and ordinances. 5. Actual techniques thereby to regulate air feeding.
<p>Work to operate recompressing locks.</p>	<ol style="list-style-type: none"> 1. Items concerning knowledge of compressed air hazards. 2. Items concerning methods of decompressing in case of emergency. 3. Items concerning methods for first-aid treatment. 4. Related laws and ordinances. 5. Actual techniques concerning how to operate recompression locks and first-aid treatment.

Type of work	Items to be taught
Work to operate compressed air.	<ol style="list-style-type: none"> 1. Items concerning knowledge of compressed air methods. 2. Items concerning knowledge of the facilities related to compressed air methods. 3. Items concerning the prevention of drastic pressure drop, fire, etc. 4. Items concerning knowledge of compressed air hazards. 5. Related laws and ordinances.

3. In addition to these items, as provided for in Articles 37 and 38 of the Ordinance on Industrial Safety and Health (Ministry of Labour Ordinance No. 32 of 1972, and hereinafter called "Safety and Health Ordinance"), as well as the ones as described in the preceding two paragraphs, the Minister of Health, Labour and Welfare will establish items necessary for the execution of the special education prescribed in the same paragraph.

(Diving Workers)

Article 12. The employer shall not have any person engage in diving operations unless he has been licensed as a diving worker.

Section 2. Management of Work in Compressed Air

(Prohibition of Entrance into Work Areas)

Article 13. The employer shall prohibit those other than persons directly concerned from entering the man-lock and work chamber, and shall put up a notice which can easily be identified outside the caissons, diving bells, compressed shields, etc., stating the prohibition.

(Rate of Compression)

Article 14. When the employer applies compression to the compressed air workers in a man-lock, the employer shall increase the pressure at a rate not higher than 0.08 MPa/min.

(Time Spent under High Pressure)

Article 15. When the employer has workers engage in work in compressed air, (restricted only to those types carried out under barometric pressures of 0.1 MPa or more, same as in this Article), the employer shall not make the compressed air workers engage in the said work in compressed air in violation of the standards on time given below for which the said workers are allowed to engage in the said work.

(1) The time, starting off from commencing the compression on the compressed air workers till commencing the decompression on them, (hereinafter called the "time spent under high pressure") shall be limited as set forth in the following (a) or (b).

a In case the numbers of shifts of work in which the employer has the compressed air workers engage in the said work in compressed air does not exceed twice per day and in addition the pressure imposed on the said workers does not exceed 0.4 MPa, the times given below are allowable:

(a) In terms of the first shift of work in compressed air (inclusive of the case in which the work in compressed air is carried out once per day); the longest time of those listed in the "Time under high pressure" column of [Attached Table 1](#) depending upon the division of the "Pressure" column of the said Table, on the basis of the pressures used for the said work in compressed air.

(b) In terms of the second shift of work in compressed air; the time as listed in the "Time under high pressure for the second shift" column of [Attached Table 1](#) depending upon the direction of the "Pressure" column of the said Table and the "Time under high pressure" column of the said Table in accordance with the time under high pressure used for the first shift, on the basis of the pressure used for the said work in compressed air (which corresponds to the one used for the first shift, if the pressure used for the first shift is higher than that for the second shift).

b In case the number of shifts of work in compressed air conducted by compressed air worker exceeds two per day or the pressure used for the work in compressed air exceeds 0.4 MPa , the times allowable are given below:

(a) In the terms of the first shift of work in compressed air (inclusive of the case in which the work in compressed air is carried out once per day); the longest time of those listed in the "Time under high pressure" column depending the classification of the "Pressure" column of [Attached Table 2](#) on the basis of the pressures used for the said work in compressed air.

(b) In terms of the second or following shift of work in compressed air; the time which is subtracted from the time which is obtained from [Attached Table 3](#) (hereinafter called "corrected time for compressed air workers") from the longest time of those listed in the "Time under high pressure" column of [Attached Table 2](#) depending upon the division of the "Pressure" column of the said Table on the basis of the pressure used for the said shift of work in compressed air (maximum pressure, in the case in which the pressure used for the work in compressed air already done by the said workers in the day is higher than that used for the said work in compressed air) (when a total of time, during work in compressed air is longer than the time set forth in the "Time under high pressure per day" column in accordance with the classification of the pressures as listed in the "Pressure" column of [Attached Table 2](#) on the basis of the maximum pressure used for work in compressed air, and imposed on the said workers, the time is available by further subtraction of the differences between the said total of the time and those set forth in the

"Time under high pressure" column from the said longest of time of those described in the "Time under high pressure" column).

(2) When the employer has compressed air workers who have already engaged in work in compressed air further engage in the said work within a day, the employer shall provide the compressed air workers with a time, upon the completion of last decreasing gas pressures, which is longer than those set forth in the following (a) or (b), as the time for which to make decrease in the gas coefficients in the body of the compressed air workers (hereinafter called "time for decompression for the compressed air workers), and shall not make the compressed air workers further engage in heavy work for the said time.

a) When there occurs a case which corresponds to that set forth in (a) of the preceding item; the time as listed in the "Time for decreasing gas pressure between shifts of work in compressed air" column of Attached Table 1 in accordance with the classification set forth in the "Pressure" column and also in the "Time under high pressure" column of the said Table on the basis of the pressure and the time under high pressure used for the first shift of work in compressed air.

b) When there occurs a case as set forth in (b) of the preceding item; the time as listed in the "Time for decreasing gas pressure between shifts of work in compressed air" column of [Attached Table 2](#) in accordance with the classification set forth in the "Pressures" column and also in the "Time under high pressure", column of the said Table on the basis of the pressure and the time under high pressure used for the final shift of work in compressed air.

(3) When the employer shall provide compressed air workers who have completed the work in compressed air for that day with the time, upon the completion of last decompression, which are longer than those set forth in the following a or b, as the time for decreasing gas pressures for the compressed air workers, and shall not make the compressed air workers further engage in heavy work.

a) When there occurs a case which corresponds to those set forth in (a) of item 1; the time as listed in "Time for decreasing gas pressure after completion of work" column of [Attached Table 1](#) in accordance with the classification set forth in the "Pressures" column and also in the "Time under high pressures" of the said Table on the basis of the pressure and the time under high pressure used for the final shift of work in compressed air.

b) When there occurs a case set forth in (b) of item 1; the time as listed in the "Time for decreasing gas pressures after completion of work" column of [Attached Table 2](#) in accordance with the classification set forth in the "Pressure" column and also in the "Time under high pressures" column of the said Table on the basis of the pressure and the time under high pressure used for the final shift of work in compressed air.

(4) In a case in which the employer gives the time for decreasing gas pressure of compressed air workers following the second time to the workers who work two shifts or more in compressed air per day, the times under high pressure of work in compressed air set forth in (a) of item 2 and (a)

and (b) of the preceding item shall be those which are available by the addition of the time under high pressure used for the said shift of the compressed air workers concerned and the corrected time for compressed air workers.

(Control of Carbon Dioxide)

Article 16. The employer shall make ventilation and assume other required measures to ensure that the partial pressure of carbon dioxide is not more than 0.5 kPa in the work chamber or man-lock in order to prevent the hazards due to carbon dioxide.

(Control of Harmful Gases)

Article 17. The employer shall make ventilation, measure harmful gases and assume other required measures thereby to prevent danger and health impairment to workers due to harmful gases in the work chamber.

(Rate of Decompression)

Article 18. When the employer reduces the pressure imposed on the compressed air workers in the man-lock, he shall comply with the items given below:

(1) The rate of decompression shall be 0.08 Mpa/min or less.

(2) When there occurs a case as described in (a) of item 1 of [Article 15](#), the employer shall stop the decompression for the time set forth in the "Decompression" column or more, when the said pressure reaches that as described in the "Decompression" column in accordance with the classification as made in the "Pressure" column and the "Time under high pressures" column of [Attached Table 1](#) on the basis of the pressures and the time under high pressure during the said work in compressed air.

(3) When there occurs a case as described in (b) of item 1 of [Article 15](#), the employer shall stop the decompression for the period of time set forth in the "Decompression" column or more, when the said pressure reaches that set forth in the "Decompression" column in accordance with the classification as made in the "Pressure" column and "Time under high pressure" column of [Attached Table 2](#) on the basis of the pressures and time under high pressure during the said work in compressed air.

2. The provision of item 4 of [Article 15](#) shall apply correspondingly in respect to the time under high pressures set forth in items 2 or 3 of the preceding Article, in the case of applying decompression for the second or subsequent time to a compressed air worker who is working more than two shifts of work in compressed air per day.

(Exceptions to Provisions on Decompression)

Article 19. When the employer has a compressed air worker evacuate in an accident or rescues a compressed air worker who has become impaired in health, the employer is allowed to increase

the rate of decompression as provided for by the preceding Article or to reduce the time for stopping decompression as also provided for by the same Article within the limits of minimum necessity.

