

# JISHA

## ANNUAL REPORT 2013



### **Statue of Health**

The Statue of Health was erected in front of the JISHA headquarters building in 1971, as a symbol of health in; physical, mental and social areas and made of stainless steel.

JAPAN INDUSTRIAL SAFETY AND HEALTH ASSOCIATION (JISHA)



## **Safety and Health Motif**

The green cross motif was adopted at the first-ever Safety Week in 1928 as a symbol of safety activities. The white cross motif was then adopted at the Fourth Industrial Health Week in 1953 to symbolize occupational health activities. In 1965, in order to underline the objective of pressing forward with safety and health as a unified concept, the two separate motifs were reworked and integrated into the safety and health motif that you see here.



## President's Foreword



The number of work-related fatalities in Japan had the tendency to decrease in the long term, owing to the efforts of the concerned parties. However from 2010 to 2012 (last year) it has increased for 3 consecutive years. Thus, the number of casualties including the cases with lost worktime for four and more than four days was 119,576. Besides, the number of fatal accidents was 1,093, a 7% increase compared with the previous year. This is an extremely alarming situation.

I am concerned about the following trends of safety and health in the workplace: even though preemptive measures such as risk assessment (RA) have been widely spread, dangers and hazards in the workplace have diversified as production processes have become more varied and complex, and as new machinery, equipment and chemical substances have been introduced. Furthermore, in some cases know-how in occupational safety and health has not been handed down well enough to younger workers, unskilled workers are not given adequate safety and health education / training, and other activities such as site patrols have not been conducted in the workplace, due to the retirement of the generation of workers that has sustained safety and health expertise or diversification of the employment types. Especially among the workplaces of small and medium-sized enterprises where the frequency of occupational accidents is higher than that of big enterprises, retail businesses and social welfare facilities of the tertiary industry with the increasing number of employees have more industrial accidents than ever.

In terms of occupational health, the proportion of workers with problems identified in health examinations and those who feel strong anxiety and stress about work and occupational life remain high, and health impairment from the number of overwork has increased.

In light of these circumstances, the implementation of safety and health-focused management and the strengthening of on-site capacity are important management issues for employers today. I believe, therefore, that they need to enhance and strengthen their independent efforts toward that end. In particular, it is important for employers to try to invigorate day-to-day safety and health activities and to promote good mental and physical health for all workers in the workplace.

Accordingly, in order to support employers positively in their autonomous efforts to promote accident-prevention activities, we, JISHA, eliciting their diverse needs, wish to fully utilize our integrated business competence to develop a variety of projects actively such as: spread of risk assessment (RA) and occupational safety and health management systems (OSHMS) ; the offering of various educational programs on safety and health for strengthening the on-site capacity; expansion of the Zero Accident Campaign; promotion of physical and mental health (especially support for mental health measures); provision of safety and health technical services; and timely production of publications.

While at the East Japan Earthquake disaster areas, full-scale efforts; debris removal, nuclear decontamination work, and resumption of operations etc. are being made towards recovery and reconstruction, continuing implementation of necessary countermeasures for safety and health is in need. JISHA regards this as the most highly priority issue and by using the expertise of our organization will continue to support these regions actively.

In the area of international activities, JISHA will continue to organize training courses for safety and health professionals from overseas, to collect and disseminate safety and health information, and to promote exchanges with international organizations and safety and health associations of other countries, as well as to address the challenges toward globalization such as supports to overseas affiliates of Japanese-related companies.

This year the National 12th Industrial Accident Prevention Plan commenced. JISHA will comply with it and is committed to advance our country's operational safety and health level.

For us to proceed proactively with the above mentioned efforts, we find it important for our organization to convey widely our activities domestically and abroad. Due to this purpose we issue our "ANNUAL REPORT 2013" which compiles our organization's latest activities status. We would be much obliged if it would be made of good use to you.

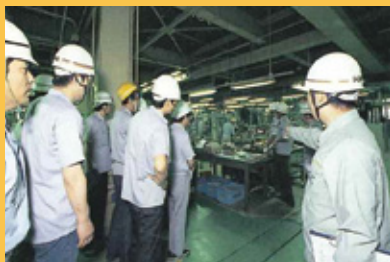
Aiming to develop further safety and health activities of our country, we, JISHA, are determined to continue to offer appropriate services required by Japanese enterprises both at home and abroad, and keep striving to prevent occupational accidents and diseases by supporting our official members, associate members, and all other organizations and enterprises with their initiatives to ensure safety and health of their workers.

November 2013

A handwritten signature in black ink that reads "Hideaki Sekizawa". The signature is written in a cursive, flowing style.

Hideaki Sekizawa  
President of JISHA

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# Introduction to JISHA

The Japan Industrial Safety and Health Association (JISHA), which was established in 1964 under the Industrial Accident Prevention Organizations Act, is a legal entity whose membership consists of employers and employers' associations. JISHA's overall objective is to help prevent work-related accidents and injuries and protect the health of workers by promoting safety and health efforts undertaken by employers and employers' associations, and by offering safety and health guidance and services. JISHA's major activities are listed below.

- Promoting occupational accident prevention efforts undertaken by employers and employers' associations
- Establishing and administering facilities for education and technical guidance
- Providing technical guidance and assistance
- Collecting and disseminating safety and health information and documents
- Conducting research, surveys and public relation services
- Operating programs entrusted to JISHA by the government, including studies of the impact of toxic chemicals on humans

In the 1960's, industrial accidents much occurred and the situation of industrial safety and health was on at worst level, ultimately, the number of industrial accidents came up the highest ever. Under this circumstance, the government enacted the Industrial Safety and Health Act in 1972 to take comprehensive measures to resolve problems and to improve status. Until now, the situation has much improved by efforts of those concerned, however, many problems and issues have still existed and new ones are taking place. JISHA will tackle these tasks in cooperation with relevant organization/institutes including the government by the following activities.





# Overview of JISHA's Core Activities

In 2012, the number of work-related fatalities was 1,093, compared with the previous year an increase of 69 (+6.7%). Also the sum of fatalities and injuries requiring four or more days off from work was 119,576, compared with last year of 117,958 (excluding the disasters related directly to the East Japan Earthquake), it increased 1,618 (+1.4%). In addition, the number of serious accidents involving three or more fatalities or injuries was 284, an increase of 29 accidents from last year.

The sum of occupational diseases requiring four or more days off from work was 7,743 and the rate of abnormal findings in periodical medical examinations was 52.7%, both of them were stuck at high level. (see the statistics in the appendix )

To help prevent occupational accidents, and diseases, to secure safe and health JISHA undertakes the core activities described below.

## 1. Support for the introduction of risk assessment (RA) and establishment of occupational safety and health management systems (OSHMS)

- (1) In response to enterprises' demand for skilled manpower that will immediately be useful in the field of RA and OSHMS, JISHA organizes a set of seminars ranging from a fundamental course covering the basics of RA to a more sophisticated course which teaches how to introduce, operate, and audit OSHMS in a workplace.

Furthermore, JISHA implements training courses on RA and risk reduction associated with machinery and equipment in accordance with the Guidelines for the Comprehensive Safety Standards of Machinery established by the Japanese Ministry of Health, Labour and Welfare (MHLW) and international standards (ISO 12100, etc.). It also implements RA training courses on chemical substances for preventing explosions and fires as well as health impairment.

- (2) Upon request from enterprises, JISHA sends experts to the workplace to give employers certain advice necessary for implementing RA as well as introducing or establishing an OSHMS appropriately.

JISHA also conducts a certification service based on JISHA OSHMS Standards in accordance with the guidelines of the MHLW and the International Labour Organization (ILO).

## 2. Expansion of occupational safety and health (OSH) education for strengthening on-site capacity

- (1) JISHA organizes trainings/seminars on OSH targeting each rank of people in enterprises, corresponding to each level: including OSH Top Seminars designed to help top managers learn the importance of OSH management in business; trainings designed to help newly employed staff, foremen, or OSH-responsible staff learn practical know-how and techniques about OSH affairs corresponding to each role and duty. JISHA also dispatches experts to enterprises upon their requests to provide technical advice or to help organize in-house training.
- (2) The Occupational Safety and Health Education Centers in Tokyo and Osaka run a variety of OSH technical training courses for the OSH trainers/instructors of enterprises.
- (3) A Zero-Accident Campaign is a culture-oriented activity that places priority on OSH and a lively workplace. Based on the philosophy of respect for human beings, all top managers, supervisors and employees participate as a whole in industrial-accident prevention activities at their workplaces,

striving to find solutions to problems and to realize “zero accidents” as their ultimate goal. Currently, JISHA is promoting campaigns under the 8th five-year Campaign Promotion Plan that started in 2008.

- (4) In order to promote Zero-Accident Campaigns across the country, JISHA organizes a set of seminars, namely: seminars for top managers who are planning to introduce the campaign activities; seminars for line managers who are primarily responsible for the campaign in the workplace on zero-accident theory and practice; or training for the KYT trainers who will educate leaders of KYT activities, or hazard-prediction activities, in the workplace. Recently, in addition to the above-mentioned activities, JISHA also implements KYT training focusing on safe driving and in the medical occupations.

### 3. Physical health promotion and mental health measures

- (1) In order to promote both physical and mental health of people in the workplace, JISHA fosters instructors and practitioners of enterprises in the field of physical exercise, nutrition guidance, health guidance, or counseling as well as organizing seminars to improve actual activities, and/or sending experts to enterprises upon request for in-house health promotion training.
- (2) Besides, in order to promote mental health measures in the workplace, JISHA runs several types of seminars including preventive measures ranging from step one to three which can be studied comprehensively, or those designed to help supervisors or OSH staff learn the approaches and techniques required to exercise their specific responsibilities. JISHA, as in the case above, sends experts to the enterprises upon their requests to help arrange in-house training. In addition, JISHA provides a JISHA health-advice service that has been developed in the form of health guidance tools to promote workers' self-awareness.

### 4. JISHA's on-demand technical services

- (1) Upon request from enterprises, JISHA sends experts such as safety/health officers to workplaces to diagnose issues related to the safety and health management of production facilities and processes, operation methods, and workplace environments, and to give employers necessary advice on problems.
- (2) Upon request from enterprises and etc., JISHA provides technical support for non-regulated hazardous chemicals, including preparation of SDS compliant with GHS, hazard assessment based on the hazard statement, advice for setting occupational exposure limit, exposure measurement, etc.
- (3) Regarding working conditions stipulated by law, JISHA conducts measurements of dust, lead, noise, intensity of illumination for VDT work, velocity control of local exhaust ventilation systems, or the status of use of organic solvents and specified chemical items. Based on the measurement results, JISHA proposes countermeasures to improve conditions, or sends experts to the enterprises to help with in-house training.
- (4) JISHA analyzes worker's blood, urine, or hair to detect chemical substances. It also conducts analysis of airborne and material-embedded free silicic acid (free silica) and asbestos, and airborne toxic substances including metals and organic solvents. Recently requests for analysis of rare metal indium in the serum have been on the increase.
- (5) JISHA provides a series of guidance/advice from gap analysis to implementation of appropriate measures to improve OSH issues for small and medium-sized enterprises.

## **5. Production and distribution of publications and other items; provision of the latest safety and health information; and public relations and educational activities**

- (1) JISHA issues monthly magazines and other publications, and produces and sells posters and other OSH-related goods.
- (2) JISHA has set up not only general matters but also special issues on its website, for example, covering “Information related to East Japan Earthquake” to offer people collected and organized information from the government agencies concerned, etc.
- (3) Every autumn, JISHA holds the National Industrial Safety and Health Convention. In addition to ceremonial events including award ceremonies, presentation of OSH activities and good practices for the improvement in the enterprises, special lectures and symposia by experts are organized. The participants have opportunities there to learn the latest OSH-related information and knowledge as well as OSH-related practical experience from other enterprises.
- (4) JISHA provides the latest information on safety and health-related protective equipment and devices at the Green Cross Exhibition, which it holds concurrently with the National Industrial Safety and Health Convention.

