

# **Industrial Accident Prevention System in Korea**

## **- An Introductory Guide -**

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# 1. Introduction

## A. Development of the Industrial Accident Prevention System

The occupational safety and health system took root as a government policy with the enactment of the Occupational Safety and Health Act in December 1981 and the modification of the enforcement decrees and rules in 1983.

Before the enactment of the Occupational Safety and Health Act, ex post facto compensation for insured workers following industrial accidents was the main focus of policy based on the Industrial Accident Compensation Insurance Act, but with the passing of the Act, disaster prevention policies were implemented.

During the Act's initial years, the social foundation for implementing industrial-disaster prevention policies had yet to be established, resulting in low awareness of the Act among labor and management. With the movement for democracy in the late 1980s, the voice of the workers demanding a higher standard of living grew increasingly louder, leading to greater interest in safety and health in the workplace.

Subsequently, the government established the Korea Occupational Safety and Health Agency in 1987 and the Occupational Safety Bureau within the Ministry of Employment and Labor in January 1989, and completely amended the Occupational Safety and Health Act in January 1990.

*Comprehensive Measures for the Prevention of Occupational Diseases and The First Six-Year Plan for the Prevention of Industrial Accidents* were established in 1991.

In 1992, the Occupational Health Research Institute and the

Occupational Safety Research Institute were established within the Korea Occupational Safety and Health Agency, preparing the basic framework for the planning and implementation of occupational safety and health policies in the 1990s.

With the advent of internationalization and globalization in the 1990s, the scope of occupational safety and health was expanded to not only include the safety and health of workers in the workplace, but also to secure the fundamental safety of exported goods and to amend and supplement regulations related to safety and health in preparation for opening the market following the Blue Round and the Uruguay Round.

Through the amendment of the *Special Act on the Deregulation of Business Activities* in the early 1990s, regulations related to safety and health were eased in 1997.

The economic crisis of late 1997 created an atmosphere of downscaling corporate investments for safety and health, resulting in greater risk of industrial accidents due to reasons such as the downsizing of organizations, downsizing of investments for safety and health, and greater flexibility in the labor market. Accordingly, the government implemented systems focused on promoting voluntary corporate activities for accident prevention and the steady expansion of the climate for disaster prevention as major policies. Since the early 1990s, the government has established and is operating several mid- to long-term industrial accident prevention plans.

## **B. Mid- to Long-Term Industrial Accident Prevention Plans**

### **The First Six-Year Industrial Accident Prevention Plan (1991-1996)**

- Goal: To reduce the accident rate by 45.6%, from 1.71% in 1990

to 0.93% in 1996

### **Industrial Accident Prevention Special Project Plan (1995-1997)**

- Goal: To reduce the accident rate to 0.7%, which is on par with that of advanced nations, in 3 years (by 1998) by investing 300 billion won from 1995 to 1997

### **The Three-Year Plan for the Advancement of Occupational Safety (1997-1999)**

- Goal: To reduce the accident rate to 0.5% and to achieve a death rate in industrial accidents of one per 10,000 persons
- Creation of a safe and pleasant working environment; establishment of rewarding workplaces that guarantee workers' rights to safety and health; and establishment of values that put safety first based on a respect for human life

### **The First Five-Year Industrial Accident Prevention Plan (2000-2004)**

- Strategic Goal 1: To bring the level of Korea's occupational safety and health close to that of advanced nations by reducing industrial accidents and improving the health of workers
- Strategic Goal 2: To improve the awareness of labor and management for safety and health, and to create a climate of compliance with safety and health laws and regulations at worksites
- Strategic Goal 3: To create a foundation for each party in charge of safety and health such as labor, management, government, and related groups and institutions to allow them to fulfill their roles efficiently

### **The Second Five-Year Industrial Accident Prevention Plan (2005-2009)**

- Goal: To create a safe and pleasant working environment, and to maintain and promote a healthy labor force

**The Third Five-Year Industrial Accident Prevention Plan (2010-2014)**

- Goal: To reduce the number of accident victims into around 60,000, thereby achieving an accident rate of 0.5% range; and to establish a voluntary system for the management of safety and health based on risk assessment



## **2. Trends in the Occurrences of Industrial Accidents**

### **A. Numbers of Accident Victims**

During the period 2000-2009, the number of accident victims who incurred work-related injuries or diseases at workplaces increased each year, reaching 97,821 in 2009 (see Table 1).

The number of accident victims per 1,000 persons peaked in 2003 at 8.956 and has trended downward since then, reaching 7.045 in 2009.

### **B. Occurrences of Work-Related Diseases**

Of the total number of accident victims (81,434 persons) in 2001, 4,456 or 5.47% were injured as a result of work-related diseases, and the figure increased to 11,472 or 12.73% out of a total of 90,147 in 2007, followed by a downward trend that reached 8.11% in 2009 (see Table 1).

The number of persons per 1,000 who incurred work-related diseases also increased, from 0.421 in 2001 to 0.916 in 2007, followed by a downward trend that reached 0.572 in 2009.

Heavier competition has resulted in higher levels of work-related stress, leading to more deaths from cerebral and cardiovascular diseases. According to a report by the Ministry of Employment and Labor, the number of deaths from cerebral and cardiovascular diseases increased from 545 in 2000 to 820 in 2003, which is 27.4% of the total number of deaths from industrial accidents (2,923), followed by a downward trend that reached 320 in 2009. Deaths from stress, overwork, and liver diseases increased from 62 in 2000 to 88 in 2003, followed by a downward trend that reached 29 in 2009 (see Table 2).

The number of deaths from occupational diseases was 394 in 2000, peaked at 524 in 2006, and decreased to 431 in 2009 (see Table 2). Most deaths from occupational diseases are due to pneumoconiosis, which contributed 397, or 92.1%, of total deaths from occupational diseases (431 persons) in 2009.

Table 1. Trends in Occurrence of Work-Related Diseases, According to Industrial Accident Insurance (2001 to 2007)  
(Unit: Number of persons)

Year	Number of insured workers	Number of accident victims (per 1,000 persons)		
		Total	Work-related injuries	Work-related diseases
2001	10,581,186	81,434 (7.696)	76,978 (7.275)	4,456 (0.421)
2002	10,571,279	81,911 (7.748)	77,721 (7.352)	4,190 (0.396)
2003	10,599,345	94,924 (8.956)	87,184 (8.225)	7,740 (0.730)
2004	10,473,090	88,874 (8.486)	80,979 (7.732)	7,895 (0.754)
2005	11,059,193	85,411 (7.723)	79,011 (7.144)	6,400 (0.579)
2006	11,688,797	89,910 (7.692)	80,796 (6.912)	9,114 (0.780)
2007	12,528,879	90,147 (7.195)	78,675 (6.279)	11,472 (0.916)
2008	13,489,986	95,806 (7.102)	87,046 (6.457)	8,760 (0.649)
2009	13,884,927	97,821 (7.045)	89,880 (6.473)	7,941 (0.572)

Note. Data from Ministry of Employment and Labor, *Analysis of Status of Industrial Accidents*, each year.