2. When the employer increases the rates of decompression or reduces the time for stopping the decompression in compliance with the provisions of the preceding paragraph, the employer shall quickly make the said worker enter into a recompression lock or man-lock after he has made the said worker evacuate or be rescued, and shall increase the pressure imposed on the said worker up to that which corresponds to the pressure used for the said shift of work in compressed air.

3. The provision of [Article 14](#) shall apply correspondingly in respect to the rate at which to increase the pressures when applying compression to the worker according to the provisions of the preceding paragraph.

(Measures Assumed when Applying Decompression)

Article 20. When the employer carries out decompression on a compressed air worker in a man-lock, he shall assume each of the measures given below:

- (1) The illuminance at the surface of the floor shall not be less than 20 lux.
- (2) In case the temperature in the man-lock is 10°C or less, the employer shall have the compressed air worker use blankets or other proper warming devices.
- (3) In the case the time required for decompression is longer than an hour, the employer shall have the compressed air worker use a chair or other reposing article.

2. When applying decompression to a compressed air worker in a man-lock, the employer shall inform in advance the said compressed air worker of the time necessary for decompression concerned.

(Recording, etc., for Decompression Status)

Article 20-2. When the employer shall have compressed air workers engage in work in compressed air under a barometric pressure of 0.1 MPa or more, the employer shall provide the man-lock with a self-recording pressure gauge, and shall prepare documents in which to record the status concerning each decompression and also documents in which to fill in names of the said compressed air workers and dates of decompression, for every time when applying decompression to a compressed air worker in the man-lock. And he shall keep these documents in custody for the period of five years.

(Communication)

Article 21. When the employer has compressed air workers engage in work in compressed air, he shall always station a liaison for contacting with the compressed air workers or with those

who operate the air compressor, and also those responsible for other required measures (hereinafter called "liaison" in this Article).

2. The employer shall provide for communicating devices by which the said liaison can communicate with the compressed air workers and those who operate the air compressor.

3. The employer shall establish methods by which communication can be effected, even if the said devices break down, as provided for by the preceding Article, and shall put up a notice which indicates the methods at a conspicuous place from which the written methods can easily be seen by the compressed air workers, air compressor operators, and the said liaison.

(Inspection and Repairing of Equipment)

Article 22. When the employer has a compressed air worker engage in work in compressed air, he shall make an inspection of the equipment, given in the following items, at least once at every period as described in the respective items, and shall make repairs and also assume other required measures when he finds probable hazards or health impairments to the compressed air worker:

- (1) Air pipelines as described in [Article 4](#), air exhaust pipelines set forth in [Article 6](#) and the communicating devices as described in paragraph 2 of the preceding Article: one day.
- (2) Valves or cocks regulating the feeding of air to the work chamber or the man-lock: one day.
- (3) Valves or cocks regulating the exhausting of air from the work chamber or the man-lock: one day.
- (4) Cooling devices attached to the air compressor for feeding of air to the work chamber or to the man-lock: one day.
- (5) The devices described in [Article 7-4](#): one day.
- (6) Automatic warning devices described in [Article 7-2](#): one week.
- (7) The air compressor for feeding air to the work chamber or to the man-lock: one week.
- (8) Pressure gauges described in [Article 7](#) and [Article 26](#): one month.
- (9) Equipment for cleaning the air as set forth in the [Article 5](#): one month.
- (10) Electrical circuits installed in the caissons, diving bells, compressed shields, etc.: one month.

2. When the employer makes an inspection of the devices, etc., in compliance with the provisions set forth in the preceding paragraph, provides for the repairing of them, and assumes other required measures, the employer shall record the results concerning the inspection,

repairing and the other measures, as soon as they have been completed, and shall keep a short description of the record in custody for the period of three years.

(Inspection when the Air-Feeding Equipment Is Started)

Article 22-2. When the employer first uses air feeding equipment, when the employer disassembles and improves or repairs the said equipment or when the employer reuses the said air feeding equipment which has not been used for more than one month, he shall make an inspection of the performance of the said air feeding equipment and confirm that there is no abnormality in its performance before resuming its use.

(Measures to Be Taken in the Case of Accident)

Article 23. When there is a possibility that hazards or health impairment to compressed air workers may have occurred due to a breakdown of the air feeding equipment, a flood, etc., the employer shall have the compressed air workers evacuate the caissons, diving bells, compressed shields, etc.

2. In a case set forth in the preceding paragraph, the employer shall make inspection of the presence or absence of abnormalities in the air-feeding equipment, the presence or absence of abnormal sinking of the diving bell, etc., the slanted status of the said devices and other items, and shall confirm that there is no possibility that hazard or health impairment may occur to the compressed air workers. He shall not have workers other than those who are specifically designated by the employer enter into the said caissons, diving bells, compressed shields, etc., until the said inspection and confirmation have been carried out by him.

(Measures Assumed for Submerging Exhausted Caissons)

Article 24. When the employer submerges the said caissons by exhausting the air from the work chamber, he shall make the compressed air workers leave the caissons.

2. In a case as described in the preceding paragraph, the employer shall make inspection of the presence or absence of flooding or generation of harmful gases, and also of the other items, and shall confirm that there is no possibility that there may occur a hazard or health impairment to the compressed air workers. And the employer shall not have workers other than those who are specifically designated by him enter into the caissons until he has confirmed there is no possibility concerning the said hazard or health impairment.

(Measures Assumed in a Case in which Blasting is Carried Out)

Article 25. When the employer carry out blasting in the work chamber, he shall not make the compressed air workers enter into the work chamber till the air has returned to its original condition before the blasting.

(Prevention of Burns, etc.)

Article 25-2. When the employer has a compressed air worker carry out work in compressed air, he shall inform the compressed air worker of the danger of combustion of substances combustible under pressures higher than atmospheric pressure, and shall furthermore assume the measures given below in terms of the caissons, diving bells, compressed shields, etc., in order to prevent burns and other danger from affecting the compressed air worker:

(1) The employer shall use lighting devices (lamps) with guards and other lamps in which there is no possibility that ignition will be made to combustible substances resulting from breakdown of the said lamps.

(2) In terms of switching devices used in electrical circuits, the employer shall use those from which no sparks or arc can occur.

(3) In terms of heating devices, the employer shall use those which have no possibility that they may serve as an ignition source for combustible substances when temperatures become high.

2. When the employer has a compressed air worker engage in work in compressed air, he shall not have the said worker carry out work such as welding, cutting, and other work using either fire or arc (hereinafter called "work of welding, etc.") inside the caissons, diving bells, compressed shields, etc., provided that this does not apply in respect to the cases which are hardly avoidable owing to the nature of the work, and in which the work such as welding, etc., is carried out under pressures of less than 0.1 MPa .

3. When the employer has a compressed air worker carry out work in compressed air, he shall prohibit the said worker from taking with him fire, matches, lighters, or other goods which give cause to fear that ignition or combustion may occur to enter into the caissons, diving bells, compressed shields, etc., and shall also put up a notice which describes the said prohibition as stated above at a conspicuous place outside of the man-lock, provided that this does not apply in respect to cases which are hardly avoidable owing to the nature of work and in which he is allowed to make the compressed air worker take with him fire, matches, lighter, or other possible ignitable or combustible goods which are necessary for carrying out the said work of welding, etc., which are carried out under pressures of less than 0.1 MPa, to enter into the inside of the said caisson, diving bell, compressed shield, etc.

(Limits concerning Digging Down below the Edge)

Article 25-3. The employer shall not have a compressed air worker dig down the portion below the edge of a caisson in depths or 50 cm or more in order to prevent hazard to the compressed air worker resulting from the sudden submerging of the caisson.

(Devices which Are Carried by Operations Chief of Work in Compressed Air)

Article 26. The employer shall have the operations chief of work in compressed air take with him a portable pressure gauge, flashlight, gas measuring apparatus to measure the concentrations of carbon dioxide and other harmful gases, and also signaling devices for an emergency.

Section 3. Management of Diving Operations

(Time Spent under Water)

Article 27. When the employer has workers engage in diving operations (restricted only to those done at a depth of 10 m or more, same as in this Article), he shall not have the diving workers engage in such a operations in violation of the periods as provided by the provisions given below:

(1) The time spent from when the diving workers start descending until they commence ascending (hereinafter called "time spent under water") shall be limited to the values given below:

a In terms of the first shift of diving operations (inclusive of that carried out once per day); the longest time among the times listed in the "Time spend under water" column of [Attached Table 2](#) in accordance with the classification as made in the "Diving depth" column of the said Table on the basis of the depth in which the said shift of diving operation is carried out.

b In terms of the second or subsequent shift of diving operation; the times which are available to the reduction of numeric values as noted in the "Gas pressure coefficient in body" column of [Attached Table 2](#) depending upon the classification as made in the "Diving depth" column and the "Time spent under water" column of the said Table on the bases of the diving depth and the time spent under water as used for the previous diving operation, time therefore to decrease gas pressure in the said diving workers as described in item 3 to 5, and the time, as obtainable from [Attached Table 3](#), (hereinafter called "corrected time for diving workers") from the longest of the times listed in the "Time spent under water" column of [Attached Table 2](#) depending upon the classification as made in the "Diving depth" column of the said Table on the basis of the said diving depth, in which the said diving operation is carried out, (corresponding to the one which is deepest, if the diving depth in which the said diving workers operated on the previous shift of diving operations within a day is deeper than that in which the said second or subsequent diving operation has been carried out on the day.) (When the total time for which the said diving workers engaged in diving operations within a day are longer than the time as noted in the "Time spent under water for one day" column of [Attached Table 2](#), depending upon the classification as made in the "Diving depth" column of the said Table on the basis of the deepest depth in which the said diving workers engaged in diving operation on the day, the time is available by further reduction of the difference between the total times and the said times as described in the "Time spent under water for one day" column from the said longest time of those described in the "Time spent under water" column).