## **6. International cooperation**

- (1) JISHA promotes international exchange with overseas OSH organizations in the form of receiving guests or attending international meetings including those of ILO/CIS and the Asia Pacific Occupational Safety and Health Organization (APOSHO).
- (2) JISHA organizes the JISHA OSH Seminar annually to provide technical cooperation for overseas OSH organizations. In addition, JISHA arranges training courses on OSH policy-related affairs, on commission from the Japan International Cooperation Agency (JICA) and ILO/ROAP.

## **7. Investigation of chemical substances for toxicity and safety testing**

On commission from governments and private companies, the Japan Bioassay Research Center conducts a variety of animal toxicity tests on chemical substances and mutagenicity tests using microorganisms and cultured cells, and provides them with the resulting data.



# Program Content

## 1. Proactive Development of Programs Relating to Risk Assessment (RA) and OSHMS

Risk assessment (RA) is the practice of identifying dangers to people or potential sources of harmful effects, estimating the effects (risks) to people, and eliminating or reducing unacceptable risks.

Occupational safety and health management system (OSHMS) is the system for achieving specific organizational goals set out in an OSH policy made by top management, creating a concrete plan for achieving those goals, and ensuring that the entire organization works together toward the goals with making each individual fully play his or her part. The PDCA (plan-do-check-act) cycle is regarded as an effective tool for implementing the system.

### (1) Expansion of RA and OSHMS-related programs

Japan's revised Industrial Safety and Health Act, which went into force in April 2006, stipulates, without penalty, that employers should make an effort to implement RA. JISHA conducts the following training courses in order to develop the human resources needed to implement RA based on the Guidelines for Risk Assessment published by the MHLW in March 2006, besides that, in order to introduce, set up, and operate OSHMS properly based on the Revised Guidelines for Occupational Safety and Health Management Systems, published by the MHLW. Figure 1 below shows the Flowchart of RA.

Table 1 on the next page shows these training courses held in fiscal 2012.

#### (a) Practical risk assessment training course for OSH staff members

A training course on proper procedures for RA, implementation method and creation of RA systems, targeting safety and health staff members and others who will play the main roles in the introduction of an RA system and improvement of its implementation procedures

#### (b) Risk assessment training course for workplace leaders

A training course on practical procedures for RA in the workplace with a focus on exercises, targeting managers, supervisors and workers who actually identify risks and hazards and implement risk assessment/evaluation in the workplace based on RA systems

#### (c) Risk assessment brush up training course

A training course on following up to support the effectiveness/continuing efforts of the RA, targeting safety and health staff members or others at workplaces where RA system is introduced

#### (d) Learning risk assessment through exercise training course

A training course on specific case study exercises to deepen the understanding of the RA system, targeting workers on-site, corresponding to the needs of workplaces where RA system has already been operated

#### (e) Management system leader training course

A training course on the proper establishment and implementation of an OSHMS based on the

OSHMS guidelines, targeting safety and health staff members who will play the main roles in the establishment and operation of an OSHMS

(f) Practical management system auditing training course

A training course on proper implementation of OSHMS auditing based on the OSHMS guidelines, targeting safety and health staff members who will play the main roles in OSHMS auditing, in creating the framework and improving the implementation structure of the OSHMS

(g) OSHMS internal auditor training course

A training course on practical procedures of OSHMS internal auditing, targeting persons who will actually be in charge of internal auditing of the OSHMS

(h) System audit level up training course

A training course on improvement of the quality of auditing, targeting internal auditors at worksite where OSHMS has been operated

(i) Practical safety and health training course for operating OSHMS

A training on how to acquire practical safety and health activities procedures by making full use of the OSHMS, targeting safety and health staff members or others at workplaces where OSHMS is introduced or are being considered to be introduced

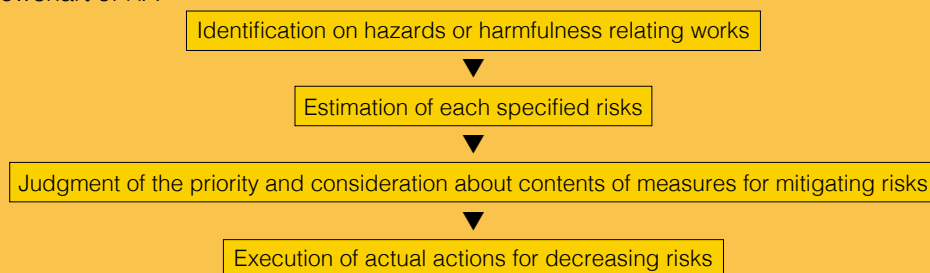
Table 1: RA/OSHMS-related Training Courses in Fiscal 2012

Training course	Number of times	Participants
1. Practical risk assessment training for OSH staff members (RA)	92	2,607
2. Risk Assessment training for workplace leaders (RA)	47	1,377
3. Risk assessment brush up training (RA)	3	24
4. Learning risk assessment through exercise training (RA)	4	20
5. Management system leader training (OSHMS)	19	436
6. Practical management system auditing training (OSHMS)	13	215
7. OSHMS internal auditor training (OSHMS)	30	918
8. System audit level up training (OSHMS)	2	13
9. Practical safety and health training course for operating the management system (OSHMS)	9	72
Total	219	5,682

JISHA also sends personnel to enterprises that are planning to introduce or are in the process of establishing an OSHMS to provide 85 on-site training courses, 34 OSHMS total support services, and other services.

In addition to the training courses shown in the table, JISHA conducted one comprehensive management system training course and one JISHA OSHMS Standards certification auditor training courses.

Fig 1: Flowchart of RA

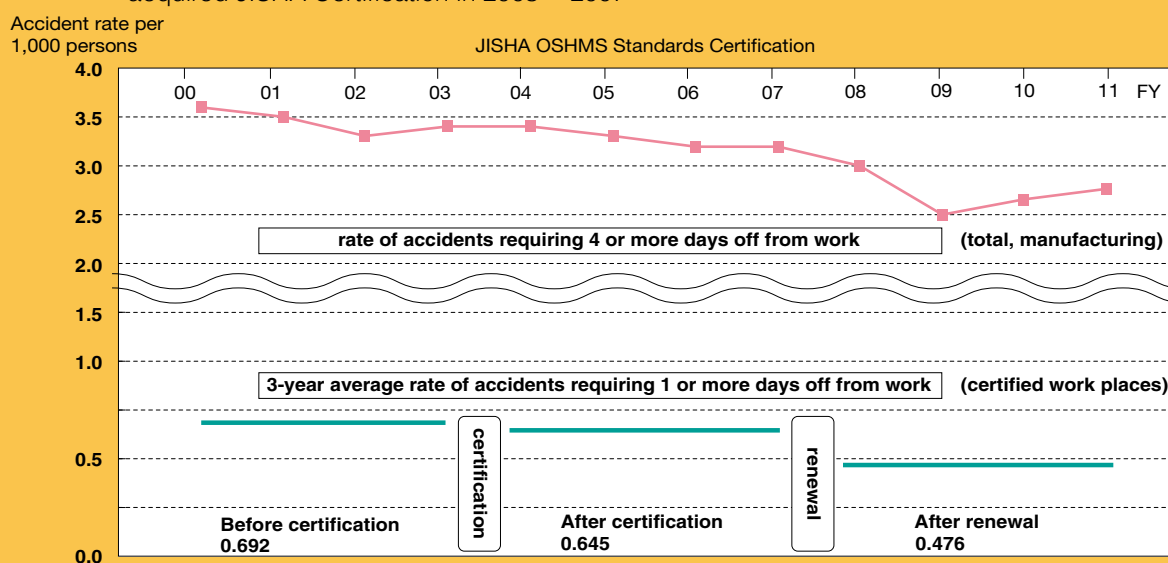


## (2) JISHA OSHMS Standards Certification service

JISHA conducts the JISHA OSHMS Standards Certification service. The certification criteria follow the guidelines of Japan's MHLW and those of the ILO. The certification is based on an investigation that includes whether the management system established at the enterprise is helping to improve the level of safety and health, whether the enterprise's OSHMS has been set up properly, and whether it is being operated appropriately to produce step-by-step improvements in safety and health performance. In fiscal 2012, JISHA certified 17 new enterprises and renewed certification for 77 enterprises, bringing the number of JISHA-certified enterprises to 277. Of these, seven are outside Japan—including Taiwan, Thailand and China.

Now that it has been ten years since JISHA started the OSHMS certification service, improvement in the occurrence status of industrial accidents can be seen as the effect of acquiring the OSHMS certification. Figure 2 below shows the change in accident rate per 1,000 persons of the average of 112 JISHA-certified workplaces during 2003-2007. Despite the fact that they were, even before acquiring the OSHMS certification, of high OSH level with a low accident rate, 3 years before certification, 3 years after the first certification and 3 years after the renewal, each of their three-year average rate of accidents requiring four or more days off from work has certainly declined after certification, which indicates the effect of OSHMS introduction.

Fig. 2: Change in accident rate per 1,000 persons in 112 certified and renewed workplaces that acquired JISHA Certification in 2003 ~ 2007



## (3) Enhancement of assistance in RA of chemical substances and of machinery and equipment

JISHA provides a comprehensive set of services relating to chemical substances, ranging from RA to risk reduction measures. Furthermore, it holds a variety of training courses on control of chemical substances. Its other services include assistance in implementing the details of RA, preparation of SDS compliant with GHS, and analysis and measurement for exposure assessment.

Regarding machinery and equipment, JISHA helps ensure the intrinsic safety of machinery at workplaces through RA and risk reduction measures based on three-step method to be taken by machinery manufacturers and users from their standpoints respectively. The various training courses are arranged so that the trainees can, step by step, study safety techniques that are compliant with the guidelines of the MHLW and international standards and applicable on site.

Upon request from enterprises, JISHA also provides on-site training programs on chemical substances and machinery/equipment.

Table 2 shows the training courses on control of chemical substances, and safety management of machinery and equipment held in fiscal 2012.

Table 2: Training Courses on Control of Chemical Substances and Safety Management of Machinery and Equipment in Fiscal 2012

Training course	Number of times	Participants
1. Basic training to start management on chemical substances	6	190
2. Training on basic understanding on SDS (MSDS)	8	168
3. Chemical risk assessment training using control banding	2	21
4. Chemical risk assessment training to prevent explosions and fires	4	63
5. Chemical risk assessment training to prevent health impairments	4	68
6. Special training to prevent health impairment from organic solvents	2	97
7. Seminar on labeling system • utilizing the SDS	1	11
8. Seminar on chemical management (latest trend of regulations on chemical management and introducing approaches to information sharing regarding the supply chain)	1	22
9. Training of dioxin operations supervisors	17	656
10. Seminar on utilizing the machinery safety on-site – to be aware of hidden danger sources surrounding us	7	119
11. Basic training on prevention of machinery disaster through risk-based understanding	20	346
12. Risk assessment training on machinery and equipment No.1 (practical procedure course)	7	75
13. Risk assessment training on machinery and equipment No.2 (risk reduction course)	7	77
14. Overall risk assessment training on machinery and equipment	1	20
15. Training on specified self inspection guidelines for power presses	11	563
Total	98	2,496

In addition, JISHA conducted 5 on-site training courses on control of chemical substances and 7 courses on machinery and equipment.

## 2. Promotion of Safety and Health Education

### (1) A broad arrangement of training and education programs, plus instructor dispatch

Firstly, based on the concept that safety and health of workers must be ensured by the initiatives of top management, JISHA offers the Top Seminar on Occupational Safety and Health. This seminar, targeting the management of companies, includes lectures on safety, health and mental health as well as lectures on relevant laws and regulations of those topics. The participants of the Top Seminar also have opportunities to exchange information with the management of other companies.

Secondly, targeting line managers, supervisors, OSH staff, and newly employed staff, JISHA provides training courses with lectures and discussions in order to acquire knowledge relating to safety and health corresponding to each level. Furthermore, JISHA conducts training courses on a particular topic such as understanding of relevant laws and regulations, prevention of human errors, preparation and implementation of operation procedures, and safety patrol in the workplace, etc.