Table 2. Trends in Occurrence of Deaths from Work-Related Injuries and Diseases (2000 to 2009)

(Unit: Number of persons, %)

Year	Work-related diseases						
	Total	Work-related injuries	Job-related diseases				
			Total	Occupational diseases	Total	Cerebral and cardiovascular diseases	Stress, overwork, liver disease, and others
2000	2,528 (100.0)	1,414 (55.9)	1,114 (44.1)	394 (15.6)	720 (28.5)	545 (21.6)	62 (2.5)
2001	2,748 (100.0)	1,575 (57.3)	1,173 (42.7)	415 (15.1)	758 (27.6)	680 (24.7)	78 (2.8)
2002	2,605 (100.0)	1,378 (52.9)	1,227 (47.1)	407 (15.6)	820 (31.5)	760 (29.2)	60 (2.3)
2003	2,923 (100.0)	1,533 (52.4)	1,390 (47.0)	482 (16.4)	908 (31.1)	820 (28.1)	88 (3.0)
2004	2,825 (100.0)	1,537 (54.4)	1,288 (45.6)	446 (15.8)	842 (29.8)	788 (27.9)	54 (1.9)
2005	2,493 (100.0)	1,398 (56.1)	1,095 (43.9)	455 (18.3)	640 (25.7)	608 (24.4)	32 (1.3)
2006	2,453 (100.0)	1,332 (54.3)	1,121 (45.7)	524 (21.4)	597 (24.3)	565 (23.0)	32 (1.3)
2007	2,406 (100.0)	1,383 (57.5)	1,023 (42.5)	480 (20.0)	543 (22.6)	515 (21.4)	28 (1.2)
2008	2,422 (100.0)	1,448 (59.8)	974 (40.2)	463 (19.1)	511 (21.1)	482 (19.9)	29 (1.2)
2009	2,181 (100.0)	1,401 (64.2)	780 (35.8)	431 (19.8)	349 (16.0)	320 (14.7)	29 (1.3)

*Note.* Deaths from work-related injuries = Deaths from work-related injuries + deaths from injuries while commuting to and from work. Deaths from occupational diseases include deaths from pneumoconiosis, metal and heavy-metal poisoning, and poisoning from specific chemicals. Work-related diseases = Diseases that occur due to both work-related factors and non-work-related factors such as illnesses (cerebral and cardiovascular diseases, tasks accompanying heavy physical burden, back pain, overwork, stress, liver diseases, etc.). Data from Ministry of Employment and Labor, *Analysis of Status of Industrial Accidents*, each year.

### **C. Persons Incurring Physical Disabilities due to Industrial Accidents**

A review of the occurrences of industrial accidents in 2009 reveals that of the 13,884,927 insured workers working in 1,560,949 workplaces, 97,821 persons experienced industrial accidents, and 2,181 persons died. In the same year, 35,273 persons were newly recognized as physically disabled due to industrial accidents (see Table 3).

The 35,273 persons newly recognized as physically disabled (physical disability degrees 1 to 14) make up 38.8% of all industrial accident victims of 2009, and the figure including deaths from industrial accidents is 35,273, or 38.3% of the total number of industrial accident victims (97,821). The percentage of deaths and persons with severe disabilities of the total number of industrial accident victims peaked at 45.7% in 2005, and decreased thereafter (to 34.5% in 2001 and to 38.37% in 2009).

## 2. Trends in the Occurrences of Industrial Accidents

Table 3. Occurrence of Physical Disabilities due to Industrial Accidents by Degree of Physical Disability

(Unit: Persons, %)

Year	No. of insured workers	Total no. of accident victims (I)	Per 1,000 persons	No. of deaths (E) (E/I)	Occurrence of physical disabilities (D)				Deaths and no. of persons with disabilities (F=D+E)	Percentage of deaths and severe disabilities (F/I)(%)
					Degree of disability					
					Total (D) (D/I)	1 to 3 (A)	4 to 7 (B)	8 to 14 (C)		
2001	10,581,186	81,434	7.696	2,748 (3.4)	25,360 (31.1)	493	2,907	21,960	28,108	34.5
2002	10,571,279	81,911	7.748	2,605 (3.2)	26,354 (32.2)	534	3,065	22,755	28,959	35.4
2003	10,599,345	94,921	8.955	2,923 (3.1)	30,356 (32.0)	633	3,449	26,274	23,279	35.1
2004	10,473,090	88,874	8.485	2,825 (3.2)	33,899 (38.1)	712	3,917	29,270	36,724	41.3
2005	11,059,193	85,411	7.723	2,493 (2.9)	36,973 (43.3)	852	4,963	31,158	39,466	46.2
2006	11,688,797	89,910	7.692	2,453 (2.7)	38,597 (42.9)	1,117	5,509	31,963	41,050	45.7
2007	12,528,879	90,147	7.195	2,406	35,793 (39.7)	938	4,966	29,889	38,199	42.4
2008	13,489,986	95,806	7.102	2,422	36,883 (38.5)	795	4,816	31,272	39,305	41.0
2009	13,884,927	97,821	7.045	2,181	35,273 (36.1)	540	2,250	34,483	37,454	38.3

*Note.* Degrees of disability 1 to 3 represent 100% loss of ability to work, and degrees 4 to 7, above 50% loss. Data from Ministry of Employment and Labor, *Analysis of Status of Industrial Accidents*, each year.

### **3. System and Contents of the Occupational Safety and Health Act**

#### **A. Purpose and Coverage**

**Purpose:** The purpose of this Act is to maintain and promote the safety and health of workers by preventing industrial accidents and creating a pleasant work environment by establishing standards for occupational safety and health and clarifying where responsibility lies.

**Coverage:** This Act applies to all businesses and workplaces, provided that this Act may not apply wholly or partially to businesses prescribed by the Presidential Decree taking into consideration the degree of harm and hazard, the type and scale of business, the location of business, and so forth.

#### **B. Duties of the Government, Employers, and Workers**

**Duties of the government:** In order to accomplish the goals of this Act, the government has the duty to faithfully fulfill the following duties.

- Establish, execute, coordinate, and control occupational safety and health policies
- Support and guide the prevention of accidents at workplaces where accidents frequently occur
- Assess and improve the safety of harmful or hazardous machines, instruments, equipment, protective devices, personal protective equipment, and so forth
- Prepare criteria for safety and health measures, and instruct and inspect harmful or hazardous machines, instruments, equipment, materials, and so forth
- Support the establishment of voluntary safety and health management systems at workplaces

- Promote a culture for safety to raise awareness on safety and health through PR activities, education, zero-accident campaigns, and so forth
- Research and develop technology, and install and operate facilities for safety and health
- Maintain and manage investigations and statistics on industrial accidents
- Support, guide, and supervise organizations related to safety and health
- Protect and promote workers' safety and health

**Duties of employers: The Act specifies the duties of employers as follows.**

- Employers should comply with the standards for the prevention of industrial accidents as prescribed in this Act and any orders issued under this Act; provide workers with information on safety and health in the workplace; prevent health problems in workers caused by physical fatigue, mental stress, etc.; protect the lives of workers; maintain and promote the safety and health of workers by creating a proper work environment through improvements in working conditions; and comply with industrial accident prevention policies of the state.
- Employers should continuously survey and assess the status of harmful or hazardous factors within workplaces in order to execute the necessary measures for management and improvement.
- Persons who design, manufacture, or import machines, instruments, and other equipment, who manufacture or import raw materials, etc., or who design or construct structures should observe the standards as prescribed by this Act or any other orders issued under this Act when designing, manufacturing, importing, or constructing an object, and should strive to prevent the occurrence of industrial accidents caused by the use of the object.

### **Duties of workers**

Workers should observe the standards as prescribed in this Act and any other orders issued under this Act, and are subject to measures for the prevention of industrial accidents established by employers or other related organizations.

## **C. Safety and Health Management System**

Safety and health management organizations at workplaces include safety and health managers, supervisors, safety managers, health managers, occupational physicians, general safety and health managers, occupational safety and health committees, and honorary occupational safety inspectors.

### **Safety and health managers**

Businesses with 100 or more full-time employees and businesses in the construction industry or those designated by the Ordinance of the Ministry of Employment and Labor who conduct construction projects valued at 2 billion won or more and have 50 to 99 employees should assign a safety and health manager to oversee and manage matters concerning the following tasks.

- Establishment of industrial accident and disease prevention plans
- Preparation and modification of safety and health management regulations
- Safety and health education of workers
- Inspection and improvement of work environments such as work-environment monitoring
- Investigation of causes of industrial accidents and the establishment of measures to prevent recurrences
- Recording and maintenance of statistics on industrial accidents
- Determining whether safety devices and personal protective equipment related to safety and health meet product standards or



not at the time of purchase

- Other matters concerning the prevention of hazard and danger to workers as prescribed by the Ordinance of the Ministry of Employment and Labor
- Instruction and supervision of safety managers and health managers.

### **Supervisors**

An employer should employ a workplace supervisor (this refers to the head of a division within the management structure who directly manages and supervises production work and employees involved therein or who takes charge of such a position) to carry out the duties related to safety and health, such as safety and health inspections, as follows.