(2) When the employer has the diving workers engage in diving operations in more than three shifts per day, and when he makes them engage in the third or subsequent shift of diving operation within a day, the time spent under water for the previous shift in compliance with the provisions of b of the preceding item shall be that which is available by the addition of the time

spent under water for the said shift of diving operations and the corrected time for diving workers as mentioned before.

(3) When the employer has diving workers who have already engaged in diving operations on a day, further engage in diving operations on that day, he shall give the said diving workers times which are longer than those listed in the "Time for decreasing gas pressure between shifts" column of [Attached Table 2](#), depending upon the classification as made in the "Diving depth" column and the "Time spent under water" column of the said Table on the basis of the diving depth and time spent under water used for the immediately previous shift of diving operations carried out within a day in the form of the rest periods of time (hereinafter called "time for decreasing gas pressure of diving workers") in order to decrease the gas pressure coefficient in the bodies of the said diving workers after the said diving workers have gone through the said immediately previous shift of diving operations, and for the rest time, the employer shall not make the said diving workers engage in heavy work.

(4) The employer shall give diving workers who have gone through all shifts of the diving operations within a day times which are longer than those described in the "Time for decreasing gas pressure after completion of operation" column of [Attached Table 2](#), depending upon the classification as made in the "Diving depth" column and the "Time spent under water" column of the said Table on the basis of the diving depth and time spent under water used for the final shift of diving operations carried out within a day in the form of time for decreasing gas pressure of the said diving workers after the said diving workers have gone through the final ascension, and shall not make the said diving workers engage in other heavy work.

(5) The provisions of item 2 will apply correspondingly in respect to the time spent under water used for the diving operations as provided for by the preceding two items when the employer gives the said diving workers the second or subsequent shift of time for decreasing gas pressure for diving workers who engage in two shifts or more of diving operations within a day.

(Amounts of Air Feeding and Air Feeding Pressure)

Article 28. When the employer feeds air to the diving workers using air compressors or manual air pumps, the quantities of fed air to each of the diving workers shall be 60 liters or more per minute under the pressure as measured at the diving depth of the said diving operation.

2. Notwithstanding the preceding articles, when the employer has the diving workers use the pressure regulator, he shall make the said diving workers use air compressors which the quantities of fed air to each diving workers shall be 40 liters or more per minute, and air feeding pressure shall be the value added 0.7 MPa to the pressure of diving depth or more.

(Diving Operations Carried Out with Air Supplied from Air Cylinders)

Article 29. When the employer has diving workers supplied with air from air cylinders, which the said diving workers take with them, (exclusive of the ones for an emergency, same as in [Articles 34, 36, and 37](#)), he shall assume the measures given below:

(1) Inform the said diving workers of the existing air-supplying capacity of the air cylinder used for the said diving operation just before the said diving workers start descending.

(2) Station one who observes whether there any mishaps occur with the said diving workers.

(Pressure Regulator)

Article 30. When the employer has the said diving workers receive air from an air cylinder which contains air under a pressure of 1 MPa or more, he shall make the said diving workers use a pressure regulator using a two-step or more decompression system.

(Rates of Ascending, etc.)

Article 31. When the employer has the said diving workers ascend, he shall comply with the provisions given below:

(1) The rates of ascending shall be 10 m/min or less.

(2) When the diving depth reaches that as noted in the "Ascending" column of [Attached Table 2](#), depending upon the classification as made in the "Diving depth" column and the "Time spent under water" column of the said Table on the basis of the diving depth and diving periods of time in or for which the diving operation is carried out at the depth of 10 m or more, he shall stop ascending for a time longer than those described in the said "Ascending" column.

2. When the employer has the said diving workers engage in diving operations of two shifts or more per day, at the depth of 10 m or more to make the said workers ascend from the locations at which the second or subsequent shift of diving operations within a day was carried out, the provision of item 2 of [Article 27](#) will apply correspondingly in respect to the time spent under water as provided for by item 2 of the preceding paragraph.

(Specific Case of Ascending)

Article 32. When the employer has the said diving workers ascend due to accidents, he is allowed to increase the ascending rates, as provided for by the preceding Article within permitted limits or to reduce the time of stopping ascending, as provided for by the same Article.

2. When the employer increases the rate of ascending, or reduces the time of stopping ascending in compliance with the provisions of the preceding paragraph, he shall make the said diving workers enter into a recompressing lock just after they ascend to the water's surface, and shall apply compression to the diving workers, up to a pressure equal to that at the deepest depth of the location at which the said shift of diving operation was carried out, or make the said workers descend again down to the deepest location at which the said shift of diving operation was carried out.

3. In case the employer has the said diving workers enter into the recompressing lock in compliance with the provisions set forth in the preceding paragraph, the provisions of [Article 14](#)

will apply correspondingly in respect to the rates of compression applied to the said diving workers.

(Life Line)

Article 33. When the employer has the said diving workers engage in diving operations, he shall provide a life line and make the said diving workers use it in descending and ascending.

2. The employer shall provide a life line, as described in the preceding paragraph, with a wooden tag or a piece of cloth which indicates the depth at intervals for the depths as described in the "Ascending" column in [Attached Table 2](#).

(Inspection and Repairing of Equipment)

Article 34. When the employer has the said diving workers engage in diving operations, he shall inspect their equipment, as listed in the respective items given below, in accordance with the diving operations set forth in the said respective items before he makes the said diving workers engage in the said diving operation, and shall make repair of the equipment and also necessary measures when he finds a case in which there may occur danger or health impairment to the said diving workers:

(1) In terms of the diving operations using an air compressor or manual air pump for air feeding; diving apparatus, air-feeding pipe, signal ropes, life line and also pressure regulator.

(2) In terms of diving work with an air cylinder (exclusive of an air cylinder which the said diving workers take with them) there from to supply air to the said diving workers; diving apparatus, air feeding pipe, signal ropes, life line or pressure regulator as provided by the [Article 30](#).

(3) In terms of diving operations with air cylinders which supply air to the said diving workers; diving apparatus and pressure regulator as provided by [Article 30](#).

2. When the employer has the said diving workers engage in diving operations, he shall make inspection of the equipment as listed in the respective items given below in accordance with the types of diving operations as described in the said respective items at least once at every period given in the said respective items, and shall make repair of the said equipment if defective, and shall assume necessary measures when there may be the possibility of hazards or health impairment to the diving workers may occur:

(1) In terms of diving operations therein to supply air to the said diving workers, using an air compressor or manual air pump.

a) Air compressor or manual air pump: one week.

b) Air cleaning equipment as provided for by [Article 9](#): one month.

c) Hydro-barometer as provided by [Article 37](#): one month.

d) Hydro-watch as provided by [Article 37](#): three months.

e) Flow-meters as provided by [Article 9](#): six months.

(2) In terms of diving operations therein to receive air supplied from an air cylinder.

a) Hydro-barometer as provided by [Article 37](#): one month.

b) Hydro-watch as provided by [Article 37](#): three months.

c) Air cylinder: six months.

3. When the employer makes an inspection of the said equipment or repair of the said equipment or assumes necessary measures in compliance with the preceding two paragraphs, he shall record the results of the inspection or repair when the inspection or repair is carried out, and shall keep a summary record in custody for the period of three years.

(Restrictions on Use of Pure Oxygen)

Article 35. When the employer has diving workers engage in diving operations, he shall not make the said workers inhale pure oxygen.

(Liaison)

Article 36. When the employer has diving workers engage in diving operations with an air compressor or manual air pump thereby to supply air to the said diving workers, or with air cylinders (exclusive of an air cylinder which diving workers might take with them), the employer shall station one liaison (called "liaison" in the following Article) per two diving workers or less to make contact between the said liaison and the diving workers concerned, and shall make the liaison execute the duties given below:

(1) Make contact with the said diving workers to make sure the said divers' descending and ascending are done properly.

(2) Make proper contact with the ones who operate valves or cocks thereby to regulate the air feeding to the said diving workers to supply necessary air to the said diving workers.