In fiscal 2012, JISHA held 384 seminars and training courses, which were attended by 12,523 people (see table 3).



Top Seminar

Table 3: Seminars and Training Courses in Fiscal 2012

Training course	Number of times	Participants
1. Top Seminar on Occupational Safety and Health (for executives)	2	97
2. Seminar for General manager for safety and health	6	147
3. Safety and health management training	67	2,550
4. Education for foremen (including staff responsible for safety and health)	80	1,602
5. Special education for nuclear decontamination works, etc. (including supplementary class)	60	3,070
6. Education for operation leaders of nuclear decontamination works, etc.	20	1,201
7. Seminars to acquire basic and practical knowledge and skills	126	3,197
8. Heat stroke prevention seminar, etc.	13	441
9. Seminar for Industrial Hygienist	8	123
10. Safety measures on diving operation	2	113
Total	384	12,523

## (2) Instructor training for safety and health education

Occupational Safety and Health Education Centers were established in Tokyo and Osaka to train trainers, instructors and others who are responsible for safety and health education conducted by enterprises (employers), as well as safety and health advisers and promoters. Both centers were established by the Ministry of Labour (currently the Ministry of Health, Labour and Welfare) and are operated by JISHA.

The Occupational Safety and Health Education Centers distinguish themselves by offering highly practical education under the guidance of experienced experts and offer cutting-edge education facilities, and by providing an environment in which trainees seek to compete against and emulate each other by living communally. The centers conduct a wide variety of training programs including RST, which is the MHLW standard training for safety and health education trainers. After completing the education and training courses, trainees help raise the safety and health levels at enterprises and other organizations not only as trainers and instructors but also as production line supervisors or safety and health staff members.

In fiscal 2012, the Tokyo and Osaka Occupational Safety and Health Education Centers held in total of 360 training courses, respectively, for a total number of 6,079 participants.

## 3. Expansion of the Zero-Accident Campaign

JISHA began to advocate the Total Participation Zero-Accident Campaign in 1973 and has been promoting it ever since. The campaign is based on a spirit of respect for human beings that holds that “each person is an indispensable being,” as expressed in three basic principles: (1) “the principle of zero-



accidents,” which requires that all kinds of danger in every person’s daily life, not limited to the dangers lurking at workplaces and in jobs, be detected, comprehended, and resolved, and which is aimed at stamping out all accidents including industrial accidents, occupational diseases, and traffic disasters; (2) “the principle of pre-emptive action,” which requires the detection, comprehension, and resolution of all dangers (and problems) hidden in workplaces and in jobs before one starts action and thereby prevents accidents and disasters; and (3) “the principle of participation,” in accordance with the idea which top management, supervisors, staff members, and rank-and-file workers cooperate and act to resolve problems in their respective positions through self-initiated endeavors.

In order to spread and expand the Total Participation Zero-Accident Campaign, JISHA, focusing on the principles of the campaign and techniques for putting those principles into practice, holds the Zero-Accident Campaign Top Seminar for executives, the Zero-Accident Campaign Program Training for line managers and supervisors, the KYT (*Kiken Yochi*, or hazard-prediction, training) Trainer Training, the KYT Training for Medical Care Safety, primarily for safety supervisors at medical institutions, the Traffic KYT Training, primarily for driving safety supervisors, the Training for line managers on improving coaching skills for strengthening on-site capacity, and the KYT training for managers and supervisors in social welfare facilities, such as aged care facilities and facilities for the disabled, for learning KYT through experience.

In the effort to prevent occupational accidents, it is also vital to strengthen on-site capacity—the capability of workers themselves to proactively identify risk factors and other problems that occur in the workplace and then resolve them. To this end, JISHA holds a campaign to enhance capabilities in the field, within the Zero-Accident Campaign framework, emphasizing the introduction of the Zero-Accident Campaign as the first step toward boosting the on-site capacity of everyone in the workplace to think about risks and problems in the workplace from the worker’s perspective, help make sure these issues are understood by all, and take action to resolve them.



Campaign logo of Zero-Accident

#### What is KYT?

Preventing accidents due to human error and ensuring safety and health on site, at that moment, requires that workplace leaders take the initiative to identify hidden dangers in the workplace and in work tasks, and take action to resolve them. With that purpose in mind, efforts must be made to heighten workers’ sensitivity to danger, foster their powers of concentration and problem-solving abilities, and increase their eagerness to put these skills into practice. The series of activities is called KYT (*Kiken Yochi*, or hazard-prediction, training), which is based on the practice of predicting and resolving hazards.

KYT is carried out in teams based on the following four steps (four-round method):

Step 1: Understanding the situation

Workplace members talk with each other about the kinds of hazards that could be hidden in a given situation.

Step 2: Investigating the nature of the hazard

The essence of each hazard is clearly defined.

Step 3: Establishing countermeasures

Members talk with each other about their ideas for how to deal with the identified hazards.

Step 4: Setting targets

Countermeasures are defined in terms of specific actions to be taken, and action targets are set for each team.

KYT is helpful for effectively implementing RA, which is the core action in OSHMS.

In addition to its regular KYT training courses, JISHA dispatches instructors to enterprises and extends guidance in hazard prediction upon request. Aiming to support enterprises' social activities and increase participation in the campaign, JISHA has established a registration system for enterprises which publicly declare their commitment to running a Zero-Accident Campaign. JISHA has been working to increase the number of businesses making that declaration.

Table 4 shows training courses related to the Zero-Accident Campaign and KYT held in fiscal 2012.



KYT seminars



Table 4: Zero-Accident Campaign and KYT Training Courses in Fiscal 2012

Training course	Number of times	Participants
1. Zero-Accident Campaign Top Seminar (for executives)	2	118
2. Zero-Accident Campaign Program Study Course	7	280
3. KYT Trainer Training	173	7,322
4. KYT Training for Medical Care Safety	13	253
5. KYT Training for Safe Driving	7	125
6. Line Manager Coaching Seminar for Strengthening On-site Capacity	4	112
7. KYT Training in Social Welfare Facilities	1	14
Total	207	8,224

## 4. Promotion of Physical and Mental Health Program

### (1) Physical and mental health promotion for workers

As Japanese society ages, the incidence of so-called lifestyle-related diseases—such as hypertension, diabetes and ischemic heart disease—continues to rise. This tendency reflects not only the safety and health conditions of workplaces but also the lifestyle people have led since their youth, including diet, exercise and habitual behavior, as well as the levels of stress workers have been exposed to. For this purpose, the government revised the Industrial Safety and Health Act in 1988, which stipulates, without penalty, that employers should take steps to maintain and promote the health of their employees, including providing general health education and medical advice. In the same year, the government also launched the Total Health Promotion Plan (THP) for workers, and JISHA started the following projects to promote THP. Figure 2 below shows the flow of the THP programs.

Table 5 shows the THP training courses conducted in fiscal 2012.



Fig. 2: Flow of THP Programs

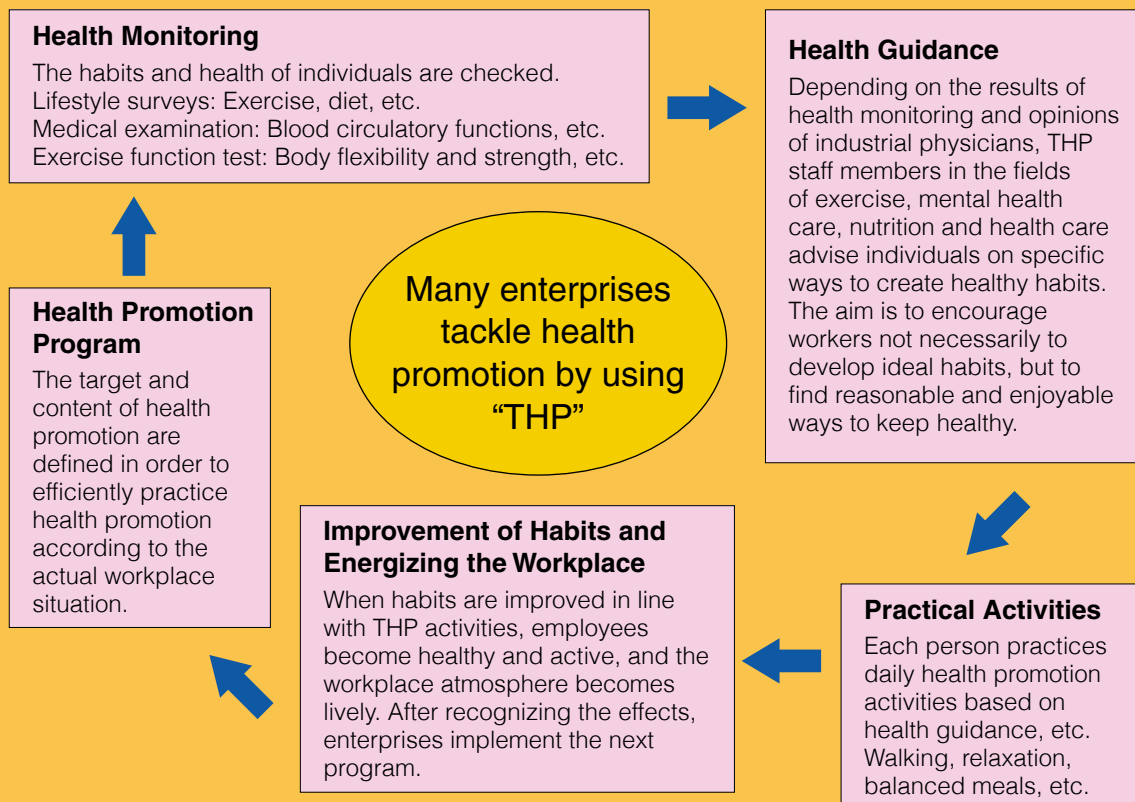


Table 5: THP Training Courses in Fiscal 2012

Training course	Number of times	Participants
1. THP leader training	24	1,243
2. Dietary improvement instructor training related to specified health guidance	2	23
3. Practical training for improvement	25	1,606
4. Specified health guidance practitioner training for THP leaders	2	79
Total	53	2,951

Besides the courses shown in the table, JISHA conducted a seminar for aged workers “Prevention of stumbling down ~ Preventing depression of physical function of aged workers” (7 times, 122 participants).

## (2) Mental health measures

In March 2006, the MHLW published the Guidelines for Promoting Mental Health Care of Workers, which outline the principal measures for mental health care that employers are advised to provide. The basic points of mental health measures in the guidelines are:

- “establishing, publishing and disseminating policies for mental health measures”;
- “preparing a mental health promotion plan”;
- “establishing a counseling system”;
- “implementing education and training for managers, supervisors and employees”;
- “making efforts to improve the working environment”; and
- “setting up rules governing how employees who have taken a long leave for a mental health reason can return to work”.

JISHA conducts the following seminars to disseminate the above guidelines and to make sure they are implemented:

“in-house mental health promoter training”, which helps persons in charge of mental health measures in enterprises comprehensively learn topics ranging from the fundamental points of mental health measures to policies on returning to work;

“management personnel seminar”, for managers and supervisors to learn needed attentive listening skills;

and in order to help workers who have taken a long leave due to mental health problems smoothly return to work, JISHA started “mental health return-to-work promoting seminar” in 2010 for enterprises to learn how to create a system to support those workers, along with case studies covering the workplace.

Table 6 shows the training courses related to mental health held in fiscal 2012. In addition to running the courses shown in the table, JISHA organized a mental health promotion symposium (410 participants).

Table 6: Mental Health-related Training Courses in Fiscal 2012

Training Course	Number of times	Participants
1. In-house mental health promoter training	33	1,180
2. Line care seminar for managers, supervisors, and leaders	17	777
3. Autogenic training/transactional analysis seminar	4	162
4. Other mental health-related seminars	40	923
Total	94	3,042



Tool of stress research

Also, regarding JISHA health advise services, the number of service users asking for health practice research was 23,272 and that for stress research was 183,884; in total 207,156.

