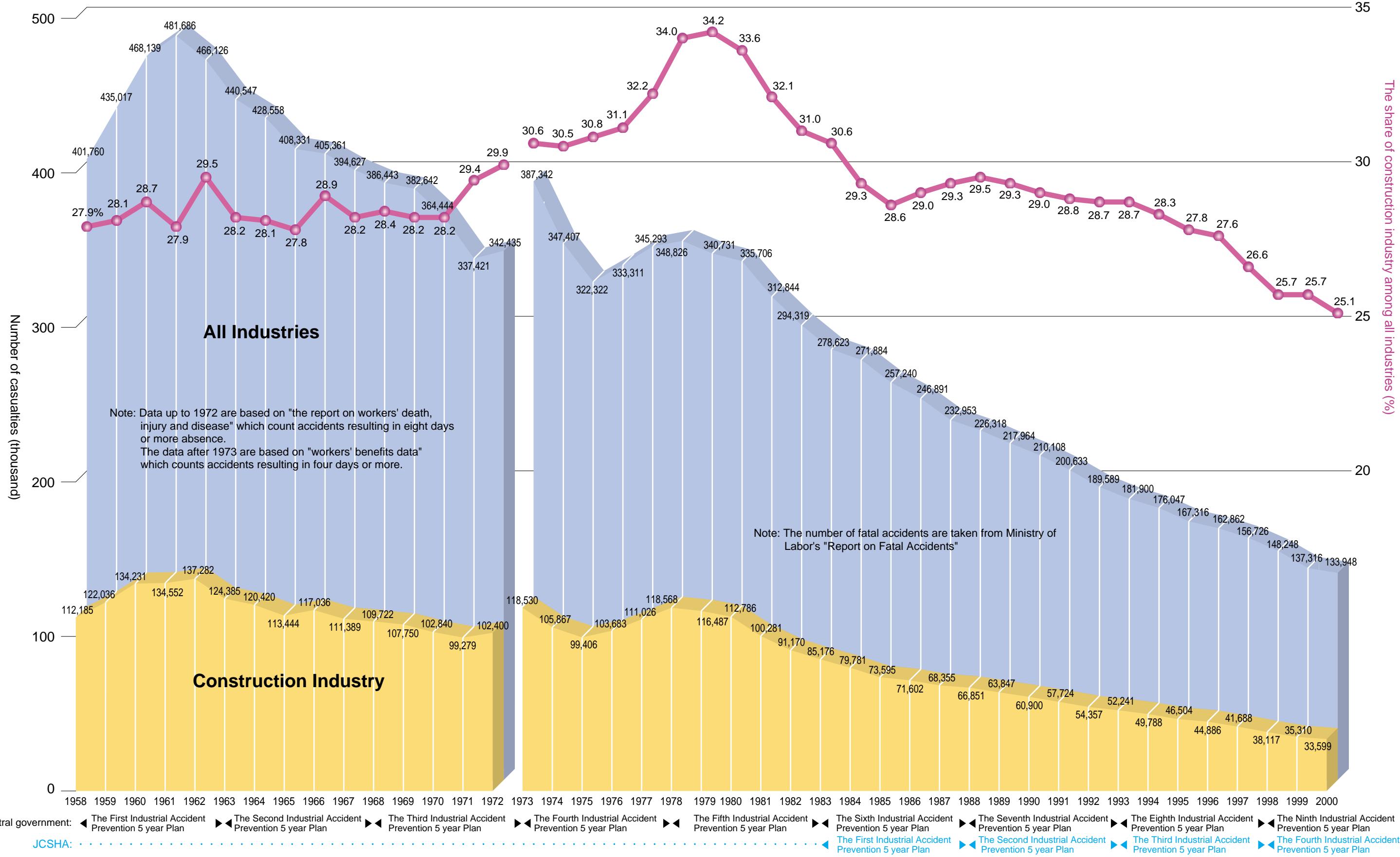