(3) Make quick contact with the diving workers when there is a possibility that danger or health impairment of the said diving workers has resulted from accidents involving the damage of air feeding facilities or other accidents.

(4) In terms of diving carried out using the helmet-type diving apparatus, to confirm a sure connection between the said helmets and the pedestal just before a diving worker starts descending.

(Devices to Be Carried by Diving Workers)

Article 37. When the employer has the diving workers engage in diving operations using air compressors or manual air pumps thereby to feed air to the said diving workers, or using air cylinders (exclusive of the ones which the said diving workers take with them) from which the said diving workers receive air to carry out the work, he shall make the said diving workers take with them signal ropes, hydro-watches, hydro-barometers, and sharp-edged knives, provided that the employer is allowed to make the said diving workers refrain from taking with them the said signal ropes, hydro-watches and hydro-barometers when the contact between the said diving workers and liaison can be made through speech communication devices.

2. When the employer has the diving workers engage in diving operations using air cylinders carried by the said diving workers from which the said diving workers receive the supply of air, he shall make the said diving workers carry with them hydro-watches, hydro-barometers, and sharp-edged knives, and shall make the said diving workers wear a life jacket.

Chapter IV. Medical Examination and Prohibition of Work of the Sick

(Medical Examination)

Article 38. The employer shall carry out a medical examination by the physician in terms of the items given below on workers who regularly engage in work in compressed air or in diving operations (hereinafter called "work under high pressure"), when the said workers are employed, when the said workers are transferred to the said work, and also at regular intervals of six months or less after the said workers started engaging in the said work:

- (1) Investigation into past history and also of previous experience in work under high pressure.
- (2) Examination of subjective or objective symptoms such as articular pain, waist pain, pain in lower extremities, ear ringing, etc.
- (3) Examination of motor functions of upper and lower extremities.
- (4) Examination of the eardrum and hearing acuity.
- (5) Measurement of blood pressure, and examination of urinary sugar and protein levels.
- (6) Measurement of pulmonary capacity.

2. The employer shall make a physician additionally carry out medical examination in terms of the items given below on those who are regarded as being required to undertake the diagnoses by a physician on the basis of the results of the examination set forth in the preceding paragraph:

- (1) Investigation of working conditions.
- (2) Pulmonary function test.

(3) Electrocardiographic examination.

(4) Investigation into articles with direct radiography.

(Results of Medical Examination)

Article 39. The employer shall prepare the individual Medical Examination Cards on Work under High Pressure (Form No. 1) on the basis of the results of the medical examination as provided for by the preceding Article called the "High Pressure Work Medical Examination" in the following Article (inclusive of the medical examination to be conducted on the said workers in the cases set forth in the provision of proviso of [paragraph 5 of Article 66 of the Law.](#)), and shall keep the recorded results in custody for a period of five years.

(Hearing the Views of the Physician Concerning the Results of the Medical Examination)

Article 39-2. Under the provisions of [Article 66-4 of the Law](#), the views of the physician based on the results of the high pressure work medical examination shall be heard in accordance with the following stipulations:

(1) Within three months of the date when the high pressure work medical examination was carried out (when the provisions of the conditional clause of [paragraph 5 of Article 66 of the Law](#) apply, the date when said worker submitted the document showing the results of the medical examination to the employer).

(2) The views of the physician shall be recorded on the individual high pressure work medical examination cards.

(Reporting of Medical Examination Results)

Article 40. When the employer has a physician carry out a medical examination as provided by [Article 38](#) (restricted to the ones done periodically), the employer shall submit without delay to the Chief of the Labour Standards Inspection Office which supervise the district in which the workplace exists a Report on the Results of Medical Examination on Work under High Pressure. (Form No. 2)

(Prohibition of Work of the Sick)

Article 41. In terms of workers suffering from any of the diseases given below, the employer shall prohibit the said workers from engaging in work under high pressure for the periods for which the said workers are regarded by the physician as being required to refrain from their engaging in the said work:

(1) Decompression illness and other diseases due to high pressure or its aftereffects.

(2) Pulmonary tuberculosis, and other respiratory tuberculosis, or acute infections in the upper respiratory tract, pneumoconiosis, emphysema of the lungs, and other diseases of the respiratory system.

(3) Anemia, valvular disease of the heart, sclerosis of the coronary arteries, hypertension, and other diseases in the blood or circulatory systems.

(4) Psychoneurosis, chronic alcoholism, neuralgia, and other psychoneurotic diseases.

(5) Meniere's disease, or otitis media and other otological diseases involving stricture of the auditory canal.

(6) Arthritis, rheumatism, and other diseases in the organs of locomotion.

(7) Asthma, excessive obesity, Basedow's disease or other allergic diseases; endocrine disorder, disorder of metabolism, or nutrition diseases.

Chapter V. Recompressing Lock

(Installation of a Recompressing Lock)

Article 42. When the employer has workers engage in work in compressed air carried out under a pressure of 0.1 MPa or more or in diving operations at the depth of 10 m or more, he shall install a recompressing lock necessary for assuming first-aid treatment for compressed air workers subjected to high pressures or for diving workers, or shall assume measures use of which the said workers can make.

2. When the employer installs the recompressing lock, he shall avoid the places given below:

(1) Places or their vicinities in which to deal with dangerous substances (which correspond to the ones as listed in [Attached Table 1 of the Cabinet Order](#), same as in the following), explosives and large amounts of combustible substances, or to store the substances described above.

(2) Places which may happen to floods, snowslide, or landslide.

(Entry Prohibited)

Article 43. The employer shall prohibit those other than persons concerned from entering into the places therein the recompressing lock has been established or the places therein to operate the said recompressing lock, and shall put up notices to that effect at conspicuous locations.

(Operation of a Recompressing Lock)

Article 44. When the employer has the said workers operate the recompressing lock, he shall comply with the provisions given below:

(1) The employer shall make inspection of air feeding equipment, air exhausting equipment, communication devices, and warning devices in terms of their operation status as installed in the said recompressing lock before operating the recompressing lock on a day, repair the equipment or devices if defective, and replace the defective with new ones when he finds anything wrong.

(2) When compression is applied to workers, the employer shall not use pure oxygen.

(3) Excluding required cases, the doors shall be kept unopened which are provided between main and sub-main rooms, and the barometric pressure in both the main and sub-main rooms shall be kept equal.

(4) The employer shall have those who operate the recompressing lock always supervise the condition of compression and decompression, or the presence of other abnormalities.

2. When the employer does operate the recompression lock, he shall record the condition of compression and decompression applied at each occasion.

(Inspection)

Article 45. The employer shall make inspection of the recompressing lock when it is installed, and subsequently at intervals shorter than a period of a month in terms of the items given below, and shall repair the said rooms or replace defective equipment or devices with new ones when he finds anything wrong in the equipment or devices:

(1) Operational condition of the air feeding equipment and air exhausting equipment.

(2) Operational condition of communication devices and warning devices.

(3) Presence or absence of leakage of electricity.

(4) Presence or absence of damage to electrical machines, equipment and wiring, and other abnormalities in the said machines, etc., or wiring.

2. When the employer makes inspection of the equipment or devices in compliance with the provisions set forth in the preceding paragraph, he shall make a recording of the inspection results, and shall keep the recorded results in custody for a period of three years.

(Prohibition of Carrying Dangerous Substances, etc.)

Article 46. The employer shall prohibit dangerous substances, etc., liable to ignite or explosive substances or the substances which may form combustible substances if an increase is made in the temperature of the substances while they are being carried into the inside of the recompressing lock, and shall also put up a notice which states the said prohibition at the entrance of the recompressing lock.

Chapter VI. Licenses

Section 1. Licenses for Operations Chiefs of Work in Compressed Air

(Those Who Can Be Granted the License)

Article 47. The license for operations chiefs of work in compressed air shall be granted to those who have passed the license examination for operations chiefs of work in compressed air by the Director General of the Prefectural Labour Bureau.

(Disqualification for Licenses)

Article 48. Those who are designated in the Ministry of Health Labour, and Welfare Ordinance conforming to the provision of item 2, [paragraph 2, Article 72 the Law](#) concerning the license for operations chiefs of work in compressed air shall refer to those who are under 20 years of age.

(Qualification to Take the License Examination for Operations Chiefs of Work in Compressed Air)

Article 49. The persons who can take the license examination for operations chief of work in compressed air shall be those who have previous experience in work in compressed air for the periods of two years or more.

(Subjects of the Examination)

Article 50. The license examination for operations chief of work in compressed air shall be carried out in terms of subjects with paper tests given below:

- (1) Compressed air engineering methods.
- (2) Air feeding and air exhausting.
- (3) Health impairment due to high pressure.
- (4) Related laws and ordinances.

(Details on License Examination)

Article 51. In addition to those as provided by [Article 71 of the Safety and Health Ordinance](#) and the preceding two Articles, the items necessary for execution of license examination for operations chiefs of work in compressed air shall be established by the Minister of Health, Labour and Welfare.