### (3) Dispatch of Safety and Health Instructors

JISHA dispatches safety and health instructors to workplaces to conduct a variety of health promotion training courses: on line care for managers and supervisors, and also on self-care for employees, upon request from enterprises. In fiscal 2012, JISHA dispatched instructors for a total number of 987 cases.

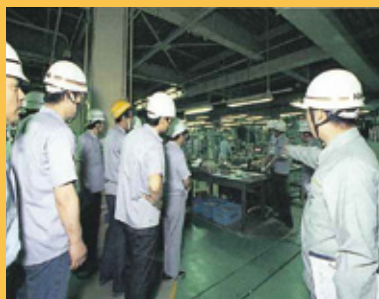


## 5. Provision of Safety and Health Technical Services

### (1) Workplace safety and health diagnoses

JISHA's safety and health officers, as safety and health professionals, visit enterprises to conduct safety and health diagnoses, upon request. They verify compliance with safety and health legislation, check the status of safety and health management, diagnose problems related to safety and health management of production equipment, processes, work procedures and workplace environments, and provide accurate advice for making improvements. They also accept requests from enterprises to help with their safety and health education based on the diagnosis results.

In fiscal 2012, these professionals conducted 322 safety and health diagnoses, provided 1,148 safety and health education sessions, and gave 590 safety and health lectures.



Safety and health diagnoses

### (2) Working environment measurements' biological sampling and analyses of airborne and material-embedded substances

JISHA takes measurements to help improve the working environment. Measurements are conducted on dust, organic solvents, specified chemical substances, lead and other metals, which are harmful substances specified by laws and ordinances, and noise, intensity of illumination for VDT work, and velocity control of local exhaust ventilation systems, as well. JISHA also provides support for improving the working environment, including suggesting improvement measures based on measurement results and inspecting local exhaust ventilation systems.

JISHA conducts analyses of toxic substances and their metabolites in biological samples such as urine, blood, and hair, as well as analyses of airborne and material-embedded free silicic acid (free silica) and asbestos, and airborne toxic substances including metals and organic solvents. Upon request, JISHA also conducts analyses, investigations, research, and counseling on a large range of non-regulated chemical substances and develops sampling and analysis methods.

Table 7 shows the working environment measurements and other technical services provided in fiscal 2012.

Table 7: Working Environment Measurements and Other Technical Services in Fiscal 2012

Services	Cases
1. Working environment measurement	1,282 enterprises
2. Biological sample analyses	20,994 samples
3. Non-biological sample analyses	5,653 samples
4. Analyses and measurement of asbestos (in raw materials, construction materials, and airborne)	103 samples



Analytical measurements

### (3) Activities on Industrial Health

#### (a) Dispatch of industrial physicians

JISHA dispatches industrial physicians periodically to enterprises which hold contract agreements, to support the implementation of occupational health education, and also to take appropriate measures such as advices based on the results of the medical examinations.

Contract agreements with 11 enterprises and 222 industrial physician activities in fiscal 2012.

#### (b) Certification training for industrial physicians

JISHA implements practical occupational health training courses targeting on the industrial physicians, upon the request of related organizations, it held 12 training courses and there were 1,331 participants in fiscal 2012.

### (4) Assistance to small and medium-sized enterprises

JISHA provides a series of guidance/advice from gap analysis to implementation of appropriate measures to improve OSH issues autonomously and continuously for small and medium-sized enterprises. Also, targeting small and medium-sized enterprises, JISHA conducts seminars etc. on the issues related to OSH.

In addition, commissioned by the MHLW and based on cooperation with the local Prefectural Labour Bureaus of the Ministry, JISHA offers the “Tampopo (Dandelion) Project” to 46 groups from fiscal 2010 and their members of small enterprises with less than 50 employees for supporting their OSH activities including guidance and assistance by OSH experts.

## 6. Distribution of Publications related to Safety and Health

### (1) Production and distribution of periodicals, books, posters, and other items

JISHA produces and distributes two monthly magazines, “Anzen to Kenko” (“Safety & Health”) for safety and health staff and managers and “Anzen-Eisei no Hiroba” (“Safety and Health Plaza”) for workplace leaders, and a quarterly journal, “Kokoro to Karada no Oashisu” (“Mental and Physical Oasis”) dealing with a wide range of health programs for the enterprises including for the tertiary industry. It also produces and distributes two semimonthly publications, “Anzen-Eisei Tsushim” (“Safety and Health News”), a bulletin of safety and health information, and “Anzen-Eisei Kabeshimbun” (“Safety and Health Wall Newspaper”), using illustrations to explain points of safety and health measures.

Additionally, JISHA produces and distributes approximately 340 textbooks, JISHA paperbacks, and other publications on the theme of safety and health. The following are just some examples of these. In all, nearly 2.40 million copies were issued in fiscal 2012.



“Anzen to Kenko”



“Kokoro to Karada no Oashisu”

### Main types of books (all in Japanese):

- Books for nuclear decontamination work related to the nuclear accidents caused by the East Japan Earthquake: “Textbook for special education for workers engaged in nuclear decontamination” and “Textbook for special education for workers engaged under specified dose”, etc.
- Textbooks for obtaining qualifications and the like: “Textbook for operational chief of hazardous work in oxygen deficient air” etc., for skill training courses, “Health Management (Vol. 1) (Vol. 2) Class-1 health officer”, etc., for license examinations, and “Safety Companion Booklet for Industrial Robots”, etc., for special educational topics
- Books relating to laws and ordinances: “Directory of Safety and Health Legislation”, which contains information on the Industrial Safety and Health Act and related ministerial order, and “Explanation of the Ordinance on Prevention of Hazards due to Specified Chemical Substances” etc., which explains specific laws and ordinances and guidelines, etc.
- Books useful when safety and health personnel and managers implement safety and health activities: “Safety and Health Staff Manual”, “What You Should Know about Safety and Health Q & A”, “Practice

*Learning Health Management*”, “*Industrial Stress and Mental Health*”, etc.

- Books useful as a follow up educational tool for workers: “*How to Protect Yourself! Workers’ Safety and Health Guide Handling Organic Solvents*”, etc.
- Illustrated pamphlets for workers that clearly explain the prevention of work accidents: “*The Key to Prevent Human Error Accidents! KY (Kiken Yochi) Activities*”, “*Let’s Proceed with 5S Activities*” etc.
- Books that explain safety and health topics in a reading material presentation: “*JISHA paperbacks about Practical Activities on How to Make an Energetic Workplace*”, and “*To Learn the ABCs of Safety at Worksite*”, etc.

Furthermore, JISHA produces and sells numerous books, posters, and other items related to such campaigns as the National Safety Week and the National Occupational Health Week, the Year-End and New-Year Zero-Accident Campaign, the campaign to promote safety & health education, and the campaigns for the prevention of heat stroke and the strengthening of on-site capacity.

Every year, JISHA issues the “*General Guidebook on Industrial Safety*” before the National Safety Week and the “*General Guidebook on Industrial Health*” before the National Occupational Health Week as books that provide guidelines for activities at enterprises.

All these publications, posters, and other items are available at JISHA’s Publishing and Sales Department, Regional Safety and Health Service Centers, and other agents.

## **7. National Events and Campaigns, Public Relations and Educational Activities**

### **(1) Provision of the latest safety and health Information**

JISHA has renewed its website and regularly updates with the latest information such as highly concerned seminars/workshops, technical services, events, publications and notably important topics etc. In addition, seasonal information is also provided by setting up campaign website pages for “National Safety Week”, “National Occupational Health Week”, “Year-end and New Year Zero-accident Campaign”, “Safety and Health for Newcomers” and “Heat Stroke Prevention”.

### **(2) National Industrial Safety and Health Convention and other events**

Every autumn, JISHA holds the National Industrial Safety and Health Convention. The Convention was initiated in 1932, and in recent years it has been attended by approximately 10,000 safety and health personnel and other interested persons from across Japan. The convention includes awards and other ceremonies, presentations of research findings and case studies on OSH activities undertaken by different workplaces, lectures and symposia. Convention attendees can learn the latest OSH-related information and knowledge, and OSH-related practical experience from other enterprises.

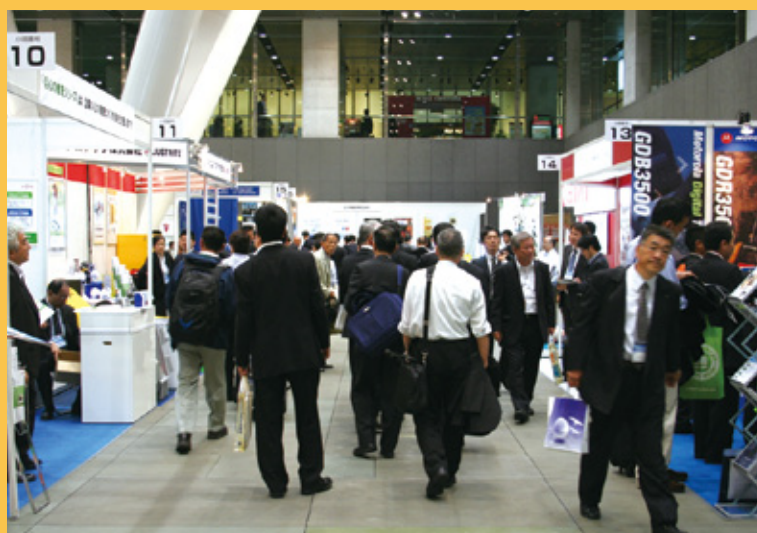
In fiscal 2012, the 71st convention, was held over three days in October in Toyama city, attended by about 7,800 people.

Concurrently with the National Industrial Safety and Health Convention, JISHA holds the Green Cross Exhibition. The Green Cross Exhibition, the fair meant to develop workers’ sense of security, is the largest exhibition of safety and health equipment and devices in Japan, offering techniques and information relating to safety and health management in all kinds of workplaces and working environment improvement.

Table 8 gives a program summary of the fiscal 2012 convention.



National Industrial Safety and Health Convention



Green Cross Exhibition

Table 8: Convention Program

General Assembly	Opening ceremony, awards ceremony, convention declaration, lectures, and special lectures
Group meetings	Risk assessment/management system group meeting
	Safety management activity group meeting
	Safety and health education group meeting
	Machinery and equipment safety group meeting
	Chemical substance management group meeting
	Zero-accident campaign group meeting
	Traffic safety group meeting
	Occupational health management activity group meeting
	Health promotion group meeting
Mental health group meeting	
Simultaneously held events	Green Cross Exhibition 2012



### (3) National safety and health campaigns

Together with the MHLW, JISHA holds campaign activities every year during the National Safety Week (first seven days of July) and the National Occupational Health Week (first seven days of October). In the month prior to each, as a preparatory period, awareness campaign activities are conducted.

Ongoing since 1926, the 85th National Safety Week was marked in 2012. The National Safety Week is targeted as an opportunity to roll out a campaign aimed at deepening awareness of industrial accident prevention and encouraging the steady implementation of safety activities in each workplace.

Continuing since 1950, the 63rd National Occupational Health Week was observed in 2012. This week is designed as a chance to promote efforts to ensure and advance the health of workers and to create comfortable workplaces.

Additionally, JISHA holds the Year-End and New-Year Zero-Accident Campaign for one month and the Heat Stroke Prevention Campaign for four months from May to August and the three month campaign on mental health from August to end of October, and it also rolls out to promote the safety and health education campaigns from February to end of April.

### (4) Various Awards

JISHA recognized a company for its distinguished contribution to the promotion and improvement of industrial safety and health (the Chairman's Award to one company); a person for his/her fine performance on the research (the Distinguished Service Award to one person); and persons, etc. for their distinguished contribution to the promotion of safety and health (86 persons). Also, the official commendation for zero-accident record was given to 152 small and medium-sized enterprises.

### (5) Research and surveys

In response to changes in the environment that companies are facing such as evolving industrial structure or employment patterns, JISHA conducts research and surveys on both the status quo and the ideal form of safety and health management.

The results of the research and surveys are published on the Internet and in various publications. These results are also utilized in safety and health education or when providing guidance, etc.