- Inspection of machines and equipment related to the work instructed and supervised by the workplace supervisor
- Check on work clothes, protective devices, and personal protective equipment for workers under the supervision of the supervisor, and education and instruction on how to wear and use such work clothes, protective devices, and personal protective equipment
- Reporting of industrial accidents and diseases occurring in the concerned workplace and emergency measures for such accidents
- Checking and inspecting of the tidiness of the workplace concerned and securing of passageways
- Cooperating with occupational physicians, safety managers, and health managers of the workplace concerned regarding their instruction and advice
- Other matters related to work-related safety and health as designated by the Minister of Employment and Labor

### **Safety managers**

An employer should assign a safety manager at the workplace to

assist the employer or safety and health manager in technical matters concerning safety, and to instruct and advise the supervisor on such matters.

The number of safety managers at individual workplaces shall be as follows:

- Soil, sand, or stone mining industry, and manufacturing industry: two managers for workplaces with 500 or more full-time employees, and one manager for workplaces with 50 to 499 employees
- Transportation and telecommunication industry: two managers for workplaces with 1,000 or more full-time employees, and one manager for workplaces with 50 to 999 employees
- Construction industry: two managers for workplaces with construction projects valued at 80 billion won or above, or with 600 or more employees, and one manager for workplaces with construction projects valued at 12 billion won or above but less than 80 billion won.

The duties of a safety manager includes 1) the work deliberated on and determined by the occupational safety and health committee or a safety and health-related labor and management consultative body, and the work prescribed by safety and health-related regulations and employment rules within the workplace; 2) selection of proper machines and equipment subject to mandatory safety certifications and voluntary safety verifications at the time of purchase; 3) the establishment and execution of safety-education plans for the workplace concerned; 4) tour of workplaces for checking and guidance, and recommendation of measures; 5) investigation of causes of industrial accidents, and technical instruction and advice to prevent recurrences; 6) instruction and management for the maintenance and management of statistics on industrial accidents; 7) suggestion for measures concerning workers who violate matters

related to safety prescribed in laws, orders issued under laws, safety- and health-related regulations, or employment rules; and 8) other matters related to safety as designated by the Minister of Employment and Labor.

An employer with fewer than 300 full-time employees may entrust the work of a safety manager to a safety management service institution. Those who may be designated as a safety management service institution are limited to legal entities who intend to conduct safety management work with the human resources, facilities, and equipment prescribed by the Ordinance of the Ministry of Employment and Labor.

### **Health managers**

An employer should assign a health manager in the workplace to assist the employer or the safety and health manager in technical matters concerning health, and to instruct and advise the supervisor on such matters.

The number of health managers at individual workplaces shall be as follows.

- Mining and manufacturing industries: two managers at workplaces with 2,000 or more full-time employees, two managers at workplaces with 500 to 1,999 full-time employees, and one manager for workplaces with 50 to 499 employees
- Land or pipeline transportation; travel agencies or other travel support services; art, sports, leisure, or related services; movies, video, and TV program production or distribution; recording-facility operation; news services; associations or organizations; repairs, or other personal services; and industries other than construction: two managers at workplaces with 5,000 or more full-time employees, and one manager for workplaces with 50 to 4,999 employees

The duties of a health manager includes 1) work deliberated on and determined by the occupational safety and health committee and work designated by the safety and health-related regulations and employment rules at the workplace; 2) management of work to prevent obstacles to promoting good health; 3) selection of proper protective devices related to health such as machines and equipment subject to mandatory safety certifications and voluntary safety verifications at the time of purchase; 4) posting and storing of safety and health data and materials; 5) work of occupational physicians in cases where the health manager is a doctor; 6) instructions for the management of workers' health, health education, and health promotion; 7) treatment of patients for symptoms common in the workplace, such as external injuries, in order to protect workers within the workplace concerned, administration of the necessary emergency measures, administration of measures to prevent the aggravation of injuries and diseases, instructions and management for the recovery of persons with diseases discovered through health examinations, and administration of medicine following the above-mentioned medical treatment in cases where the health manager is a doctor or a nurse; 8) inspection of facilities related to ventilation or air exhaust used within workplaces, and the improvement and instruction for the engineering of working methods; 9) walk-around inspections and instructions within workplaces, and suggestion of measures; 10) investigation of causes for occupational diseases and the establishment of countermeasures; 11) instruction and advice for the maintenance and management of statistics on industrial accidents (limited to the domain of health); 12) suggestion of measures for workers who violate matters related to health within laws, orders issued under laws, safety and health management regulations, and employment rules; and 13) other matters related to the management of work and work environments.

An employer operating a business with fewer than 300 full-time

employees or a business located in an isolated location as designated by the Minister of Employment and Labor may entrust the work of a health manager to a health management service institution. Those who may be designated as a health management service institution are limited to those with the human resources, facilities, and equipment prescribed by the Ordinance of the Ministry of Employment and Labor.

#### **Occupational physicians**

An employer should assign an occupational physician for the workplace to instruct the health management of workers and other duties of the health manager, except in cases where the assigned health manager is a doctor. In cases where the work of health managers is entrusted to a health management agency, it is possible not to assign an occupational physician. The regulations on the assignment of occupational physicians have been relaxed based on Article 28 (Autonomous Employment by Companies), Clause 1, Number 1 of the Special Act on Regulations for Corporate Activities. An occupational physician must be a doctor according to the Medical Services Act who specializes in industrial medicine or preventive medicine, or a person knowledgeable and well-experienced in occupational health.

The duties of an occupational physician include 1) review of the health examinations of workers, allocation of work according to the results, and administration of measures to protect the health of workers such as change of assigned jobs or shortened working hours, 2) investigation of causes that hinder the promotion of workers' health and administration of medical measures to prevent recurrences, and 3) administration of other medical measures to maintain and promote workers' health as designated by the Minister of Employment and Labor.

### **General safety and health managers**

An employer of a business, a part of which is carried out under a contract at the same place and which is prescribed by the Presidential Decree, should designate the safety and health manager for the business as the general safety and health manager. His duty is to manage and control the work aimed at preventing industrial accidents that may occur when workers employed by the employer and workers employed by his or her contractor (including subcontractors) work together at the same place.

Businesses obligated to designate a general safety and health manager are those that employ 50 or more full-time employees, including those employed by the employer or contractor (100 or more employees for numbers 4 through 7 below), or businesses in the construction industry whose construction projects, including those of both the contractee and contractor, is valued at 2 billion won or above. The businesses should belong to any one of the following industry: 1) manufacturing of basic metal products; 2) shipbuilding or boat manufacturing; 3) soil, sand, or stone mining; 4) manufacturing; 5) publishing of book, magazine, or other printed materials; 6) music and other audio material publishing; and 7) regeneration of metal or nonmetal raw materials.

The duties of a general safety and health manager include 1) suspension and resumption of work in the presence of urgent risks of industrial accidents or in the occurrence of severe accidents; 2) administration of safety and health measures for contracted projects; 3) execution and supervision of safety and health management expenses of contractors, and consultation and coordination among contractors; and 4) check on whether machines and equipment subject to mandatory safety certifications and voluntary safety verifications.

### **Occupational safety and health committees**

In order to deliberate on and make decisions about important matters concerning occupational safety and health, an employer should establish and operate an occupational safety and health committee composed of an equal number of workers and employers.

The occupational safety and health committee should deliberate on and make decisions about matters concerning the following items: 1) the establishment of industrial accident prevention plans; 2) the preparation and modification of safety and health management regulations; 3) the safety and health education of workers; 4) the inspection and improvement of work environments such as work-environment monitoring; 5) health management, such as the medical examination of workers; 6) the recording and maintenance of statistics on industrial accidents; 7) the investigation of causes of industrial accidents and the establishment of measures to prevent recurrences; and 8) safety and health measures to be taken when introducing harmful or hazardous machines, instruments, or other equipment.

Workplaces subject to the establishment and operation of an occupational safety and health committee include the following: 1) workplaces with 100 or more full-time employees, and having construction projects valued at 12 billion won or above for workplaces in the construction business; and 2) harmful or hazardous businesses with considerably higher occurrences of industrial accidents compared with other businesses as designated by the Ordinance of the Ministry of Employment and Labor among businesses with 50 to 99 full-time employees, namely soil, sand, and stone mining, manufacturing of wood and wooden products, manufacturing of chemical materials and products, manufacturing of nonmetal mineral products, manufacturing of basic metal products, manufacturing of processed metal goods, manufacturing of

automobiles and trailers, manufacturing of other machines and devices, manufacturing of household machines, and manufacturing of other electric devices.