Section 2. Licenses for Diving Workers

(Those Who are Qualified to Be Granted a License)

Article 52. The license for diving workers shall be granted to those who have passed the license examination for diving workers given by the Director General of the Prefectural Labour Bureau.

(Disqualification for Licenses)

Article 53. The persons concerning the license for diving workers, as provided for by Ministry of Health, Labour and Welfare Ordinance based on the provisions of item 2 of [paragraph 2 of Article 72 of the Law](#), shall correspond to those who are younger than 18 years old.

(The person designated by the Ministry of Health, Labour and Welfare ordinance based on [aragraph 3 of Article 72 of the Law](#))

Article 53-2. The persons concerning the license for diving workers, as provided for by Ministry of Health, Labour and Welfare Ordinance based on the provisions of paragraph 3 of Article 72 of the Law, shall be the persons who can not conduct appropriately descending or ascending in carrying out the work relating to the license due to the mental or physical function disorder.

(Consideration of Measures, etc., to Cover Handicap)

Article 53-3. In case the applicant for the license of diving worker shall be the person who described in preceding provisions, the Director General of the Prefectural Labour Bureau shall consider that the disorder is covered and the level of disorder is mitigated by the measures and treatment to cover the handicap for the decision to grant a license.

(License with Reservation)

Article 53-4. The Director General of the Prefectural Labour Bureau may grant a license for diving workers to a person suffering from mental or physical function disorder with the limitations of work he is able to operate and other necessary reservations concerning the operation.

(Subject of the Examination)

Article 54. The examination concerning diving workers shall be carried out in terms of the subjects with paper tests given below:

- (1) Diving operations.
- (2) Air feeding, descending and ascending.
- (3) Health impairment due to high pressures.
- (4) Related laws and ordinances.

(Details on License Examination)

Article 55. In addition to the items as provided for by Article 71 of the Safety and Health Ordinance, and the preceding Article, items necessary for carrying out the license examination for diving workers shall be established by the Minister of Health, Labour and Welfare.

Attached Table 1

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
0.10 or more and not more than 0.12	Not more than 30 minutes					1	1.2	30	30	335
	30 min. or more and not more than 60 min.					1	1.4	30	30	305
	60 min. or more and not more than 90 min.					1	1.5	30	30	285
	90 min. or more and not more than 120 min.					1	1.6	30	30	265
	120 min. or more and not more than 150 min.					2	1.7	60	30	270
	150 min. or more and not more than 180 min.					3	1.8	60	30	250
	180 min. or more and not more than 210 min.					4	1.9	60	30	230
	210 min. or more and not more than 240 min.					5	1.9	60	30	230
	240 min. or more and not more than 270 min.					5	2.0	150	45	135
	270 min. or more and not more than 300 min.					6	2.0	150	45	105
	300 min. or more and not more than 330 min.					6	2.0	150	45	75
	330 min. or more and not more than 360 min.					7	2.1	150	45	45
0.12 or more and not more than 0.14	Not more than 30 minutes					1	1.3	30	30	295
	30 min. or more and not more than 60 min.					1	1.5	30	30	270
	60 min. or more and not more than 90 min.					1	1.6	30	30	255
	90 min. or more and not more than 120 min.					3	1.7	60	30	255
	120 min. or more and not more than 150 min.					5	1.8	60	30	240

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	150 min. or more and not more than 180 min.					6	1.9	60	30	215
	180 min. or more and not more than 210 min.					8	2.0	60	30	210
	210 min. or more and not more than 240 min.					10	2.0	60	30	210
	240 min. or more and not more than 270 min.					10	2.1	150	45	130
	270 min. or more and not more than 300 min.					10	2.1	150	45	100
	300 min. or more and not more than 330 min.					12	2.2	150	45	70
0.14 or more and not more than 0.16	Not more than 30 minutes					1	1.3	30	30	270
	30 min. or more and not more than 60 min.					1	1.5	30	30	250
	60 min. or more and not more than 90 min.					3	1.7	60	30	235
	90 min. or more and not more than 120 min.					5	1.8	60	30	225
	120 min. or more and not more than 150 min.					7	1.9	60	30	210
	150 min. or more and not more than 180 min.					9	2.0	60	30	200
	180 min. or more and not more than 210 min.					11	2.1	90	45	210
	210 min. or more and not more than 240 min.					15	2.2	150	45	135
	240 min. or more and not more than 270 min.					18	2.2	150	45	115
	270 min. or more and not more than 300 min.					23	2.2	150	45	85
0.16 or more and not more than 0.18	Not more than 30 minutes					1	1.3	30	30	275
	30 min. or more and not more than 60 min.					5	1.6	30	30	245

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	60 min. or more and not more than 90 min.					9	1.8	60	30	235
	90 min. or more and not more than 120 min.					13	1.9	60	30	225
	120 min. or more and not more than 150 min.				2	15	2.0	60	30	215
	150 min. or more and not more than 180 min.				5	20	2.1	90	45	205
	180 min. or more and not more than 210 min.				8	25	2.1	90	45	170
	210 min. or more and not more than 240 min.				9	30	2.2	150	45	110
	240 min. or more and not more than 270 min.				10	35	2.2	150	45	75
	270 min. or more and not more than 300 min.				17	35	2.2	150	45	50
0.18 or more and not more than 0.20	Not more than 30 minutes					1	1.4	30	30	240
	30 min. or more and not more than 60 min.					8	1.6	30	30	220
	60 min. or more and not more than 90 min.					16	1.8	60	30	215
	90 min. or more and not more than 120 min.				7	15	2.0	90	30	195
	120 min. or more and not more than 150 min.				9	20	2.1	90	45	200
	150 min. or more and not more than 180 min.				11	30	2.1	90	45	170
	180 min. or more and not more than 210 min.				15	35	2.2	150	45	100
	210 min. or more and not more than 240 min.				20	40	2.2	150	45	85
240 min. or more and not more than 270 min.				25	45	2.2	150	45	50	
0.20 or more and not more	Not more than 30 minutes					1	1.4	30	30	240

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
than 0.22	30 min. or more and not more than 60 min.					11	1.7	60	30	225
	60 min. or more and not more than 90 min.				8	15	1.9	60	30	210
	90 min. or more and not more than 120 min.				12	20	2.0	90	30	210
	120 min. or more and not more than 150 min.				15	30	2.1	90	45	180
	150 min. or more and not more than 180 min.				23	40	2.1	90	45	145
	180 min. or more and not more than 210 min.				25	45	2.2	150	45	90
	210 min. or more and not more than 240 min.				30	50	2.2	150	45	60
	240 min. or more and not more than 270 min.				31	60	2.2	150	45	30
0.22 or more and not more than 0.24	Not more than 30 minutes					1	1.4	30	30	215
	30 min. or more and not more than 60 min.					14	1.7	60	30	200
	60 min. or more and not more than 90 min.				9	20	1.9	60	30	185
	90 min. or more and not more than 120 min.				18	30	2.0	90	30	180
	120 min. or more and not more than 150 min.				26	35	2.1	120	45	135
	150 min. or more and not more than 180 min.			5	30	40	2.2	150	45	95
	180 min. or more and not more than 210 min.			10	30	50	2.2	150	45	65
	210 min. or more and not more than 240 min.			14	30	60	2.2	150	45	40
0.24 or more and not more than 0.25	Not more than 30 minutes					1	1.5	30	30	210
	30 min. or more and not more than 60 min.					20	1.8	60	30	195

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	60 min. or more and not more than 90 min.				13	25	2.0	90	30	180
	90 min. or more and not more than 120 min.				19	35	2.1	120	45	150
	120 min. or more and not more than 150 min.				33	45	2.1	120	45	110
	150 min. or more and not more than 180 min.			6	35	50	2.2	150	45	70
	180 min. or more and not more than 210 min.			15	35	55	2.2	150	45	50
	210 min. or more and not more than 240 min.			18	35	65	2.2	150	45	20
0.25 or more and not more than 0.27	Not more than 30 minutes					2	1.5	30	30	180
	30 min. or more and not more than 60 min.				10	15	1.8	60	30	170
	60 min. or more and not more than 90 min.				17	30	2.0	90	30	150
	90 min. or more and not more than 120 min.			9	25	35	2.1	120	45	120
	120 min. or more and not more than 150 min.			15	30	45	2.2	150	45	85
	150 min. or more and not more than 180 min.			16	35	55	2.2	150	45	55
	180 min. or more and not more than 210 min.			21	40	60	2.2	150	45	30
0.27 or more and not more than 0.29	Not more than 15 minutes						1.3	30	30	195
	15 min. or more and not more than 30 min.					2	1.5	30	30	180
	30 min. or more and not more than 45 min.				3	5	1.7	60	45	165
	45 min. or more and not more than 60 min.				13	15	1.9	60	45	150
	60 min. or more and not more than 75 min.				18	20	2.0	90	45	135