The main research and surveys conducted in fiscal 2012 are shown in Table 9.

Table 9: Research and Survey Topics in Fiscal 2012

1. Development of safety and health management method for prevention of industrial accidents by young workers
2. Revision of the guidelines for prevention of industrial accidents on security service business
3. Research and survey of good example activities for prevention of industrial accidents on restaurant business

## 8. International Cooperation

### (1) Exchanges with safety and health organizations abroad and provision of safety and health information

JISHA engages in international exchanges with OSH organizations abroad. These exchanges take the form of acceptance of overseas guests on a daily basis, dispatching personnels to related

organizations and participation in international conferences, including meetings of World Congress on Safety and Health at Work and annual conferences of the Asia Pacific Occupational Safety and Health Organization (APOSHO), as a member ILO/CIS national centers.

JISHA gathers safety and health information from the United States, Asian and European and other countries and provides this information in Japanese in the form of global topics via its website. JISHA also provides information in English for people outside Japan on its own activities.



APOSHO General Meeting in 2012 (in Philippines)

## **(2) Technical assistance to developing countries**

JISHA conducts a seminar on OSH once a year to provide technical assistance to OSH organizations outside Japan. Furthermore, on commission from the Japan International Cooperation Agency (JICA), JISHA conducts seminars on policy improvement of industrial safety and health, and on working environment control for occupational disease prevention, which are both group training courses, besides, provides support for country-specific technical assistance projects in China.

In addition, JISHA accepts requests from abroad to dispatch experts overseas or to receive and arrange customized study tours in Japan.

## **(3) International cooperation programs conducted during fiscal 2012 are introduced in detail in Appendix 5.**

# **9. Japan Bioassay Research Center**

The Japan Bioassay Research Center, founded in 1982, conducts animal studies (with rats and mice) to investigate the single dose toxicity (acute toxicity), short-term (28-day, 2-week, and 13-week) repeated-dose toxicity, chronic toxicity, reproductive and developmental toxicity, and carcinogenicity of chemical substances administered via inhalation and orally.

The center features technologies to conduct inhalation exposure studies on chemical substances that appear in the form of a gas, mist, or particles as well as short-term and long-term inhalation devices (see photos in the appendix), which make it a large-scale testing facility without parallel anywhere in the world. It is important to understand the inhalation toxicity of chemical substances because there are many opportunities for exposure to chemical substances through inhalation from the ambient air in

the general environment and in workplace environments. Given the urgent need to confirm the safety of nanoparticles and asbestos substitutes, the center recently started to develop exposure technologies for these materials. Thus far, the center has conducted carcinogenicity tests (including 2-week and 13-week repeated-dose preliminary tests) on more than 40 chemical substances, whose results have been published in scientific papers and other forms,<sup>a</sup> and have been rated highly worldwide.

The center also conducts mutagenicity studies using microorganisms, chromosome aberration studies using mammalian cell cultures, micronucleus studies using rodents, and other studies to screen for carcinogenicity. It has developed effective mutagenicity testing technologies for gaseous substances and volatile substances to which its animal inhalation exposure technologies are applied (see photos in the appendix). These technologies have been used in the center's genetic toxicity studies, which have produced numerous study achievements.

All studies conducted by the center are performed in compliance with Good Laboratory Practice (GLP) standards.

Appendix 11 shows the commissioned studies, the number of studies conducted in fiscal 2012, and pictures of the equipment.

## 10. Support for the Recovery and Reconstruction of the East Japan Earthquake

Japan experienced the East Japan Earthquake and tsunami disaster and the Fukushima Nuclear Power Plant accidents in March 2011.

Now, Japan has been orchestrating its collective efforts to work tirelessly for the recovery and reconstruction including the debris removal, nuclear decontamination work, and resumption of operations. JISHA also have been continuing our overall supports of the OSH measures such as implementing education/training to the operation leaders or operators of nuclear decontamination work. (refer to table 3.)

Besides, in order to provide the latest safety and health information to the employers / workers who are engaged in the recovery / reconstruction works from the East Japan Earthquake, JISHA has set up a special page of "Overall support of safety and health on the recovery / reconstruction works from the East Japan Earthquake" on its website, where it widely implements public relations activities by posting information related to special education including nuclear decontamination works and education for operation leaders.

a) See the JISHA website (<http://www.jisha.or.jp>) for information on test results.

One of many published papers: K. Nagano, T. Sasaki, Y. Umeda, T. Nishizawa, N. Ikawa, H. Ohbayashi, H. Arito, S. Yamamoto and S. Fukushima. "Inhalation carcinogenicity and chronic toxicity of carbon tetrachloride in rats and mice," *Inhalation Toxicology* 19: pp. 1089-1103, 2007.

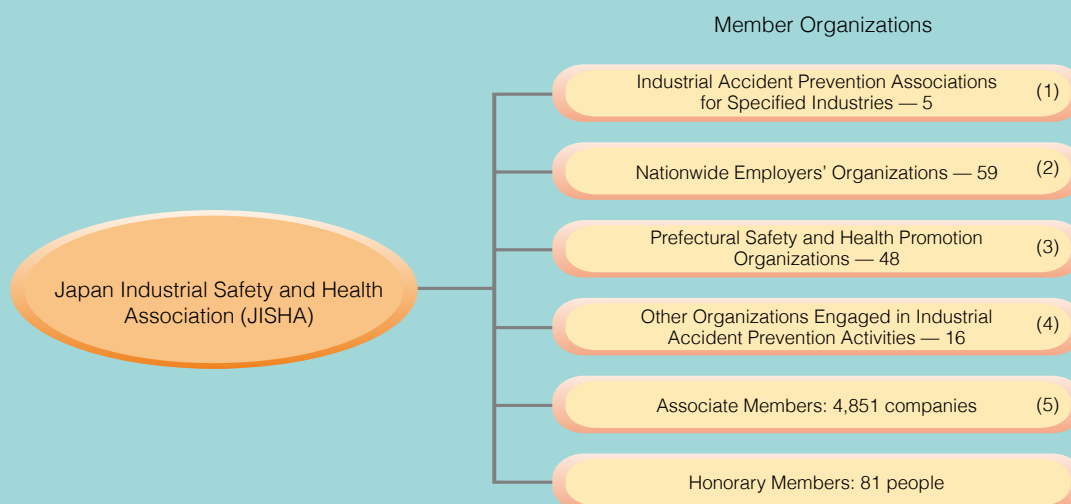
# Appendices

## Appendices

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# Membership



JISHA Members and Associate Members (March 2013)

## Notes

### 1) Five Industrial Accident Prevention Associations

- Japan Construction Occupational Safety and Health Association
- Japan Land Transportation Industry Safety and Health Association
- Japan Port Transport Industry Safety and Health Association
- Japan Forestry and Timber Manufacturing Safety and Health Association
- Japan Mining Safety and Health Association

### 2) Nationwide Employers' Organizations

There are 55, including:

- Japan Business Federation
- The Japan Iron and Steel Federation
- The Federation of Electric Power Companies Japan
- The Japan Electrical Manufacturers' Association
- Japan Petrochemical Industry Association
- Japan Chemical Industry Association
- The Shipbuilders' Association of Japan



3) “Prefectural Safety and Health Promotion Organizations” are established in each prefecture. There are 48 such organizations.

#### 4) Other Organizations Engaged in Industrial Accident Prevention Activities

There are 16, including:

Japan Boiler Association

Japan Crane Association

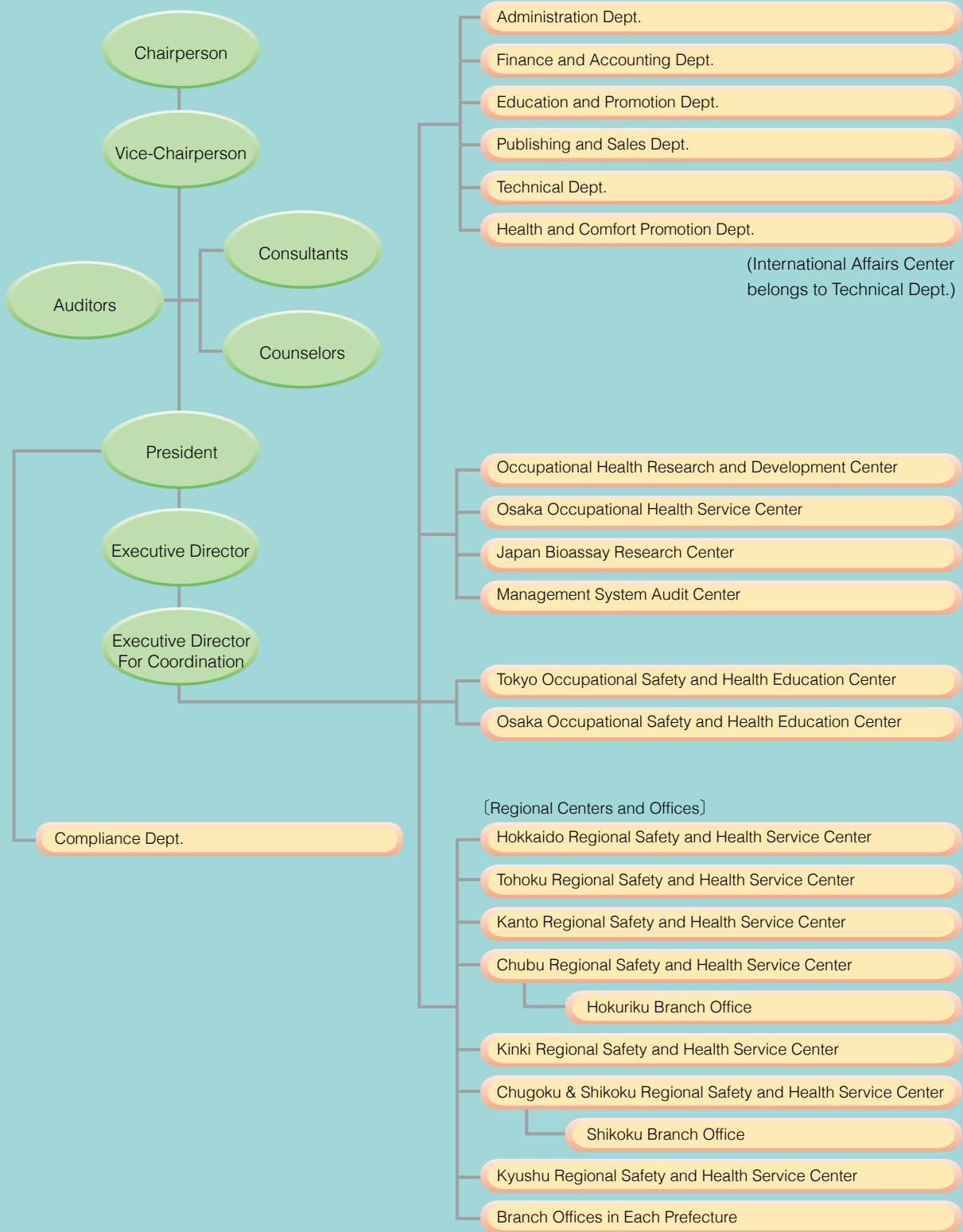
Japan Association of Safety and Health Consultants

#### 5) Associate Members, by Industry

(As of March 31, 2013)

Industry	Number	Industry	Number
Agriculture	0	Metal products	177
Forestry	0	General machinery	211
Fishery	1	Electrical machinery	294
Mining	11	Transport machinery	238
Construction	587	Precision instruments	58
Foods	251	Other manufacturing	243
Textiles	42	Electricity, gas and water	87
Lumber and furniture	24	Transport	230
Pulp and paper	108	Finance and insurance	19
Publishing and printing	71	Telecommunications	111
Chemicals	437	Labour unions	30
Coal and petroleum	84	Public sector	56
Rubber	54	Others	202
Ceramics, clay and stones	90	Services	713
Iron and steel	140	Medicine and public health	203
Nonferrous metal	79	Total	4,851