An occupational safety and health committee is composed of worker members, one workers' representative, one or more honorary occupational safety supervisor(s) designated by the workers' representative, and up to nine workers from the workplace designated by the workers' representative; and employer members, the representative of the business, one safety manager, one health manager, occupational physician, and up to nine department heads designated by the business representative.

The chairperson of the occupational safety and health committee is elected by the committee from among the members, regular meetings are called by the chairperson every 3 months, and extraordinary meetings are called by the chairperson as deemed necessary.

For matters that failed to be decided at the occupational safety and health committee, or when a consensus is not reached on the interpretation of the decided matters or implementation methods, a mediation body is organized within the occupational safety and health committee through the agreement of worker and employer councilors, or mediated by a third party.

### **Honorary occupational safety inspector**

In order to promote participation in and support for industrial accident and disease prevention activities, the Minister of Employment and Labor may appoint an honorary occupational safety inspector from workers, worker groups, employer groups, or professional industrial accident and disease prevention agencies

Honorary occupational safety inspector may be appointed from the following: 1) a worker employed at a business that is obligated to



organize an occupational safety and health committee or labor-management consultative body, who is nominated by the workers' representative considering the opinion of the employer; 2) an executive of a labor union or the body representing the area concerned according to Article 10 of Trade Union and Labor Relations Adjustment Act, who is nominated by the labor union or the body representing the area concerned; 3) an executive of a national employers' group or an affiliated organization, who is nominated by the group or organization; or 4) an executive of a organization related to industrial accident and disease prevention or its subsidiaries, who is nominated by the group or organization.

The duties of an honorary occupational safety inspector include the following: 1) participating in in-house inspection in a workplace and in the inspection of workplaces conducted by labor inspectors, 2) participating in the establishment of workplace industrial accident and disease prevention plan and in in-house inspection of machines and equipments in the workplace, 3) requesting that the employer make improvements in cases of violations of legislation, and report to the inspection institution, 4) requesting that the employer suspend work in cases of urgent risks of industrial accidents and diseases, 5) attending the work environment monitoring and health diagnosis of workers and participating in the explanatory session on the results, 6) requesting that the employer conduct extraordinary health diagnosis in case the symptom of work-related illnesses exists or many workers contact the diseases, 7) instructing workers on safety rules, 8) suggesting improvements to laws and industrial accident and disease prevention policies, 9) participating in and supporting activities to raise awareness of safety and health, and accident-free movements, and 10) other work as designated by the Minister of Employment and Labor concerning industrial accident prevention such as promotion of and education on industrial accident and disease prevention.

## **D. Safety and Health Management Regulations**

In order to maintain safety and health in the workplace, employers should prepare safety and health management regulations, post or keep them in the workplace, and notify workers. The regulations should include matters concerning: 1) the safety and health management organization and its function, 2) safety and health education, 3) the safety management of the workplace, 4) the health management of the workplace, 5) accident investigation and the formulation of accident prevention plans, and 6) other safety and health related issues.

Safety and health management regulations should not contradict collective agreements or employment rules that are applicable to the workplace concerned. In case any part of the safety and health management regulations contradicts the collective agreement or employment rules, it should be subject to the standards set by the collective agreement or employment rules.

When preparing or modifying safety and health management regulations, employers should get the approval of the occupational safety and health committee after its deliberation of the regulations. However, employers at workplaces where an occupational safety and health committee is not yet established should obtain the consent of the workers' representative.

Except as provided by the Occupational Safety and Health Act, the provisions of the Labor Standards Act concerning employment regulations should apply *mutatis mutandis* to the safety and health management regulations unless contrary to the nature thereof.

Businesses obligated to prepare safety and health management regulations are those with 100 or more full-time workers.

## **E. Measures for the Prevention of Hazard and Danger**

The system of measures to prevent harm and hazard includes safety measures, health measures, matters to be observed by workers, suspension of work, technical guidelines and work-environment standards, prohibition on the contracting of hazardous work, safety and health measures for contracted businesses, appropriation of occupational safety and health management expenses, safety and health education for workers, education for safety and health managers, protective measures for harmful or hazardous machines and instruments, safety certification, safety self-inspections, safety inspections, hazardous substances prohibited from being manufactured, hazardous substances subject to approvals, hazard and risk evaluation of new chemical substances, management of asbestos, and the preparation of material safety data sheets.

### **Safety measures**

An employer should take measures necessary to prevent the following hazards.

- Hazards caused by machines, tools, or other equipment; hazards caused by explosive, combustible, or inflammable substances; hazards caused by electricity, heat, or other forms of energy; hazards caused by improper working methods during excavating, quarrying, stevedoring, timbering, transporting, operating, dismantling, the handling of heavy objects, or other work; and hazards in places where workers may fall, sand or structures may collapse, or objects may fall or come flying off.
- Safety measures to be taken by the employer are prescribed by the Ordinance of the Ministry of Employment and Labor *Rules on Occupational Safety Standards*.

### **Health measures**

An employer should take the necessary health measures to prevent the following health problems.

- Health problems caused by raw materials, gas, vapor, dust, fumes, mist, oxygen-deficient air, pathogens, etc.; health problems caused by radiation, harmful rays, high temperature, low temperature, ultrasonic waves, noise, vibration, abnormal air pressure, etc.; health problems caused by gas, liquid, residue, etc., discharged from the workplace; health problems caused by the monitoring of gauges, the operation of computer terminals, precision work, etc.; health problems caused by simple and repetitive work or work that requires excessive physical labor; and health problems caused by failure to maintain proper standards of ventilation, lighting, illumination, thermal insulation, dampproofing, cleaning, etc.
- Safety measures to be taken by the employer are prescribed by the Ordinance of the Ministry of Employment and Labor *Rules on Occupational Health Standards*.

### **Matters to be observed by workers**

Workers should observe the measures prescribed by the Ordinance of the Ministry of Employment and Labor *Rules on Occupational Safety Standards* and *Rules on Occupational Health Standards*.

### **Suspension of work**

If there is imminent danger that an industrial accident may occur, or if a serious accident has occurred, the employer should take the necessary measures such as the immediate suspension of operations, or the evacuation of workers from the workplace, before resuming operations.

If a worker suspends work and takes shelter as a result of urgent risk of an industrial accident, he or she should report without delay

to the immediate superior officer, who should take the appropriate measures.

### **Technical guidelines and work-environment standards**

The Minister of Employment and Labor may set technical guidelines and work-environment standards for measures to be taken by an employer, and instruct and recommend them to employers.

If deemed necessary in setting such guidelines and standards, the Minister of Employment and Labor may organize and operate a standard-establishment committee in respective fields.

Existing technical guidelines include the following: standard safe-operation guidelines for makeshift constructions, standard safe-operation guidelines for the prevention of falls, technical guidelines for the safety standards for machine tools, technical guidelines for the installation of gas alarms, operation-management guidelines for VDT operators, and safe-operation guidelines for the manufacturing of wood and wooden products.

### **Prohibition of contract for hazardous work**

Work that is hazardous or dangerous to safety or health as prescribed by the Presidential Decree should not be separately contracted for (including subcontracting) without obtaining authorization from the Minister of Employment and Labor.

Work that is prohibited from being contracted for by the Presidential Decree is as follows: 1) metal plating; 2) refining, pouring, processing and heating of heavy metals such as mercury, lead, and cadmium; and 3) manufacturing or using materials that need approval, and other harmful or hazardous work as designated by the Minister of Employment and Labor following the deliberations of the policy deliberation committee.