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	75 min. or more and not more than 90 min.			4	20	30	2.0	90	45	120
	90 min. or more and not more than 105 min.			11	25	40	2.1	120	45	105
	105 min. or more and not more than 120 min.			13	30	40	2.1	120	45	90
	120 min. or more and not more than 135 min.			15	35	45	2.2	150	60	75
	135 min. or more and not more than 150 min.			18	35	45	2.2	150	60	60
	150 min. or more and not more than 165 min.			23	35	50	2.2	150	60	45
	165 min. or more and not more than 180 min.			20	40	55	2.2	150	60	30
	180 min. or more and not more than 195 min.			24	40	60	2.2	150	60	15
	195 min. or more and not more than 210 min.			26	40	75	2.2		60	0
0.29 or more and not more than 0.31	Not more than 15 minutes					2	1.3	30	30	180
	15 min. or more and not more than 30 min.					9	1.6	30	30	165
	30 min. or more and not more than 45 min.				11	15	1.8	60	45	150
	45 min. or more and not more than 60 min.				18	25	1.9	60	45	135
	60 min. or more and not more than 75 min.				25	35	2.0	90	45	120
	75 min. or more and not more than 90 min.			10	25	40	2.0	90	45	105
	90 min. or more and not more than 105 min.			12	30	45	2.1	120	45	90
	105 min. or more and not more than 120 min.			15	35	50	2.1	150	60	75
	120 min. or more and not more			20	40	50	2.2	150	60	60

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	than 135 min.									
	135 min. or more and not more than 150 min.			20	40	60	2.2	150	60	45
	150 min. or more and not more than 165 min.			22	40	65	2.2	150	60	30
	165 min. or more and not more than 180 min.			25	40	70	2.2	150	60	15
	180 min. or more and not more than 195 min.		5	25	40	75	2.2		60	0
0.31 or more and not more than 0.33	Not more than 15 minutes					2	1.4	60	30	165
	15 min. or more and not more than 30 min.					13	1.6	60	30	150
	30 min. or more and not more than 45 min.				14	20	1.8	90	45	135
	45 min. or more and not more than 60 min.				21	30	1.9	90	45	120
	60 min. or more and not more than 75 min.			13	25	35	2.0	120	45	105
	75 min. or more and not more than 90 min.			15	35	45	2.1	120	45	90
	90 min. or more and not more than 105 min.		5	15	35	55	2.1	120	45	75
	105 min. or more and not more than 120 min.		9	15	40	60	2.1	150	60	60
	120 min. or more and not more than 135 min.		10	20	40	65	2.1	150	60	45
	135 min. or more and not more than 150 min.		12	25	40	65	2.2	150	60	30
	150 min. or more and not more than 165 min.		14	25	40	70	2.2	150	60	10
	165 min. or more and not more than 180 min.		16	25	40	75	2.2		60	0
	0.33 or more and not more	Not more than 15 minutes					2	1.4	60	30

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
than 0.35	15 min. or more and not more than 30 min.					17	1.6	60	30	135
	30 min. or more and not more than 45 min.				15	25	1.8	90	45	120
	45 min. or more and not more than 60 min.			5	20	35	2.0	120	45	105
	60 min. or more and not more than 75 min.			11	25	50	2.0	120	45	90
	75 min. or more and not more than 90 min.			18	30	60	2.0	120	45	75
	90 min. or more and not more than 105 min.			25	35	65	2.1	150	60	60
	105 min. or more and not more than 120 min.		9	25	40	65	2.1	150	60	45
	120 min. or more and not more than 135 min.		14	25	40	70	2.2	150	60	30
	135 min. or more and not more than 150 min.		16	25	40	75	2.2	150	60	15
	150 min. or more and not more than 165 min.		18	25	40	80	2.2		60	0
0.35 or more and not more than 0.37	Not more than 15 minutes					2	1.4	60	30	135
	15 min. or more and not more than 30 min.					21	1.7	60	45	120
	30 min. or more and not more than 45 min.				20	25	1.9	90	45	105
	45 min. or more and not more than 60 min.			9	25	35	2.0	120	45	90
	60 min. or more and not more than 75 min.		5	15	30	50	2.0	120	45	75
	75 min. or more and not more than 90 min.		12	20	30	60	2.1	120	45	60
	90 min. or more and not more than 105 min.		14	25	35	65	2.1	150	60	45
	105 min. or more and not more	5	15	25	35	70	2.1	150	60	30

Pressure(MPa)	Duration of work under high pressure (or in compressed air)	Pressure reducing (decompression) rate (min.)					Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration of 2nd-time work under high pressure (or in compressed air) (min.)
		0.15 MPa	0.12 MPa	0.09 MPa	0.06 MPa	0.03 MPa				
	than 120 min.									
	120 min. or more and not more than 135 min.	8	20	25	35	70	2.2	150	60	15
	135 min. or more and not more than 150 min.	11	20	25	40	70	2.2	150	60	0
0.37 or more and not more than 0.4	Not more than 15 minutes					2	1.4	60	30	120
	15 min. or more and not more than 30 min.					25	1.7	90	45	105
	30 min. or more and not more than 45 min.				15	35	1.9	90	45	90
	45 min. or more and not more than 60 min.			12	20	45	2.0	120	45	75
	60 min. or more and not more than 75 min.		7	20	30	55	2.0	120	45	60
	75 min. or more and not more than 90 min.		15	20	35	65	2.1	150	60	45
	90 min. or more and not more than 105 min.	7	15	20	35	70	2.1	150	60	30
	105 min. or more and not more than 120 min.	11	15	25	35	70	2.2	150	60	15
	120 min. or more and not more than 135 min.	11	20	25	40	70	2.2		60	0

Attached Table 2

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
		Duration of diving	Surfacing (min.)										Duration (min.) of diving per day	
			24m	21m	18m	15m	12m	9m	6m	3m				
0.10 or more and not more than 0.12	10 or more and not more than 12	Not more than 10 minutes									1.1	30	30	480
		10 min. or more and not more than 30 min.									1.2	30	30	
		30 min. or more and not more than 60 min.									1.4	30	30	
		60 min. or more and not more than 90 min.									1.5	30	30	
		90 min. or more and not more than 120 min.									1.6	30	30	
		120 min. or more and not more than 180 min.								3	1.8	60	30	
		180 min. or more and not more than 240 min.								5	1.9	60	30	
		240 min. or more and not more than 360 min.								7	2.1	150	60	
0.12 or more and not more than 0.14	12 or more and not more than 14	Not more than 10 minutes								1.1	30	30	420	
		10 min. or more and not more than 30 min.								1.3	30	30		
		30 min. or more and not more than 60 min.								1.5	30	30		
		60 min. or more and not more								1.6	30	30		

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing time (min.) between works	Pressure reducing time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)											
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m			Duration (min.) of diving per day	
		than 90 min.												
		90 min. or more and not more than 120 min.								4	1.7	60	30	
		120 min. or more and not more than 150 min.								6	1.8	60	30	
		150 min. or more and not more than 180 min.								7	1.9	60	30	
		180 min. or more and not more than 210 min.								9	2.0	60	30	
		210 min. or more and not more than 240 min.								10	2.0	150	60	
		240 min. or more and not more than 300 min.								12	2.1	150	60	
0.14 or more and not more than 0.16	14 or more and not more than 16	Not more than 10 minutes									1.1	30	30	360
		10 min. or more and not more than 30 min.									1.3	30	30	
		30 min. or more and not more than 50 min.									1.4	30	30	
		50 min. or more and not more than 70 min.									1.6	30	30	
		70 min. or more and not more than 90 min.								3	1.7	60	30	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)											
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m				Duration (min.) of diving per day
		135 min. or more and not more than 165 min.							15	27	2.1	150	60	
		165 min. or more and not more than 225 min.							18	34	2.2	150	60	
0.20 or more and not more than 0.22	20 or more and not more than 22	Not more than 15 minutes									1.2	30	30	240
		15 min. or more and not more than 30 min.									1.4	30	30	
		30 min. or more and not more than 42 min.									1.5	30	30	
		42 min. or more and not more than 60 min.								7	1.7	60	30	
		60 min. or more and not more than 75 min.								16	1.8	60	30	
		75 min. or more and not more than 85 min.							5	16	1.8	60	30	
		85 min. or more and not more than 100 min.							12	16	1.9	60	30	
		100 min. or more and not more than 120 min.							17	22	2.0	60	30	
		120 min. or more and not more than 150 min.							21	29	2.1	150	60	
		150 min. or more and not							25	39	2.2	150	60	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)		
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03	
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa	
			Surfacing (min.)										Duration (min.) of diving per day		
			24m	21m	18m	15m	12m	9m	6m	3m					
		more than 210 min.													
0.22 or more and not more than 0.24	22 or more and not more than 24	Not more than 10 minutes									1.2	30	30	216	
		10 min. or more and not more than 25 min.									1.4	30	30		
		25 min. or more and not more than 37 min.									1.5	30	30		
		37 min. or more and not more than 50 min.								6	1.6	30	30		
		50 min. or more and not more than 58 min.								14	1.7	60	30		
		58 min. or more and not more than 75 min.								16	14	1.8	60		30
		75 min. or more and not more than 90 min.								18	16	1.9	60		30
		90 min. or more and not more than 108 min.								21	22	2.0	90		30
		108 min. or more and not more than 145 min.								27	32	2.1	150		60
		145 min. or more and not more than 180 min.								29	41	2.2	150		60
0.24 or more and not more than 0.25	24 or more and not more than 26	Not more than 10 minutes									1.2	30	30	200	
		10 min. or more and not more than 20 min.									1.3	30	30		