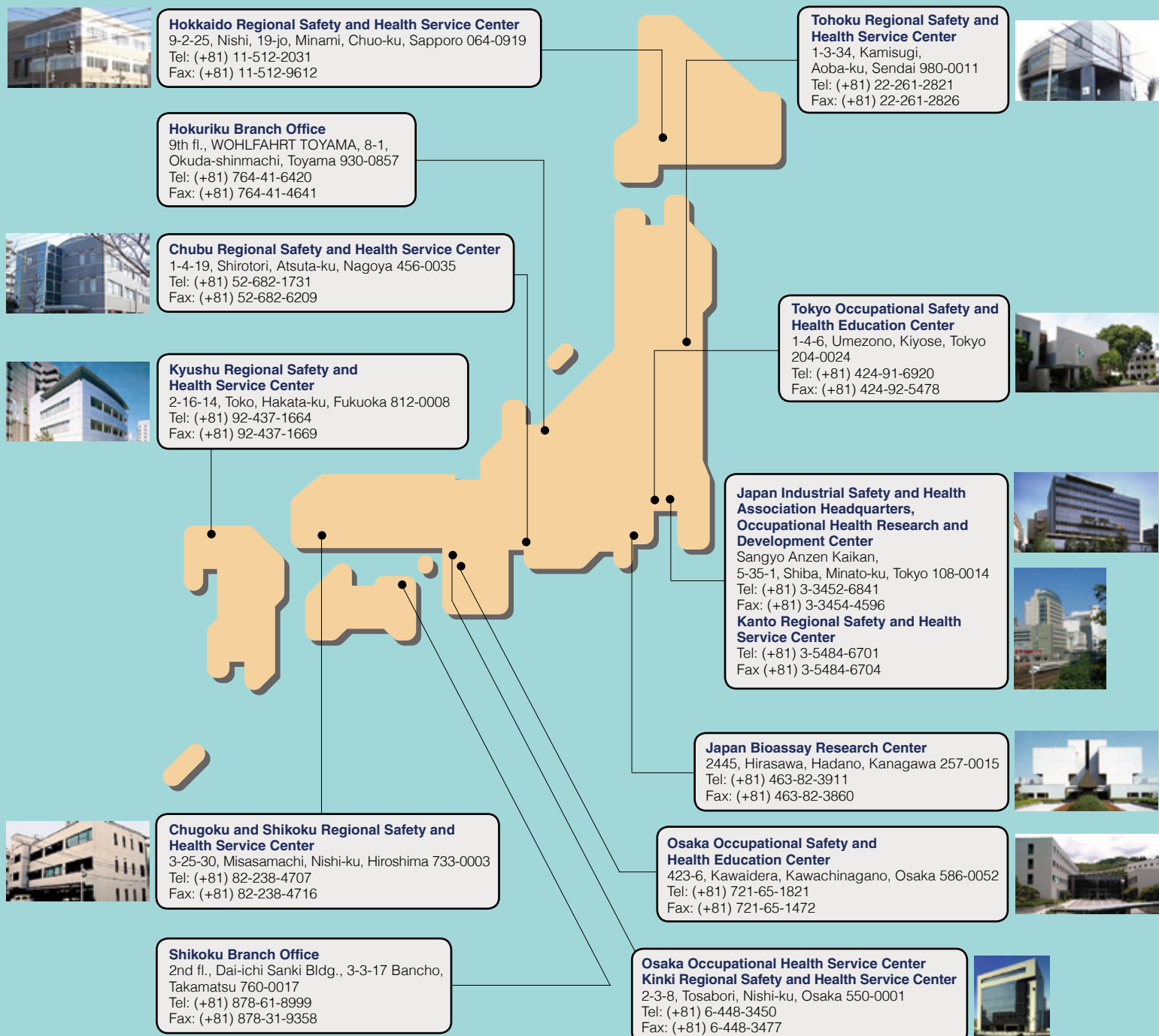
# JISHA Office Organization Chart



(as of October 2013)

# JISHA Office Locations

JISHA operates the Occupational Safety and Health Education Centers in Tokyo and Osaka, the Occupational Health Research and Development Center, the Osaka Occupational Health Service Center, and seven Regional Safety and Health Service Centers and two branch offices. All of these Regional Centers offer technical advice, conduct working environment measurements, organize seminars and sell books and other JISHA materials. This map shows the location of JISHA facilities throughout Japan.



(as of November 2013)

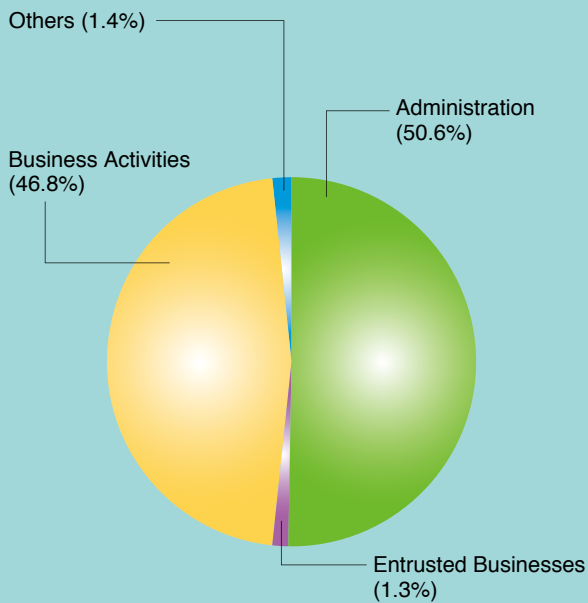
# Budget

Changes in Budget

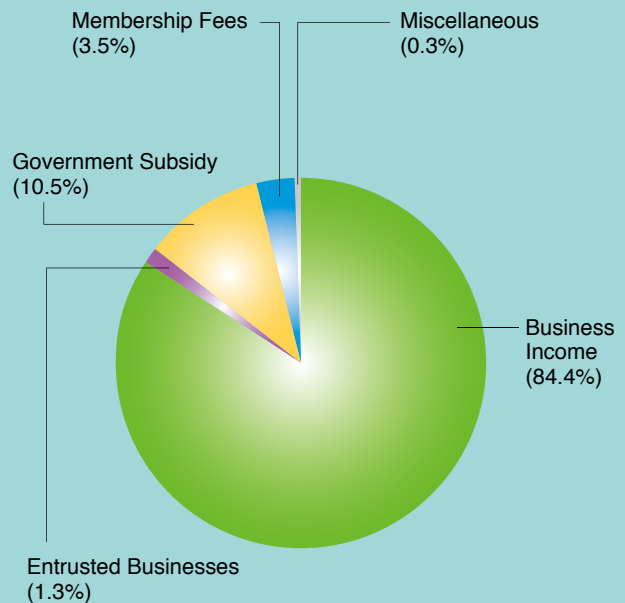


Expenditure and Income for FY2013 (General Account)

## EXPENDITURE



## INCOME



# FY 2012 International Cooperation Activities

## 1) Promotion of Exchanges with OSH Organizations

Mission	Overview
Dispatching JISHA's own executives overseas	<ul style="list-style-type: none"> <li>• The General Meeting of Industrial Safety and Health Association of Taiwan, ISHA, celebrating the Annual OSH Conference (Taiwan, Apr. 26-29, 2012)</li> <li>• The 27<sup>th</sup> Annual Conference of the Asia Pacific Occupational Safety and Health Organization, APOSHO (The Philippines, Sep. 18-21, 2012)</li> </ul>
Receiving visitors and trainees from overseas	<ul style="list-style-type: none"> <li>• Korean Occupational Safety and Health Agency in Jun. 2, 2012</li> <li>• Korean study group in Jul. 19, 2012</li> <li>• Hong Kong Occupational Safety and Health Council, in Nov. 29, 2012</li> <li>• Brazilian study group in Dec. 19, 2012</li> </ul>

## 2) Technical Cooperation with Developing Countries

Name of Project	Project Outline
a. JISHA OSH Seminar	The training program for 10 trainees from overseas (Mar. 4-8, 2013) (Theme: Zero-accident campaign and OSHMS in Japan)
b. Other Seminars	<ul style="list-style-type: none"> <li>• Study mission of KOSHA "Indium Analysis and Methods of Medical Examination" (3 trainees, Jun. 5, 2012)</li> <li>• Study mission of ILO Multi-bilateral Programme "Occupational Safety and Health Measures in Japan" (Cambodia 10 trainees, Sep. 24-28, 2012)</li> <li>• Study mission of ILO Multi-bilateral Programme "Occupational Safety and Health Measures in Japan" (Vietnam 15 trainees, Jan. 15-21, 2013 )</li> <li>• Dispatch of an expert to the KYT Seminar organized by AISOHMEX, A.C. (Mexico, Aug. 27-29, 2012)</li> <li>• Dispatch of an expert to NIMS "Safety and Health for Foreign Newcomers" (Nov. 1, 2012)</li> <li>• Dispatch of two experts to HIDA "The Role of Executives for Better Industrial Relations in Global Era" (Jan. 28-Feb. 15, 2013)</li> </ul>
c. Support for JICA technical cooperation projects	<p>Project on Strengthening the Occupational Health Ability in China</p> <ul style="list-style-type: none"> <li>• Trainees received in Japan               <ul style="list-style-type: none"> <li>Local Exhaust System Design (3 trainees, May 24-Jun. 11, 2012)</li> <li>Occupational Safety and Health Management Administrative Guidance (9 trainees, Aug. 17-24, 2012)</li> <li>Industrial Hygienist (12 trainees, Sep. 6-25, 2012)</li> </ul> </li> <li>• Trainee Instructor dispatched               <ul style="list-style-type: none"> <li>Diagnosis of pneumoconiosis (3 instructors, Jun. 7-8, 2012)</li> </ul> </li> <li>• Short-term expert dispatched               <ul style="list-style-type: none"> <li>Local Exhaust System Design (Apr. 12-15, Sep. 7-15 2012 and Jan. 18-27, 2013)</li> <li>Labour Health Education (Introduction on Total Health Promotion Plan: THP) (Mar. 4-8, 2013 )</li> </ul> </li> </ul>
d. Implementation of JICA training	<ul style="list-style-type: none"> <li>• Implemented Seminar on Working Environment Control for Occupational Disease Prevention (7 trainees, Jun.8 – Jul. 27, 2012)</li> <li>• Implemented Seminar on Policy Improvement of Industrial Safety and Health (10 trainees, Oct. 9 – Nov. 9, 2012)</li> <li>• Implemented Seminar on Policy of OSHMS of SME'S (10 trainees, Nov. 26 – Dec. 7, 2012)</li> </ul>

## 3) Collecting and Providing Information to Domestic and Overseas Users

- Provision via website
- *JISHA Annual Report 2013*



# Project-type Technical Cooperation (ODA)



# in Which JISHA Was / has been Involved



# Countries That Have Sent Participants the Support of JICA (FY1974–2012)



# to Seminars Conducted by JISHA with



# JISHA English Publication List

## 1. Periodicals

Annual Report

## 2. Books

General Guidebook on Industrial Health 2004	¥5,000
House Keeping at Work	¥300
Safety and Health Training for Newcomers	¥630
How to Prevent Lumbago	¥3,500
A Guide to Safety in Press Work for Press Operators	¥1,000
A Guide to Safety in Casting for Foundry Workers	¥1,000

## 3. Photocopies of Books (¥105 per page)

### (1) Manuals on Safety and Health

Safety Assessment

Explanation of Guide for Periodic Voluntary Inspection of Local Exhaust Ventilating Systems and Dust Collectors

How to Establish a Safety and Health Improvement Programme (for Special Guidance on Safety Control)

How to Establish a Safety and Health Improvement Programme (for Special Guidance on Industrial Health Preservation)

Safety Control Handbook

Case Studies of Industrial Injuries and Countermeasures

Fundamental Knowledge of Industrial Hygiene for Working Environmental Experts

Sampling of Harmful Substances

Industrial Hygienist Technical Course (1)–(4)