### **Safety and health measures for contracted businesses**

Employers, a part of whose work is done under a contract, in the following industries should take safety and health measures to prevent industrial accidents and diseases that may occur when those employed directly and those employed by a contractor work together at the same place: 1) construction; 2) manufacturing of basic metal products; 3) shipbuilding or boat manufacturing; 4) soil, sand, or stone mining; 5) manufacturing; 6) publishing of books, magazines, or other print materials; 7) publishing of music or other audio products; and 8) regeneration of metal or nonmetal raw materials. The safety and health measures to be taken are as follows: 1) constitution and operation of a consultative body among employers concerning safety and health; 2) safety and health management such as inspection tour of workplaces; 3) guidance and support for the safety and health education of workers conducted by a contractor; and 4) other matters prescribed by the Ordinance of the Ministry of Employment and Labor for the purpose of preventing industrial accidents and diseases.

### **Appropriation of occupational safety and health management expenses**

Persons who contract to undertake work in the construction, shipbuilding, or repair-businesses industry, or other businesses designated by the Presidential Decree, or who carry out such businesses independently, upon entering into a contract or establishing an independent business plan should appropriate occupational safety and health management expenses in order to prevent industrial accidents in the amount of the contract or work expenses under such conditions as determined and announced by the Minister of Employment and Labor.

In order to efficiently use the occupational safety and health expenses, the Minister of Employment and Labor may determine standards

according to the progress of construction work, for the method for using the expenses and the details of the expenses by the scale and category of construction work, and for other matters necessary for the use of the occupational safety and health expenses.

Persons who contract for or independently carry out a construction project worth 300 million won or more but less than 12 billion won and who use occupational safety and health management expenses should receive guidance from specialized institution providing guidance on accident prevention in advance on matters such as the method for using such expenses and accident prevention measures.

#### **Safety and health education for workers**

Employers should periodically provide safety and health education for workers in the workplace under such conditions as prescribed by the Ordinance of the Ministry of Employment and Labor, namely regular education, education upon hiring, education upon changes to the contents of the work, and special education for those employed in hazardous or dangerous job.

The hours of regular education are as follows: 1 hour or more per month or 3 hours or more per quarter for office workers, 1 hour or more per month or 3 hours or more per quarter for those in sales, 2 hours or more per month for those subject to special safety and health education, 2 hours or more for other workers in general, and 8 hours or more every half year or 16 hours or more per year for managers or supervisors.

The hours of education upon hiring are as follows: 1 hour or more for daily workers, and 8 hours or more for all other workers.

The hours of education when the contents of the work changes are as follows: 1 hour or more for daily workers, and 8 hours or more for all other workers.

The hours of education for those subject to special education are as follows: 2 hours or more for daily workers, and 16 hours or more for all other workers.

The contents of regular safety and health education for workers are as follows: 1) matters concerning occupational safety and health and prevention of accidents, 2) matters concerning occupational health and prevention of occupational diseases, and 3) matters concerning the promotion of health and prevention of diseases, management of harmful and hazardous work environments, the Occupational Safety and Health Act, and management in general.

#### **Education for managers, etc.**

Safety and health managers, safety managers, health managers, and those employed at accident prevention institutions should receive job-competency education on safety and health conducted by the Ministry of Employment and Labor.

Job-competency education includes education for those newly appointed to a position within 3 months of appointment and supplementary education 2 years after appointment.

Hours of education for those newly appointed to a position are as follows: 6 hours or more for safety and health managers, 34 hours or more for safety managers, and 34 hours or more for health managers.

Hours of supplementary education are as follows: 6 hours or more for safety and health managers, 24 hours or more for safety managers, 24 hours or more for health managers, and 24 hours or more for those employed at specialized institution providing guidance on accident prevention.

The contents of education for those newly appointed as safety and health managers are as follows: 1) matters concerning the duties and



responsibilities of managers, and 2) matters concerning the Occupational Safety and Health Act and safety and health measures. The contents of education for those newly appointed as safety managers are associated with the following topics: 1) the Occupational Safety and Health Act; 2) the introduction to occupational safety; 3) human engineering and industrial psychology; 4) safety education methods; 5) emergency measures upon the occurrence of accidents; 6) safety inspections and evaluations, and accident analysis methods; 7) accident prevention by fields such as safety standards and personal protective equipment; 8) the appropriation of occupational safety and health management expenses and the standards for using the expenses; 9) industrial hygiene, such as improving work environments; 10) methods for conducting accident-free movements and their practice; and 11) other matters necessary to improving the work of safety managers.

The contents of education for those newly appointed as health managers are associated with the following topics: 1) the Occupational Safety and Health Act and work-environment monitoring; 2) introduction to occupational safety and health; 3) establishment and assessment of occupational health management, and occupational epidemiology; 4) improvement of work environments; 5) occupational epidemiology and statistics; 6) industrial ventilation; 7) safety and health management systems and regulations, and the role of health managers; 8) health management plans and their operation; 9) health management of workers and first aid; and 10) other matters necessary to improving the work of health managers.

#### **Protective measures for hazardous or dangerous machines, instruments, etc.**

Among machines or instruments whose operation requires harmful or hazardous work or that are operated by electric power, those that are designated by the Presidential Decree should not be transferred,

leased, installed or used, or displayed for the purpose of transfer or lease, without protective measures to prevent hazards and danger as prescribed by the Minister of Employment and Labor.

Machines and instruments subject to this provision and the protective devices to be installed are as follows: 1) protective devices for presses and cutters; 2) safety devices for acetylene welding equipment and gas-gathering welding equipment; 3) explosion-proof structures for explosion-proof electric machines and instruments; 4) automatic electronic shock preventers for alternating current arc welding equipment; 5) overload limiters and other protective devices announced by the Minister of Employment and Labor for cranes, elevators, gondolas, and lifts; 6) pressure-relief systems for pressure vessels; 7) pressure-relief systems and pressure switches for boilers; 8) emergency stop devices for rollers; 9) covers for grinders; 10) reaction-proof devices and blade guards for circular woodwork saws; 11) blade guards for hand-push wood-planing machines; 12) safety mats and fences for complex-movement-enabled industrial robots; 13) protective insulating equipment and live-wire work equipment for insulating equipment needed for power failures or live-wire work; and 14) in the case of makeshift equipment for the prevention and protection of hazards such as falls and collapses, such products should be appropriate according to the standards set by the Minister of Employment and Labor.

A person who lends or borrows machines, instruments, or equipment as prescribed by the Presidential Decree to or from another person should take the necessary measures to prevent harm and hazards as prescribed by the Ordinance of the Ministry of Employment and Labor.

Measures to prevent hazards and danger to be taken by those who lend hazardous machines, instruments, or equipment from others are as follows: 1) prior inspection of machines, and immediate repairs

when abnormalities are found and other necessary maintenance; and 2) issuance of documentation by the lender holding information on the capacity of machines; the details of protective measures, characteristics of the machines, and cautions to be taken during use; detailed contents of repairs, maintenance, and inspections of the machines; and the manufacturing dates of major parts.

#### **Safety certification**

To assess the safety of harmful or hazardous machines, instruments, equipment, protective devices, and personal protective equipment (hereinafter referred to as “machines, instruments, etc. subject to safety certification”), the Minister of Employment and Labor may determine and announce safety certification criteria by the kind, standard, and type of machines, instruments, etc. subject to safety certification concerning the safety performance, the manufacturer’s technology capacity, the production system, etc. A person who manufactures machines, instruments, etc. subject to safety certification (hereinafter referred to as “machines, instruments, etc. subject to mandatory safety certification”) as are deemed necessary for the safety and health of workers and prescribed by the Presidential Decree should receive the safety certification administered by the Minister of Employment and Labor to ensure that the machines, instruments, etc. subject to mandatory safety certification meet the safety certification criteria.

Machines, instruments, etc. subject to mandatory safety certification are as follows: 1) presses, 2) shearing machines, 3) cranes, 4) pressure vessels, 5) rollers, 6) injection molders, and 7) aerial work platforms. Protective devices subject to mandatory safety certification are as follows: 1) protective devices for presses and shearing machines; 2) overload limiters for hoists; 3) pressure-relief safety valves for boilers; 4) pressure-relief safety valves for pressure vessels; 5) pressure-relief rupture disks for pressure valves; 6) protective devices

for insulation and devices for live-wire work; 7) electronic machines, instruments, and parts for explosion-proof; and 8) makeshift equipment needed to prevent and to protect works from hazards such as falls, drops, and collapses as designated and announced by the Minister of Employment and Labor.