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing time (min.) between works	Pressure reducing time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
		Duration of diving	Surfacing (min.)										Duration (min.) of diving per day	
			24m	21m	18m	15m	12m	9m	6m	3m				
		and not more than 44 min.												
		44 min. or more and not more than 49 min.								16	1.7	60	30	
		49 min. or more and not more than 60 min.							11	16	1.8	60	30	
		60 min. or more and not more than 70 min.							18	22	1.9	60	30	
		70 min. or more and not more than 90 min.							27	22	2.0	90	30	
		90 min. or more and not more than 110 min.						8	27	29	2.1	150	60	
		110 min. or more and not more than 140 min.						13	29	41	2.2	150	60	
0.27 or more and not more than 0.29	28 or more and not more than 30	Not more than 10 minutes									1.2	30	30	170
		10 min. or more and not more than 20 min.									1.4	30	30	
		20 min. or more and not more than 25 min.									1.5	30	30	
		25 min. or more and not more than 35 min.								4	1.6	30	30	
		35 min. or more and not more than 39 min.								10	1.6	30	30	
		39 min. or more and not more than 44 min.								16	1.7	60	30	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)											
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m				Duration (min.) of diving per day
		44 min. or more and not more than 50 min.							8	16	1.8	60	30	
		50 min. or more and not more than 60 min.							16	16	1.8	60	30	
		60 min. or more and not more than 78 min.							27	22	1.9	60	30	
		78 min. or more and not more than 85 min.						5	27	22	2.0	90	30	
		85 min. or more and not more than 105 min.						12	27	32	2.1	150	60	
		105 min. or more and not more than 130 min.						17	29	48	2.2	150	60	
0.29 or more and not more than 0.31	30 or more and not more than 32	Not more than 10 minutes									1.2	30	30	158
		10 min. or more and not more than 22 min.									1.4	30	30	
		22 min. or more and not more than 30 min.							8		1.5	30	30	
		30 min. or more and not more than 35 min.							14		1.6	30	30	
		35 min. or more and not more than 40 min.							22		1.6	30	30	
		40 min. or more and not more than 46 min.							9	22	1.7	60	45	
		46 min. or more and not more							16	22	1.8	60	45	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)											
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m				Duration (min.) of diving per day
		than 53 min.												
		53 min. or more and not more than 68 min.							27	22	2.0	90	45	
		68 min. or more and not more than 79 min.						7	27	33	2.0	90	45	
		79 min. or more and not more than 100 min.						17	27	48	2.1	150	60	
		100 min. or more and not more than 120 min.						21	27	55	2.1	150	60	
0.31 or more and not more than 0.33	32 or more and not more than 34	Not more than 10 minutes									1.2	60	30	146
		10 min. or more and not more than 19 min.									1.4	60	30	
		19 min. or more and not more than 27 min.								7	1.5	60	30	
		27 min. or more and not more than 31 min.								22	1.6	60	30	
		31 min. or more and not more than 36 min.								22	1.7	90	45	
		36 min. or more and not more than 41 min.							8	22	1.7	90	54	
		41 min. or more and not more than 48 min.							16	22	1.8	90	45	
		48 min. or more and not more than 60 min.							27	22	1.9	90	45	
		60 min. or more						10	27	37	2.0	120	45	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing time (min.) between works	Pressure reducing time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)		
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03	
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa	
			Surfacing (min.)												
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m				Duration (min.) of diving per day	
		and not more than 73 min.													
		73 min. or more and not more than 95 min.						19	27	63	2.0	150	60		
		95 min. or more and not more than 115 min.					5	22	32	74	2.0	150	60		
0.33 or more and not more than 0.35	34 or more and not more than 36	Not more than 5 minutes									1.2	60	30	134	
		5 min. or more and not more than 17 min.									1.4	60	30		
		17 min. or more and not more than 25 min.								8	1.5	60	30		
		25 min. or more and not more than 29 min.								14	1.6	60	30		
		29 min. or more and not more than 33 min.								22	1.6	60	30		
		33 min. or more and not more than 38 min.								9	22	1.7	90		45
		38 min. or more and not more than 43 min.								16	22	1.8	90		45
		43 min. or more and not more than 55 min.								27	22	1.9	90		45
		55 min. or more and not more than 67 min.						10	27	34	2.0	120	45		
		67 min. or more and not more than 90 min.						22	27	63	2.0	150	60		
		90 min. or more					9	22	34	80	2.0	150	60		

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)		
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03	
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa	
			Surfacing (min.)										Duration (min.) of diving per day		
			24m	21m	18m	15m	12m	9m	6m	3m					
		and not more than 110 min.													
0.35 or more and not more than 0.37	36 or more and not more than 38	Not more than 5 minutes									1.2	30	60	124	
		5 min. or more and not more than 15 min.									1.4	30	60		
		15 min. or more and not more than 22 min.								5	1.5	30	60		
		22 min. or more and not more than 26 min.								14	1.6	30	60		
		26 min. or more and not more than 30 min.								22	1.6	30	60		
		30 min. or more and not more than 34 min.							9	22	1.7	45	90		
		34 min. or more and not more than 40 min.								17	22	1.8	45		90
		40 min. or more and not more than 50 min.								27	22	1.9	45		90
		50 min. or more and not more than 62 min.							12	27	34	2.0	45		120
		62 min. or more and not more than 85 min.						4	22	27	67	2.0	60		150
85 min. or more and not more than 105 min.						12	22	36	83	2.0	60	150			
0.37 or more and not more than 0.39	38 or more and not more than 40	Not more than 5 minutes									1.2	60	30	116	
		5 min. or more and not more									1.4	60	30		

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)										Duration (min.) of diving per day	
			24m	21m	18m	15m	12m	9m	6m	3m				
		than 26 min.												
		26 min. or more and not more than 29 min.							9	22	1.7	90	45	
		29 min. or more and not more than 35 min.							14	22	1.8	90	45	
		35 min. or more and not more than 42 min.							27	28	1.8	90	45	
		42 min. or more and not more than 55 min.						15	27	34	2.0	120	45	
		55 min. or more and not more than 75 min.					8	22	27	65	1.9	150	60	
		75 min. or more and not more than 95 min.					16	22	36	80	2.0	150	60	
0.41 or more and not more than 0.44	42 or more and not more than 45	Not more than 10 minutes								2	1.4	60	30	
		10 min. or more and not more than 14 min.								8	1.4	60	30	
		14 min. or more and not more than 20 min.								14	1.6	60	30	
		20 min. or more and not more than 24 min.								22	1.6	60	30	
		24 min. or more and not more than 30 min.							15	28	1.6	60	30	
		30 min. or more and not more than 37 min.							27	28	1.8	60	45	
		37 min. or more and not more						16	27	34	2.0	120	45	

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing time (min.) between works	Pressure reducing time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)		
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03	
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa	
			Surfacing (min.)										Duration (min.) of diving per day		
			24m	21m	18m	15m	12m	9m	6m	3m					
		than 50 min.													
		50 min. or more and not more than 70 min.					11	22	27	68	2.0	150	60		
		70 min. or more and not more than 90 min.				4	19	22	30	107	2.0	150	60		
0.44 or more and not more than 0.49	42 or more and not more than 45	Not more than 8 minutes								2	1.3	60	30	86	
		8 min. or more and not more than 12 min.								8	1.4	60	30		
		12 min. or more and not more than 16 min.								16	1.5	60	30		
		16 min. or more and not more than 20 min.								28	1.6	60	30		
		20 min. or more and not more than 26 min.							16	28	1.7	90	45		
		26 min. or more and not more than 33 min.								27	28	1.8	90		45
		33 min. or more and not more than 43 min.							18	27	31	2.0	120		45
		43 min. or more and not more than 60 min.						13	23	27	68	2.0	150		60
		60 min. or more and not more than 80 min.					9	19	22	45	85	2.0	150		60
		0.49 or more and not more than 0.54	50 or more and not more than 55	Not more than 6 minutes								2	1.3		60
6 min. or more and not more than 10 min.										7	1.4	60	30		