Practical Handling of Analyzing Instruments for Working Environment Measurement

Examples of Occupational Injury

Text for RST Trainers

Important Points in Drawing Up Guidance Sheets for RST Education

List of RST Sheets for Construction Work

Promoting Safety and Health Education within a Company

Text for Construction Engineers

Report Concerning the Construction Industry

Guidelines for Lining Work in Tunnels; Safety Work Standards Regarding Construction Machinery Used in Tunnels

Work Guidelines for Tunnel Excavation: Rock Tunnels

Work Guidelines for Tunnel Excavation: Shield Tunnels

Tunnel Excavation Safety Guide: Ground Excavation

Tunnel Excavation Safety Guide: Cut and Cover Tunnel

Tunnel Excavation Safety Guide: Earth Support System for Cutting

Information Regarding Work at MRT Construction Sites

Safety and Health Administrative Guidelines in the Shipbuilding Industry

The Ninth Industrial Accident Prevention Plan

### (2) Safety and Health Textbooks (Educational Textbooks)

Safety and Health Training of Newcomers: Instructor's Manual

Gas Welding

Safety Manual for Arc Welding

Press Operator's Safety Handbook

Safety Manual for Grinders

Handling Electricity

Necessary Knowledge Regarding Industrial Robots

Health Administration Henceforward

### (3) Zero-Accident Books

Identifying Occupational Safety Hazards  
—A Compilation of Promotional Methods for Training in Prediction of Potential Hazards with Illustrated Situation Sheets [1]

Identifying Occupational Safety Hazards  
—TBM-KY Procedure and Model Sheets Education [2]

Identifying Occupational Safety Hazards  
—The Short-Term KY Method and Model Sheets [3]

What Work Instructions Would You Give?  
—Work Instructions Training Procedures and Model Sheets [4]

Identifying Occupational Safety Hazards  
—New KYT Procedure and Model Sheets Edition [5]

The Story of New KYT

Building The Zero-Accident Campaign with Total Participation  
—A Guide for Formulating Plans for Zero-Accidents

Are You Practicing Short-Time Danger Prediction Training?

Are You Practicing Finger Pointing and Call?

The Zero-Accident Campaign: "We Are Glad We Did It!"  
—Everyone Takes Part to Achieve Zero-Accidents

New KYT: New Small Group Activities 5 Minute Zero-Accident Meeting

# Websites

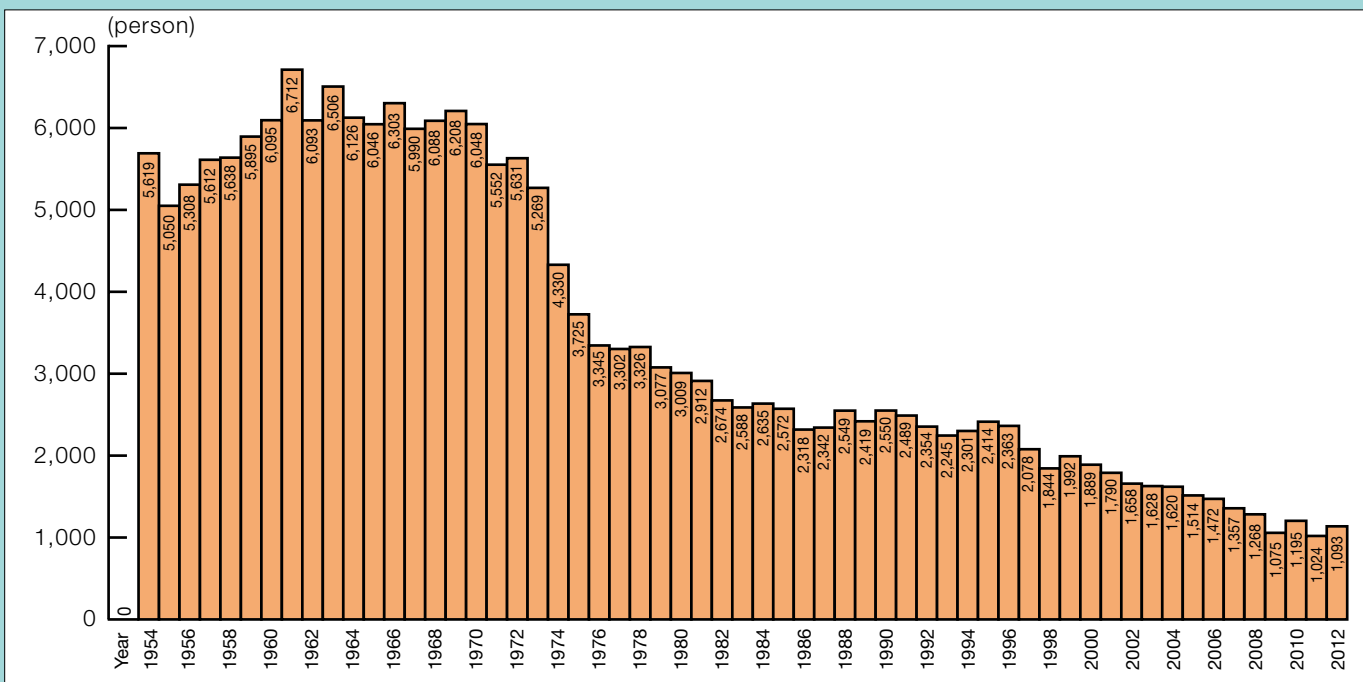
Japan Industrial Safety and Health Association (JISHA):  
<http://www.jisha.or.jp/>



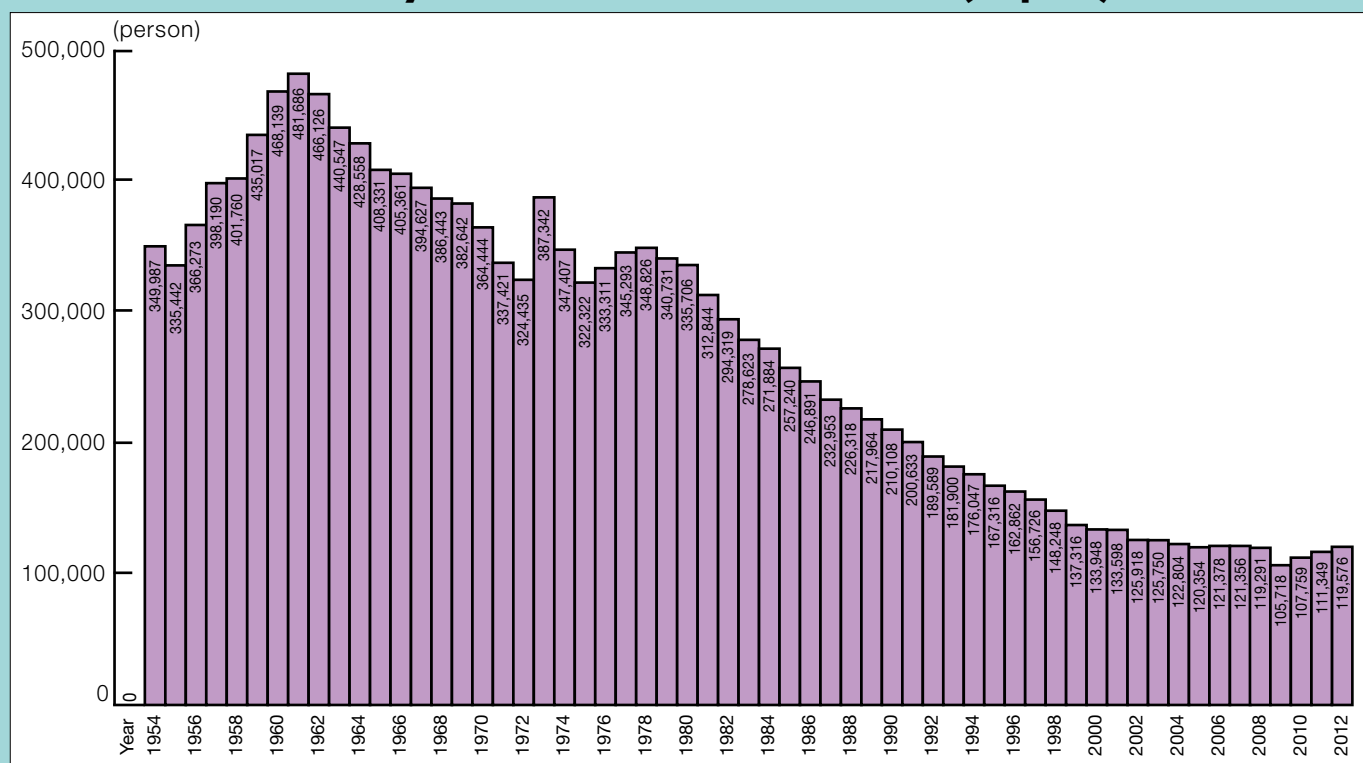


# Statistics

## Change in Number of Deaths in All Industries (Japan)



## Change in Number of Deaths and Injuries Requiring an Absence of 4 Days or More in All Industries (Japan)

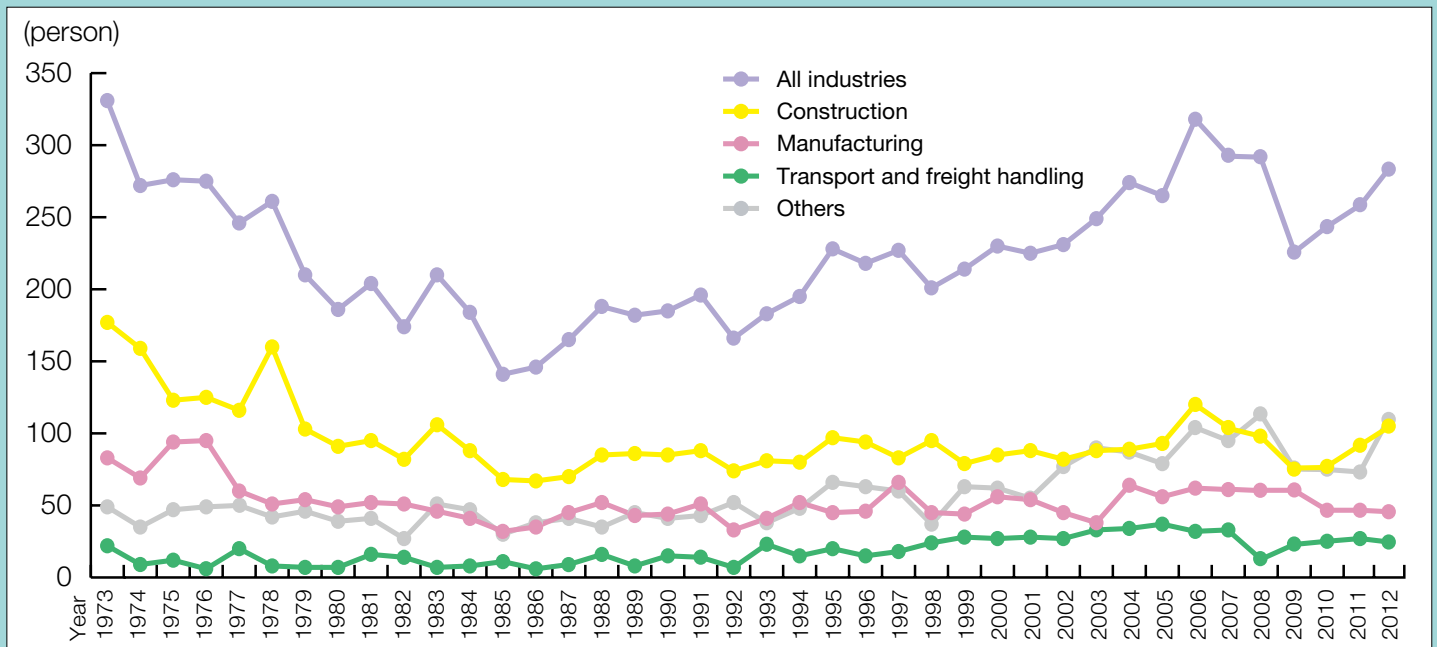


Note: The figures for 1972 and before indicate the number of deaths and injuries requiring an absence of 8 days or more.