Protective instruments subject to mandatory safety certification are as follows: 1) safety helmets for the prevention of hazard from crashes and electric shocks, 2) safety shoes, 3) safety gloves, 4) antidust masks, 5) gas masks, 6) air-supplied masks, 7) powered air-purifying respirators, 8) protective cloths, 9) safety belts, 10) protective goggles for light shielding and protection against hazards from arsenic acids, 11) face shields for welding, and 12) earplugs and earmuffs for sound proofing.

Once received, the safety certification should be affixed to the container or packaging of the machines, instruments, etc. subject to mandatory safety certification.

### **Safety inspection**

An employer who uses hazardous or dangerous machines or instruments as designated by the Presidential Decree (hereinafter referred to as “hazardous or dangerous machines, etc.”) should receive inspections (hereinafter referred to as “safety inspections”) conducted by the Minister of Employment and Labor to ensure that the safety-related performance of the harmful or hazardous machines, etc. meet the inspection standards set and announced by the Minister of Employment and Labor.

The harmful or hazardous machines, instruments, and equipment subject to safety inspections are as follows: 1) presses, 2) shearing machines, 3) cranes, 4) lifts, 5) pressure vessels, 6) gondolas, 7) local ventilation systems, 8) centrifuges, 9) chemical equipment and the peripheral equipment, 11) rollers, and 12) injection molders.

The cycles for safety inspections are as follows: 1) for cranes, lifts, and gondolas, the first safety inspection within 3 years from the date that the installation is completed, followed by inspections every 2 years (every 6 months from the installment for those used in construction sites); and 2) for other hazardous or dangerous machines, etc., the first safety inspection within 3 years from the date that the installation is completed, followed by inspections every 2 years.

**Hazardous substances prohibited from being manufactured, imported, transferred, supplied, or used**

No person may manufacture, import, transfer, supply, or use the following harmful substances as designated by the Presidential Decree: 1) substances proved to cause occupational cancer and recognized to be hazardous to the health of workers, and 2) substances that have been evaluated for harm and hazard or whose harm and hazard has been investigated, substances that are suspected of causing significant health problems to workers.

Hazardous substances prohibited from being manufactured, imported, transferred, supplied, or used are as follows: 1) yellow phosphorous matches; 2) paint including white lead; 3) poly chlorinated terphenyls; 4) 4-nitrodiphenyl and its salts; 5) actinolite asbestos and anthophyllite asbestos; 6) beta-naphthylamine and its salts; 7) crocidolite asbestos and amosite asbestos; 8) rubber glue containing benzene; 9) materials containing any substances included in numbers 3 through 7; 10) materials prohibited from being manufactured, imported, sold, stored, transported, or used according to Article 32 of the Toxic Chemical Control Act; and 11) other substances that are hazardous to the health of workers as designated by the Minister of Employment and Labor after review by the policy deliberation committee.

### **Hazardous substances subject to advance permission for manufacture or use**

A person who intends to manufacture or use the following materials should receive advance permission from the Minister of Employment and Labor as designated by the Presidential Decree: 1) substances proved to cause occupational cancer and recognized to be especially harmful to the health of workers, and 2) of harmful substances that were evaluated for harm and hazard and whose harm and hazard has been investigated, substances that are concerned to cause significant health problems to workers.

Hazardous substances subject to approval for manufacture or use are as follows: 1) dichlorobenzidine and its salts, 2) alpha-naphthylamine and its salts, 3) zinc chromate, 4) ortho-tolidine and its salts, 5) diamisidine and its salts, 6) beryllium, 7) arsenic and its inorganic compounds, 8) chromite chromium, 9) volatile coal tar pitch, 10) nickel sulfide, 11) vinyl chloride, 12) benzotrichloride, 13) asbestos, 14) preparations containing any substances in numbers 1 through 11, 15) preparations containing the substance in number 12, and 16) other substances harmful to the health of workers as designated by the Minister of Employment and Labor after the review by the policy deliberation committee.

### **Management of asbestos**

Persons who intend to tear down or dismantle a building or structure of a certain scale or above as designated by the Presidential Decree should have an asbestos inspection institution designated by the Minister of Employment and Labor inspect the building or facility concerned to determine whether it contains asbestos, the type and quantity of asbestos contained, and the location and surface area of the product that contains asbestos. The results of such inspections should be recorded and preserved.

Structures or facilities subject to inspection for asbestos as designated by the Presidential Decree are as follows: 1) structures whose total floor space is 50 square meters or greater, and where the total area to be torn down or dismantled is 50 square meters or greater; 2) houses whose total floor space is 200 square meters or greater, and the total area to be torn down or dismantled is 200 square meters or greater; and 3) insulation materials, thermal insulation materials, spray-coating materials, spray-applied fire-resistant coating, gasket, packing materials, and sealants that make up 15 square meters or more of the area to be torn down or dismantled, or the total volume of which is one cubic meter or more.

Qualifications and procedures for designating asbestos inspection institutions are prescribed by the Presidential Decree, and inspection methods and other necessary matters are designated by the Minister of Employment and Labor.

Those who tear down or dismantle structures or facilities found to contain asbestos as a result of inspections should abide by the standards designated by the Ordinance of the Ministry of Employment and Labor.

Those tearing down or dismantling structures that contain more asbestos than the quantity and surface area prescribed by the Presidential Decree should have a service provider registered with the Minister of Employment and Labor remove and dispose of the asbestos.

An asbestos disposal and removal service provider should ensure that the concentration of asbestos in the air within the workplace is not higher than the standards prescribed by the Ordinance of the Ministry of Employment and Labor after completion of the work, and proof of such should be submitted to the Minister of Employment and Labor.

### **Standards for management of and exposure to hazardous agents**

The Minister of Employment and Labor should classify and manage chemical and physical agents (hereinafter referred to as “hazardous agents”) known to cause health problems to workers according to the classification standards prescribed by the Ordinance of the Ministry of Employment and Labor.

The Minister of Employment and Labor should designate and announce the standards for exposure density to hazardous agents. The Minister of Employment and Labor may evaluate the harm and hazard to the health of workers by hazardous agents, and announce the results in the official gazette.

Employers should maintain the exposure density of hazardous agents within the workplace that are suspected of causing serious health problems in workers, such as carcinogenic substances, and designated by the Presidential Decree to be no higher than the level approved by the Ordinance of the Ministry of Employment and Labor. Such harmful agents are as follows: 1) lead and its inorganic compounds; 2) nickel; 3) dimethylformamide; 4) benzene; 5) 2bromopropane; 6) asbestos; 7) hexavalent chromium compounds; 8) carbon bisulfide; 9) cadmium and its compounds; 10) toluene-2, 4-diisocyanate; 11) trichloroethylene; 12) formaldehyde; and 13) normal hexane.

### **Hazard and risk evaluation of new chemicals**

Employers who intend to manufacture or import new chemicals should evaluate the harm and hazard of the new chemicals as prescribed by the Ordinance of the Ministry of Employment and Labor in order to prevent the occurrence of health problems in workers, submit the evaluation report to the Minister of Employment and Labor, and implement the necessary measures according to the evaluation in order to avoid, without delay, causing health problems to workers.



The Minister of Employment and Labor, upon receiving an evaluation report on hazards and risk of new chemicals, should review the report without delay; notify relevant government bodies of the names, risk and hazards of the new chemicals, and measures taken against such risk and hazards; and announce such information in the official gazette or daily newspaper registered as having nationwide circulation according to Article 12, Clause 1 of the *Act on the Guarantee of Freedom and Function of Papers, etc.* When reviewing the submitted report, the Minister of Employment and Labor may refer to the results of the hazards assessment of the Minister of Environment or seek the opinions of the Korea Occupational Safety and Health Agency or other experts.

The Minister of Employment and Labor may order an employer to take necessary preventive measures, such as installing or maintaining facilities and equipment and providing personal protective equipment, if deemed necessary, to prevent the occurrence of health problems in workers according to the results of the submitted report on the risk and hazards of new chemicals.

Employers who transfer or supply new chemicals should provide documents describing the measures to be taken to prevent the occurrence of health problems in workers.