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)							Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)	
			0.24	0.21	0.18	0.15	0.12	0.09	0.06					0.03
			MPa	MPa	MPa	MPa	MPa	MPa	MPa					MPa
			Surfacing (min.)											
		Duration of diving	24m	21m	18m	15m	12m	9m	6m	3m			Duration (min.) of diving per day	
		24 min. or more and not more than 33 min.						16	27	42	1.9	90	45	
		33 min. or more and not more than 50 min.			9	20	24	27	65	70	1.9	150	60	
		50 min. or more and not more than 70 min.		14	18	20	24	50	100	73	1.9	150	60	
0.59 or more and not more than 0.64	60 or more and not more than 65	Not more than 5 minutes								5	1.3	60	30	
		5 min. or more and not more than 12 min.								32	1.5	60	30	
		12 min. or more and not more than 21 min.								23	36	1.8	90	45
		21 min. or more and not more than 30 min.				2	24	28	35	45		1.9	90	45
		30 min. or more and not more than 45 min.			6	20	24	28	56	73		1.9	150	60
		45 min. or more and not more than 65 min.	4	16	18	20	26	53	92	73		1.9	150	60
0.64 or more and not more than 0.69	65 or more and not more than 70	Not more than 5 minutes								10	1.4	60	30	
		5 min. or more and not more than 11 min.								34	1.5	60	30	
		11 min. or more and not more than 18 min.								25	36	1.7	90	45
		18 min. or more and not more than 27 min.				4	24	28	35	45		1.9	90	45
		27 min. or more			12	20	24	28	65	95		1.8	150	60

Pressure(MPa)	Diving depth (m)	Duration of work under High pressure (or in compressed air)	Pressure reducing (or decompression) rate (min.)								Body (internal) gas pressure coefficient	Pressure reducing (or decompression) time (min.) between works	Pressure reducing (or decompression) time (min.) after work	Duration(min.) of work under high pressure (or in compressed air per day)
			0.24	0.21	0.18	0.15	0.12	0.09	0.06	0.03				
			MPa	MPa	MPa	MPa	MPa	MPa	MPa	MPa				
			Surfacing (min.)											
			24m	21m	18m	15m	12m	9m	6m	3m				Duration (min.) of diving per day
		and not more than 40 min.												
		40 min. or more and not more than 60 min.	8	16	17	20	27	52	95	105	1.8	150	60	
0.69 or more and not more than 0.78	70 or more and not more than 80	Not more than 5 minutes								16	1.5	60	30	50
		5 min. or more and not more than 10 min.							8	35	1.6	60	30	
		10 min. or more and not more than 15 min.							28	35	1.7	90	45	
		15 min. or more and not more than 22 min.				7	24	28	37	51	1.8	90	45	
		22 min. or more and not more than 35 min.			18	20	24	30	65	100	1.8	150	60	
		35 min. or more and not more than 50 min.	12	16	18	20	28	52	95	105	1.8	150	60	
											30	1.5	60	
0.78 or more and not more than 0.88	80 or more and not more than 90	Not more than 5 minutes								30	1.5	60	30	40
		5 min. or more and not more than 10 min.							20	35	1.7	90	45	
		10 min. or more and not more than 15 min.						14	28	35	1.8	90	45	
		15 min. or more and not more than 20 min.				13	24	28	44	51	1.9	90	45	
		20 min. or more and not more than 30 min.		6	18	20	24	29	65	100	1.8	150	60	
		30 min. or more and not more	12	16	18	20	24	49	90	100	1.8	150	6	

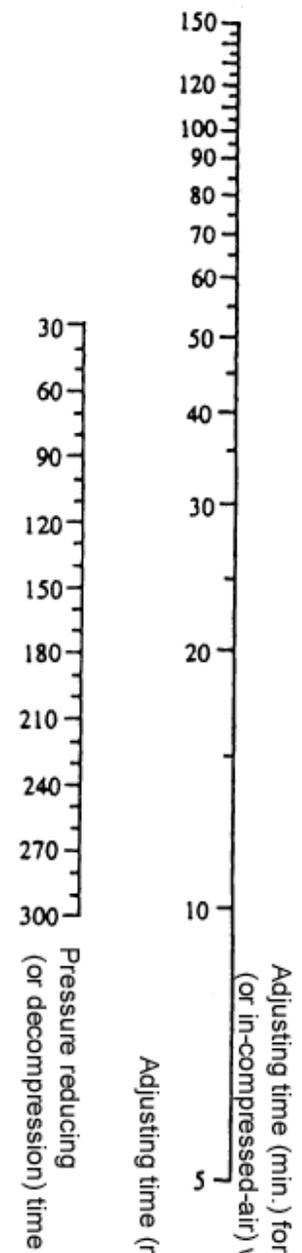
Attached Table 3

(80 or more and not more than 90)	(0.78 or more and not more than 0.88)
(70 or more and not more than 80)	(0.69 or more and not more than 0.78)
(65 or more and not more than 70)	(0.64 or more and not more than 0.69)
(60 or more and not more than 65)	(0.59 or more and not more than 0.64)
(55 or more and not more than 60)	(0.54 or more and not more than 0.59)
(50 or more and not more than 55)	(0.49 or more and not more than 0.54)
(45 or more and not more than 50)	(0.44 or more and not more than 0.49)
(42 or more and not more than 45)	(0.41 or more and not more than 0.44)
(40 or more and not more than 42)	(0.39 or more and not more than 0.41)
(38 or more and not more than 40)	(0.37 or more and not more than 0.39)
(36 or more and not more than 38)	(0.35 or more and not more than 0.37)
(34 or more and not more than 36)	(0.33 or more and not more than 0.35)
(32 or more and not more than 34)	(0.31 or more and not more than 0.33)
(30 or more and not more than 32)	(0.29 or more and not more than 0.31)
(28 or more and not more than 30)	(0.27 or more and not more than 0.29)
(26 or more and not more than 28)	(0.25 or more and not more than 0.27)
(24 or more and not more than 26)	(0.24 or more and not more than 0.25)
(22 or more and not more than 24)	(0.22 or more and not more than 0.24)
(20 or more and not more than 22)	(0.20 or more and not more than 0.22)
(18 or more and not more than 20)	(0.18 or more and not more than 0.20)
(16 or more and not more than 18)	(0.16 or more and not more than 0.18)
(14 or more and not more than 16)	(0.14 or more and not more than 0.16)
(12 or more and not more than 14)	(0.12 or more and not more than 0.14)
(10 or more and not more than 12)	(0.10 or more and not more than 0.12)

Diving Depth (m)

Pressure of air in high-pres room for work (f

Body (i
pressu



Remarks

1. The adjusting time for under-high-pressure (or in-compressed-air) worker shall be determined by the following procedure:

(1) The adjusting time shall be determined by the point to be plotted on the scale ② corresponding to the body (internal) gas pressure coefficient based on the pressure range listed in the pressure column and the time listed in the column for the duration of work under high pressure (or in-compressed air), which are to be determined according to the pressure under which the previous work was carried out and the duration of such work carried out in Table 2 (Refer to Table 1, if the worker concerned falls under the category of the case designated in a), item 3 of Article 15 and the case designated in item 2 of paragraph 1 of Article 18).

(2) Plot the point corresponding to the decompression time provided by Article 15 for the worker worked in the high-pressure room on the scale ④.

(3) Connect the points determined on items (1) and (2) mentioned above with a straight line, and plot the point at which the straight line intersects the scale ③.

(4) Plot the point corresponding to the pressure of the high-pressure room where in the work concerned has been carried out on scale ①, and connect this point and the point plotted on scale ③ with a straight line to locate the point at which this straight line intersects scale ⑤.

(5) The value determined by item (4) shall be adopted as the adjustment time for workers working in the high-pressure room.

(6) Despite the rule set forth in the above item (5), in the case of the worker who regularly engages in the high-pressure room 3 times or more in a day, in determining the adjustment time for such worker, the adjustment time of the last work in the high-pressure room determined by the procedure set forth in the above items (1) through (5) shall be added to the duration of the last work under high pressure; this length of time shall be treated as the duration of the last work under high pressure of this worker described in item (1); then, the procedures set forth in the items (1) through (5) shall be repeated to determine the adjustment time required for the worker who worked in the high-pressure room; and this procedure shall be repeated according to the number of times of the work in the high-pressure room to determine the adjustment time required for the latest work under high pressure carried out by the worker concerned.

2. To determine the adjustment time for the diving worker, the procedure for the worker to work in high-pressure room set forth in the above section 1 shall be applicable with necessary modifications.

For instance, in applying the procedure written for the work under high pressure, the expression "worker in high pressure room" shall be read as "diving worker"; "work in compressed air" as "diving operations"; "pressure" as "depth of water"; "duration of work under high pressure" as "duration of diving"; "column for pressure" as "column for diving depth"; "column for duration of work under high pressure" as "column for duration of diving"; "Article 15" as "Article 27"; and "gas pressure reducing time for the worker in high-pressure room" as "gas pressure reducing time for diving worker".