## Change in Serious Industrial Accidents by Industry (Japan)

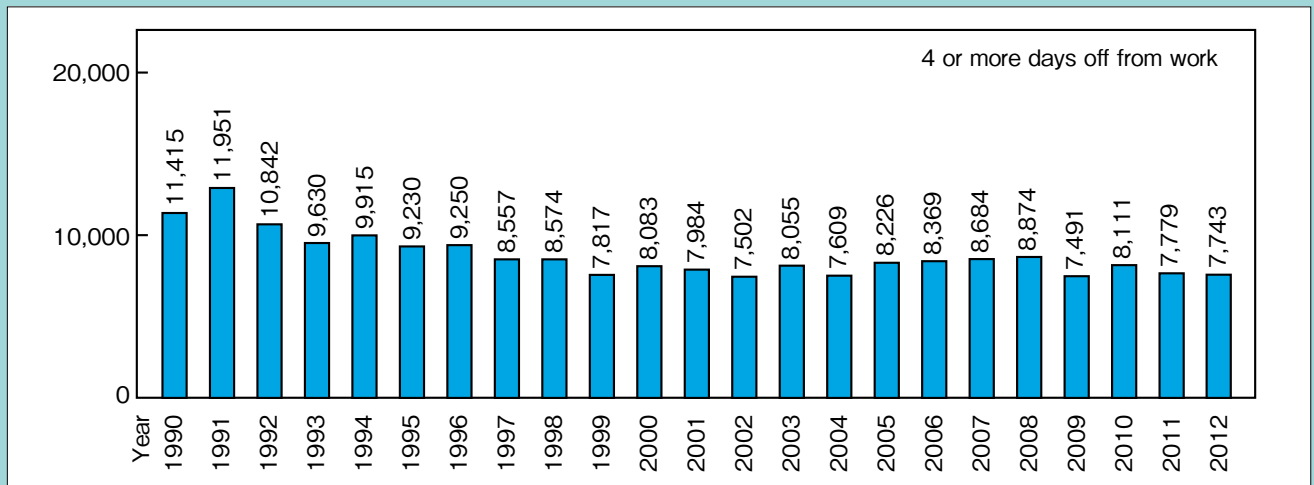
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
All industries	331	272	276	275	246	261	210	186	204	174	210	184	141	146	165	188	182	185	196	166
Construction	177	159	123	125	116	160	103	91	95	82	106	88	68	67	70	85	86	85	88	74
Manufacturing	83	69	94	95	60	51	54	49	52	51	46	41	32	35	45	52	43	44	51	33
Transport and freight handling	22	9	12	6	20	8	7	7	16	14	7	8	11	6	9	16	8	15	14	7
Others	49	35	47	49	50	42	46	39	41	27	51	47	30	38	41	35	45	41	43	52

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
All industries	183	195	228	218	227	201	214	230	225	231	249	274	265	318	293	281	228	245	255	284
Construction	81	80	97	94	83	95	79	85	88	82	88	89	93	120	104	93	75	87	95	105
Manufacturing	41	52	45	46	66	45	44	56	54	45	38	64	56	62	61	58	55	49	49	45
Transport and freight handling	23	15	20	15	18	24	28	27	28	27	33	34	37	32	33	13	21	24	27	24
Others	38	48	66	63	60	37	63	62	55	77	90	87	79	104	95	117	77	85	84	110

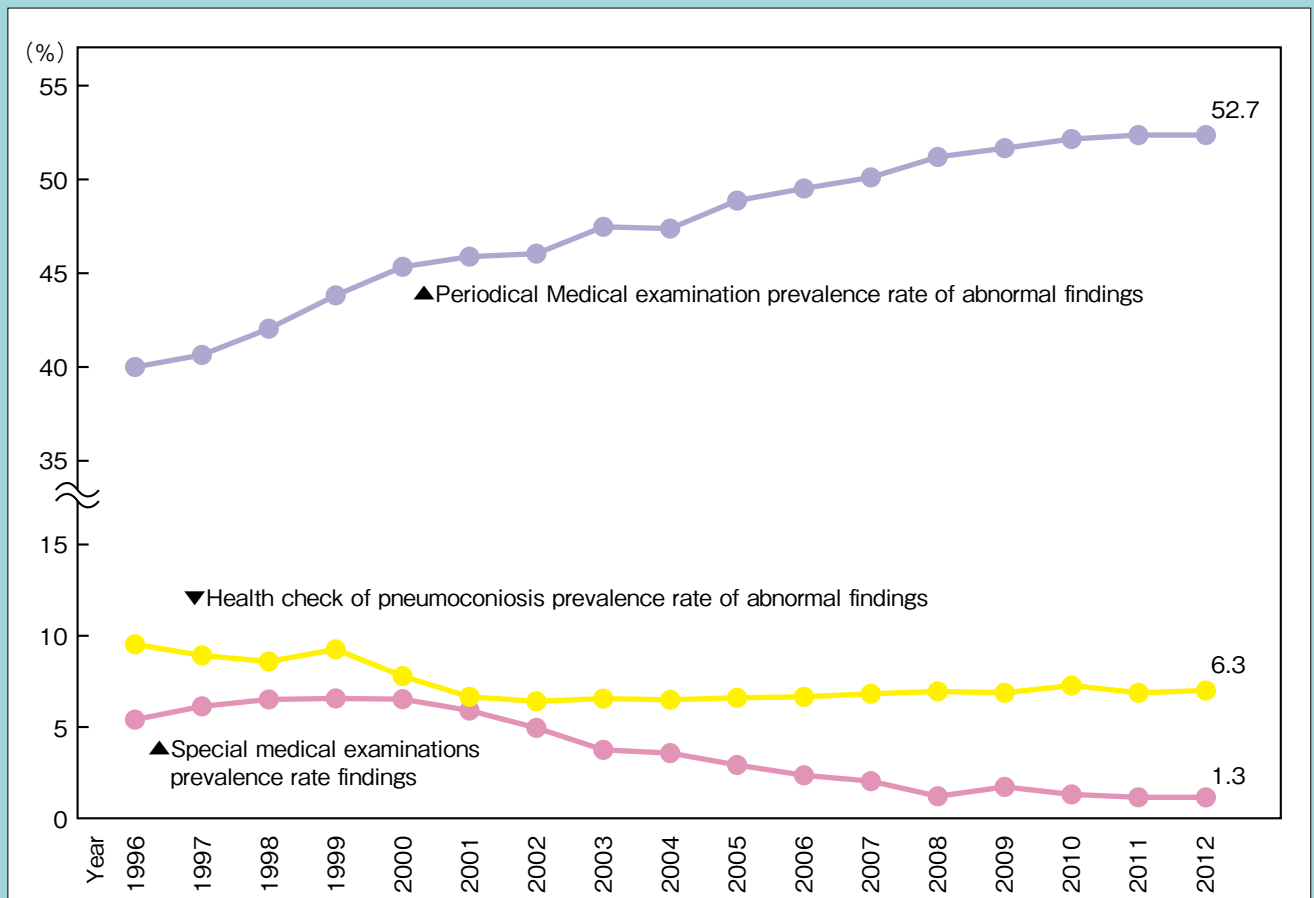


Note: "Serious industrial accident" signifies an accident resulting in three or more deaths and/or injuries at a time.

## Change in Number of Occupational Diseases (Japan)



## Prevalence rate of abnormal findings of periodical medical examination (Japan)



Note: Sources of above statistics come from those of MHLW

# Commissioned Studies and Number of Studies Conducted by the Japan Bioassay Research Center

## 1) Commissioned studies

<ul style="list-style-type: none"> <li>● Toxicity studies using rats and mice               <ul style="list-style-type: none"> <li>• Single dose toxicity studies (acute toxicity studies)</li> <li>• Repeated dose (28-day, 2-week, and 13-week) toxicity studies</li> <li>• Chronic toxicity studies</li> <li>• Carcinogenicity studies</li> <li>• Combined chronic toxicity/carcinogenicity studies</li> <li>• Reproductive and development toxicity studies                   <ul style="list-style-type: none"> <li>• Combined repeated dose toxicity/reproductive and development toxicity studies</li> <li>• Single generation reproduction studies</li> <li>• Uterotrophic bioassays in rodents</li> <li>• Hershberger bioassays in rats</li> </ul> </li> <li>• Others</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>● Mutagenicity assays (the technological level applicable for commission for gaseous substances and volatile substances)               <ul style="list-style-type: none"> <li><i>in vitro</i> studies                   <ul style="list-style-type: none"> <li>• Mutagenicity assays using microorganisms / reverse mutation assays using bacteria / Ames test</li> <li>• Chromosomal aberration assays using cell cultures</li> <li>• Cytotoxicity assays using cell cultures</li> <li>• Mouse lymphoma TK assays</li> <li>• Micronucleus assays using cell cultures</li> <li>• Transformation assays</li> <li>• Others</li> </ul> </li> <li><i>in vivo</i> studies                   <ul style="list-style-type: none"> <li>• Bone-marrow micronucleus assays using rodents</li> <li>• Liver micronucleus assays using rodents</li> <li>• Testis micronucleus assays using rodents</li> <li>• Transgenic rodent mutation assay</li> </ul> </li> </ul> </li> </ul>

## 2) Number of studies conducted (fiscal 2012 actual)

<ul style="list-style-type: none"> <li>● Toxicity studies using rats and mice               <ul style="list-style-type: none"> <li>Inhalation toxicity studies                   <ul style="list-style-type: none"> <li>• Repeated dose toxicity studies</li> <li>• Combined chronic/carcinogenicity studies</li> </ul> </li> <li>Oral toxicity studies                   <ul style="list-style-type: none"> <li>• Single dose toxicity studies</li> <li>• Repeated dose toxicity studies</li> <li>• Combined chronic/carcinogenicity studies</li> </ul> </li> <li>Reproductive and development toxicity studies                   <ul style="list-style-type: none"> <li>• Combined repeated dose toxicity/reproductive and development toxicity studies</li> </ul> </li> <li>Others                   <ul style="list-style-type: none"> <li>• Concentration analysis, etc</li> </ul> </li> </ul> </li> </ul>	9 7 (1) 2 (2) 7 (2) 2 1 4
<ul style="list-style-type: none"> <li>● Mutagenicity assays               <ul style="list-style-type: none"> <li>• Mutagenicity assays using microorganisms</li> <li>• Chromosomal aberration assays using cell cultures</li> <li>• Micronucleus test</li> </ul> </li> </ul>	5 6 (6) 2 (2)

(Figure in parenthesis) : Studies using nanoparticles



Japan Bioassay Research Center



Bioassay operation



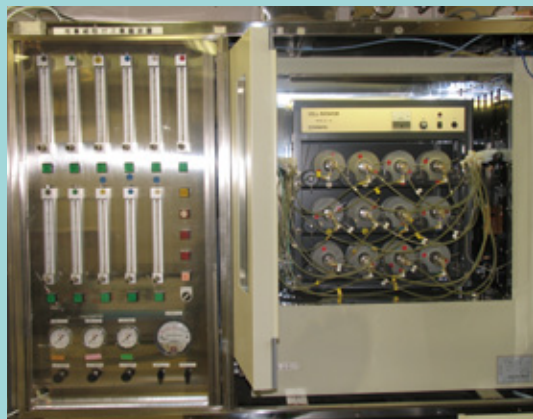
Inhalation Exposure Chamber (Short-term Study)



Inhalation Exposure Chamber (Long-term Study)



Gas Exposure System (Ames-test)<sup>a)</sup>



Gas Exposure System (chromosomal aberration assay)<sup>b)</sup>

a) A. Araki, T. Noguchi, F. Kato and T. Matsushima. 1994. "Improved method for mutagenicity testing of gaseous compounds by using a gas sampling bag." *Mutation Research* 307: 35-344.

b) M. Asakura, T. Sasaki, T. Sugiyama, H. Arito, S. Fukushima and T. Matsushima. 2008. "An improved system for exposure of cultured mammalian cells to gaseous compounds in the chromosomal aberration assay." *Mutation Research* 652: 122-130.







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