#### **Preparation of material safety data sheet**

Employers who intend to manufacture, import, use, transport, or store chemicals or materials containing chemicals (excluding those designated by the Presidential Decree) should post or keep a data sheet where it can be easily seen by workers handling such substances that includes the following information: 1) name, ingredients, and composition of the chemical; 2) safety and health precautions for handling the chemical; 3) health and ecological hazards identifications; and 4) other matters as designated by the Ordinance

of the Ministry of Employment and Labor.

For the safety and health of workers handling chemicals or chemical-containing materials, employers should take proper measures such as affixing warning labels to containers or packaging and/or educating workers. If the chemical or chemical-containing materials are transferred or supplied, the relevant material safety data sheet should be transferred or supplied with the chemical or chemical-containing material. Employers should post the control points for the handling chemicals or chemical-containing materials by each stage of the work process.

Preparation and submission of material safety data sheets; the contents, location, and posting method of warning labels; and other necessary matters are prescribed by the Ordinance of the Ministry of Employment and Labor. Matters related to the Toxic Chemicals Control Act should be determined after consultation with the Minister of Environment.

## **F. Health Management of Workers**

The health management system for workers includes work-environment monitoring, health examination of workers, epidemiologic investigation, health management pocketbook, prohibitions and restrictions on work by sick persons, restrictions on the extension of working hours, and restrictions on employment due to qualifications.

### **Work-environment monitoring**

Employers should employ a person possessing the qualifications prescribed by the Ordinance of the Ministry of Employment and Labor to monitor the work environment of workplaces where work hazardous to the health of workers is carried out, to record and preserve the results, and to report the results to the Minister of Employment and Labor as prescribed by the Ordinance of the

Ministry of Employment and Labor. Upon request, the workers' representative may be present during the process of work-environment monitoring.

Employers should inform workers in the workplace of the results of work-environment monitoring, and take proper measures such as installing and improving the facilities or equipment concerned in accordance with the results to protect the health of workers.

Employers should comply with the following when monitoring the work environment: 1) conduct preliminary monitoring of the work environment; 2) conduct monitoring during the time when work is normally done, and when the workers' exposure to harmful agents can be accurately assessed; and 3) conduct all monitoring using the individual-sample extraction method, and in cases where the individual-sample extraction method is difficult to administer, use the regional-sample extraction method.

Employers should hold an information-briefing session on the results of the work-environment monitoring, or have the institutions that conducted the monitoring hold such a session at the request of the occupational safety and health committee or workers' representative. The Minister of Employment and Labor may assess the credibility of the work-environment monitoring results when deemed necessary to determine the accuracy and precision of the results.

The Minister of Employment and Labor may designate and support research institutions that specialize in analyzing work environments by hazardous agents or industries in order to protect the health of workers from hazardous agents within the workplace and to promote professional research on topics such as work-environment management methods when deemed necessary.

### **Health examination of workers**

Employers should conduct health examinations to workers at an institution designated by the Minister of Employment and Labor or at an institution that conducts health examinations according to the National Health Insurance Act in order to protect and maintain the health of workers. In this case, upon request, the workers' representative may be present during health examinations.

If deemed necessary to protect the health of workers, the Minister of Employment and Labor may order an employer to conduct tentative health examinations for particular workers or to take other necessary measures.

Health examinations include regular health examinations, special health examinations, health examinations before allocation, rolling health examinations, and tentative health examinations.

The cycle for regular health examinations is once every 2 years for office workers and once a year for other workers.

The cycle for special health examinations is once every 6 months or 12 months, according to the hazardous agent concerned.

The cost for regular health examinations follows the standards prescribed by the National Health Insurance Act.

Employers should preserve documents that prove the results of health examinations submitted by workers for 5 years. However, documents of the results of health examinations of workers who handle substances proved to be carcinogenic as announced by the Minister of Employment and Labor, or data that have been computerized, should be preserved for 30 years.

### **Epidemiologic investigation**

The Minister of Employment and Labor, if deemed necessary for

diagnosing and preventing occupational diseases and identifying their causes, may conduct an epidemiological investigation for an occupational disease to study the correlation between the disease of workers and hazardous factors within the workplace.

The Minister of Employment and Labor, if deemed necessary for an epidemiological investigation, may request that relevant institutions provide the results of workers' health examinations, a record of medical benefits and the results of health examinations according to the National Health Insurance Act, and data on diseases and the causes of death according to the Cancer Management Act.

The Korea Occupational Safety and Health Agency may conduct epidemiological investigations in the following cases: 1) where it is difficult to determine through work-environment monitoring or health examinations alone whether a worker's disease is an occupational disease, upon request for an epidemiological investigation by the employer, the workers' representative, health manager, or a doctor employed by the health-examination institution; 2) where the Korea Workers' Compensation and Welfare Service requests an epidemiological investigation to make a decision on an occupational disease as prescribed by the Minister of Employment and Labor; 3) where the Korea Occupational Safety and Health Agency decides that an epidemiological investigation is necessary for the prevention of occupational diseases after the deliberation of the epidemiological-investigation assessment committee; and 4) where the local labor office requests an epidemiological investigation when it is necessary to investigate the correlation between harmful workplace factors and a disease that has drawn social criticism for being occupationally caused.

The Korea Occupational Safety and Health Agency should establish and operate an epidemiological-investigation assessment committee to fairly assess epidemiological investigations and the subsequent

development of measures to protect the health of workers.

### **Health management pocketbook**

The Minister of Employment and Labor should issue a health management pocketbook to a worker who is engaged in work, as prescribed by the Ordinance of the Ministry of Employment and Labor, that may cause health problems, for a period longer than determined by the Ordinance of the Ministry of Employment and Labor.

Workers who are issued a health management pocketbook may receive a health examination from the Korea Occupational Safety and Health Agency or a special health-examination institution once a year after they are no longer engaged in the work, subject to the issuance of the pocketbook.

In cases where the Korea Occupational Safety and Health Agency issues a health management pocketbook, the Agency may have the holder of the pocketbook receive a health examination or suggest other measures necessary to protect the health of the worker.

### **Prohibition or Restriction on Work of Sick Persons**

With respect to a person who is affected by an infectious or mental disease, or a disease that may be seriously aggravated by work and that is prescribed by the Ordinance of the Ministry of Employment and Labor, the employer should prohibit or restrict the work according to a doctor's diagnosis. When a worker whose work has been prohibited or restricted recovers his or her health, the employer should allow him or her to return to work without delay.

Work by the following persons is prohibited: 1) persons with diseases who may be infected; 2) persons with schizophrenia, dementia paralytica, or other mental diseases; 3) persons with heart, kidney, or lung disease that may be aggravated by work; and 4) persons with

other diseases in accordance with numbers 1 through 3 as designated by the Minister of Employment and Labor.

Restrictions on sick persons, etc.: employers should restrict as a result of health examinations persons poisoned with harmful substances such as organic chemicals or metals; persons whose possibilities for such poisoning has been recognized by a doctor; persons diagnosed with pneumoconiosis, or persons exposed to radiation from handling a suspected harmful or radioactive substance; engaging in work that emits dust, vapor, or gas of the respective harmful substance; or engaging in work that may aggravate the health problem of the worker. An employer should not allow a worker who has a disease to engage in work involving high pressure.

#### **Restriction on working hours for harmful or hazardous work**

Employers may not allow workers who are engaged in hazardous or dangerous work as designated by the Presidential Decree to work more than 6 hours a day or 34 hours a week. This work, for example, done with caisson or under water, is performed under high atmospheric pressure.

Employers should appropriately allocate working hours and recess hours, and protect the health of workers through improvements in working conditions related to working hours, besides taking preventive measures in the following types of harmful or hazardous work: 1) work done inside underground mines; 2) work dealing with lots of high-heat materials and work conducted in a highly hot places; 3) work dealing with lots of low-heat materials and work conducted in a highly cold place; 4) work dealing with radium radioactive rays, X-rays, and other hazardous radioactive rays; 5) work done in places with heavy airborne dust from glass, soil, stones, or minerals; 6) work conducted in a place where loud noises are present; 7) work that causes workers to feel strong vibrations such as the use of rock drills;

8) work handling heavy materials using human power; and 9) work conducted in a place where the dusts, steam, or gases of heavy metals such as lead, mercury, chrome, manganese, cadmium, etc., or carbon bisulfide, organic solvent, or specific chemicals determined by the Ordinance of the Ministry of Employment and Labor.

### **Restriction on employment by qualifications, etc.**

An employer should not employ a worker without a license or skills necessary for work that is hazardous or dangerous as designated by the Ordinance of the Ministry of Employment and Labor.

## **G. Supervision and Order**

Systems related to supervision and order include matters such as harm and hazard prevention plans, safety and health diagnoses, process safety reports, safety and health improvement plans, and supervisory measures.

### **Hazard and danger prevention plan**

When an employer who operates a business of the category and scale as prescribed by the Presidential Decree installs or moves any structure, machine, instrument, equipment, etc., directly related to a production process, or alters a major part of a structure, he or she should prepare a hazard and danger prevention plan, and submit it to the Minister of Employment and Labor. The businesses subject to the preparation and submission of a hazard and danger prevention plan include the manufacturing of processed metal goods, and the manufacturing of nonmetal mineral goods whose total rated capacity of electricity-consuming facilities is 300 kilowatts or above.

Employers who install or move machines, instruments, or equipment that requires harmful or hazardous work, that is used in harmful or hazardous places, or that is used to prevent health problems, and is designated by the Ordinance of the Ministry of Employment and



Labor, or who alter a major part of a structure should prepare a hazard and danger prevention plan and submit it to the Minister of Employment and Labor. Machines and instruments subject to the preparation and submission of a harm and hazard prevention plan are as follows: 1) smelting furnaces for metal or other minerals, 2) chemical equipment, 3) drying equipment, 4) gas-gathering welding equipment, and 5) equipment related to work involving hazardous substances or dust subject to government approvals and management. Employers who intend to begin a construction project designated by the Ordinance of the Ministry of Employment and Labor should prepare a hazard and danger prevention plan after consulting with those with the qualifications prescribed by the Ordinance of the Ministry of Employment and Labor, and submit the plan to the Minister of Employment and Labor.

#### **Safety and health diagnosis**

The Minister of Employment and Labor may order the following workplaces to have an institution designated by the Minister of Employment and Labor conduct a safety and health diagnosis: 1) workplaces where a serious accident has occurred, 2) workplaces that have been ordered to establish and implement a safety and health improvement plan, and 3) workplaces at high risk for the occurrence of an accident such as a fall, explosion, or collapse, and whose need for a safety and health diagnosis has been recognized by the local labor office.

#### **Process safety report**

An employer of a workplace with harmful or hazardous equipment as prescribed by the Presidential Decree should prepare a process safety report as prescribed by the Presidential Decree, submit the report to the Minister of Employment and Labor, and keep a copy of the plan within the workplace, or on areas in the vicinity of the

workplace, in order to prevent accidents (hereinafter referred to as “serious industrial accidents”) that may inflict immediate damages on workers in or near the workplace due to leakage of hazardous substances from such equipment, fires, explosions, etc.

Harmful or hazardous equipment subject to the above refers to equipment possessed by the following workplaces: 1) petroleum refineries; 2) reproducers of other fractionated petroleum products; 3) manufacturers of basic organic petrochemical compounds, or synthetic resins or other plastic materials; 4) manufacturers of nitrogenous, phosphatic, or potassium fertilizers; 5) manufacturers of composite fertilizers; 6) manufacturers of agricultural chemicals; and 7) manufacturers of explosive and pyrotechnic products.

### **Safety and health improvement plan**

In cases where comprehensive measures for improvement are necessary to prevent industrial accidents with respect to workplaces, equipment, or other matters, the Minister of Employment and Labor may order the employer to prepare and implement a safety and health improvement plan for the workplace, equipment, or other matters as prescribed by the Ordinance of the Ministry of Employment and Labor.

### **Supervisory measures**

In cases where it is necessary for the execution of the Occupational Safety and Health Act and any orders issued under the Act as prescribed by the Ordinance of the Ministry of Employment and Labor, a labor inspector prescribed by the Labor Standards Act may enter a workplace, the office of an asbestos disposal and removal service provider, or the office of a related organization to question persons concerned; inspect the books, documents, and other items; conduct safety and health inspections; and gratuitously collect products, raw materials, or instruments needed for inspections.

In cases where it is necessary for the execution of the Occupational Safety and Health Act and any orders issued under the Act, the Minister of Employment and Labor may order the report or attendance of employers, workers, occupational safety consultants, or industrial hygiene consultants.

## 4. Industrial Accident Prevention Fund

### A. Legal Grounds

Article 95 (Establishment and Creation of Industrial Accident Compensation Insurance and Prevention Fund), Clause 1 of the Industrial Accident Compensation Insurance Act stipulates that “the Minister of Employment and Labor shall establish an *Industrial Accident Compensation Insurance and Prevention Fund* in order to secure financial resources necessary for insurance activities and industrial accident prevention activities, and to finance insurance benefits.”

Article 61-3 (Financial Resources for Accident and Disease Prevention) of the Occupational Safety and Health Act stipulates, “The financial resources to be appropriated to any of the following subparagraphs shall be provided from the Industrial Accident Compensation Insurance and Prevention Fund under Article 95 (1) of the Industrial Accident Compensation Insurance Act. 1) Expenses related to facilities for accident and disease prevention and the operation thereof; 2) Projects related to accident and disease prevention; and 3) Expenses for other projects necessary for the prevention of accidents and diseases approved by the Minister of Employment and Labor.”

Article 96 (Use of Industrial Accident Compensation Insurance and Prevention Fund), Clause 2 of the Industrial Accident Compensation Insurance Act stipulates that the Minister of Employment and Labor shall appropriate 8% or more of the budgeted expenses from the fund every fiscal year for the use prescribed in Article 61-3 (Financial Resources for Accident Prevention) of the Occupational Safety and Health Act and for contributions to the Korea Occupational Safety and Health Agency according to the Korea Occupational Safety and Health Agency Act.

## **B. Use of the Industrial Accident Prevention Fund**

The total expenditure of the Industrial Accident Insurance in 2009 was 4.2095 trillion won. Of the total amount, working expenses were 3.6667 trillion won, or 87.11%, including insurance benefits of 3.4631 trillion won; loans for industrial accident victims of 27.3 billion won, or 0.65%; administrative support of 273.8 billion won, or 6.50%; industrial accident prevention projects of 162.1 billion won, or 3.85%; and loans for industrial accident prevention facilities of 79.6 billion won, or 1.89%. In other words, the expenditures related to industrial accident prevention added to the loans for industrial accident prevention facilities totaled 241.7 billion won, which is 5.74% of the total expenditure of 4.2095 trillion won.

## 5. Summary and Conclusion

The occupational safety and health system of Korea took root as a legal system with the enactment of the Occupational Safety and Health Act in December 1981 and the modification of the enforcement decrees and rules in 1983. Before the enactment of the Occupational Safety and Health Act, ex post facto compensation for insured workers following industrial accidents was the main focus based on the Industrial Accident Compensation Insurance Act, but with the enactment of the Act, disaster prevention policies were implemented.

The Ministry of Employment and Labor established and implemented a total of five mid- to long-term plans for industrial accident prevention, beginning in 1991: The Six-Year Industrial Accident Prevention Plan (1991-1996), The Three-Year Plan for the Advancement of Occupational Safety (1997-1999), The First Five-Year Industrial Accident Prevention Plan (2000-2004), The Second Five-Year Industrial Accident Prevention Plan (2005-2009), and The Third Five-Year Industrial Accident Prevention Plan (2010-2014).

The structure of the Occupational Safety and Health Act includes: 1) purpose and coverage; 2) duties of the government, employers, and workers; 3) safety and health management systems; 4) safety and health management regulations; 5) hazard and danger prevention measures; 6) health management of workers; 7) supervision and order; and 8) the industrial accident prevention fund.

Given changes in the industrial structure, fiercer competition internationally, greater awareness of workers' rights to health, lower birthrates, and an aging society, the Minister of Employment and Labor has set the vision for future industrial accident prevention systems as creating a safe and happy society in which workers are able to lead safe and happy lives.