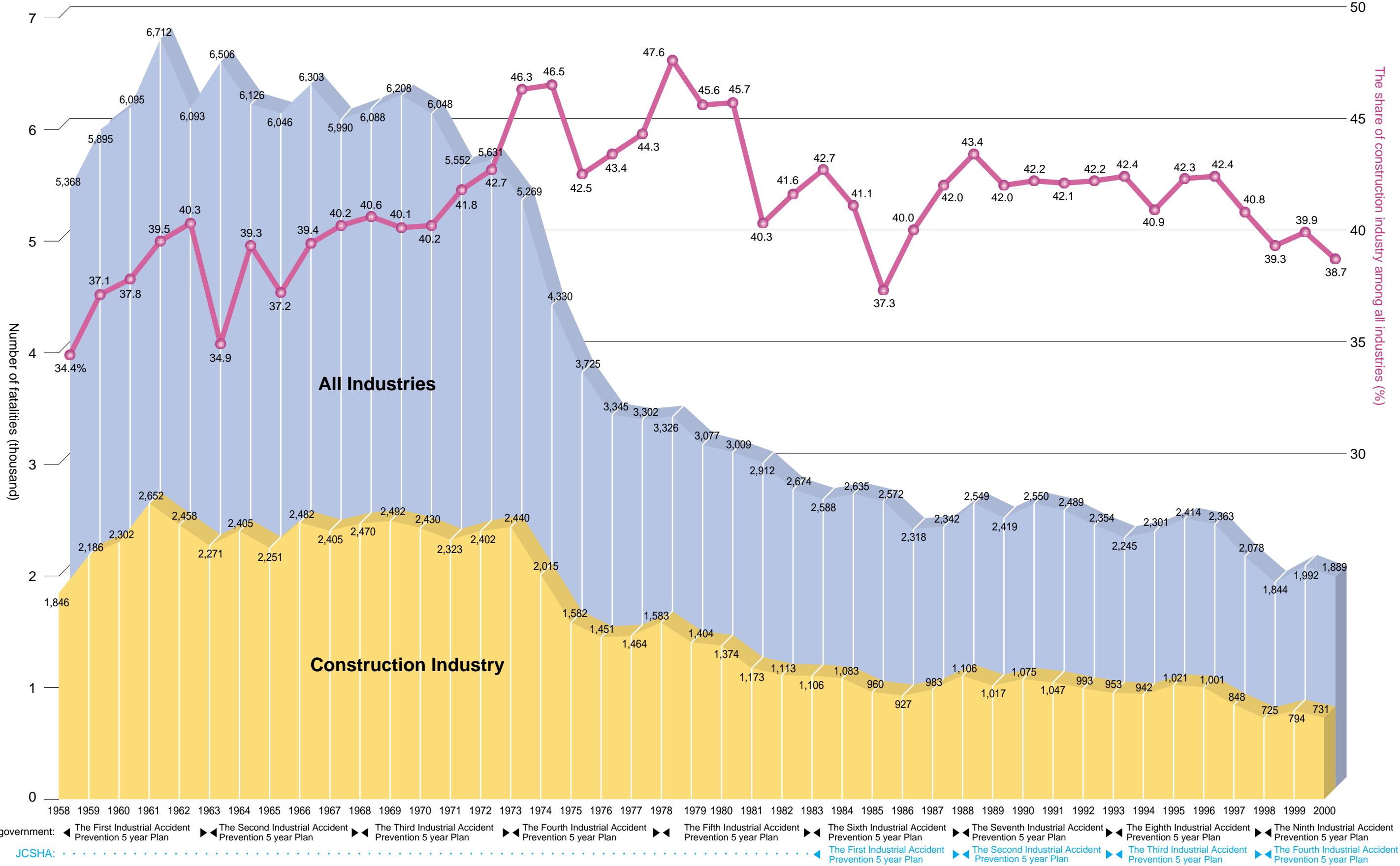


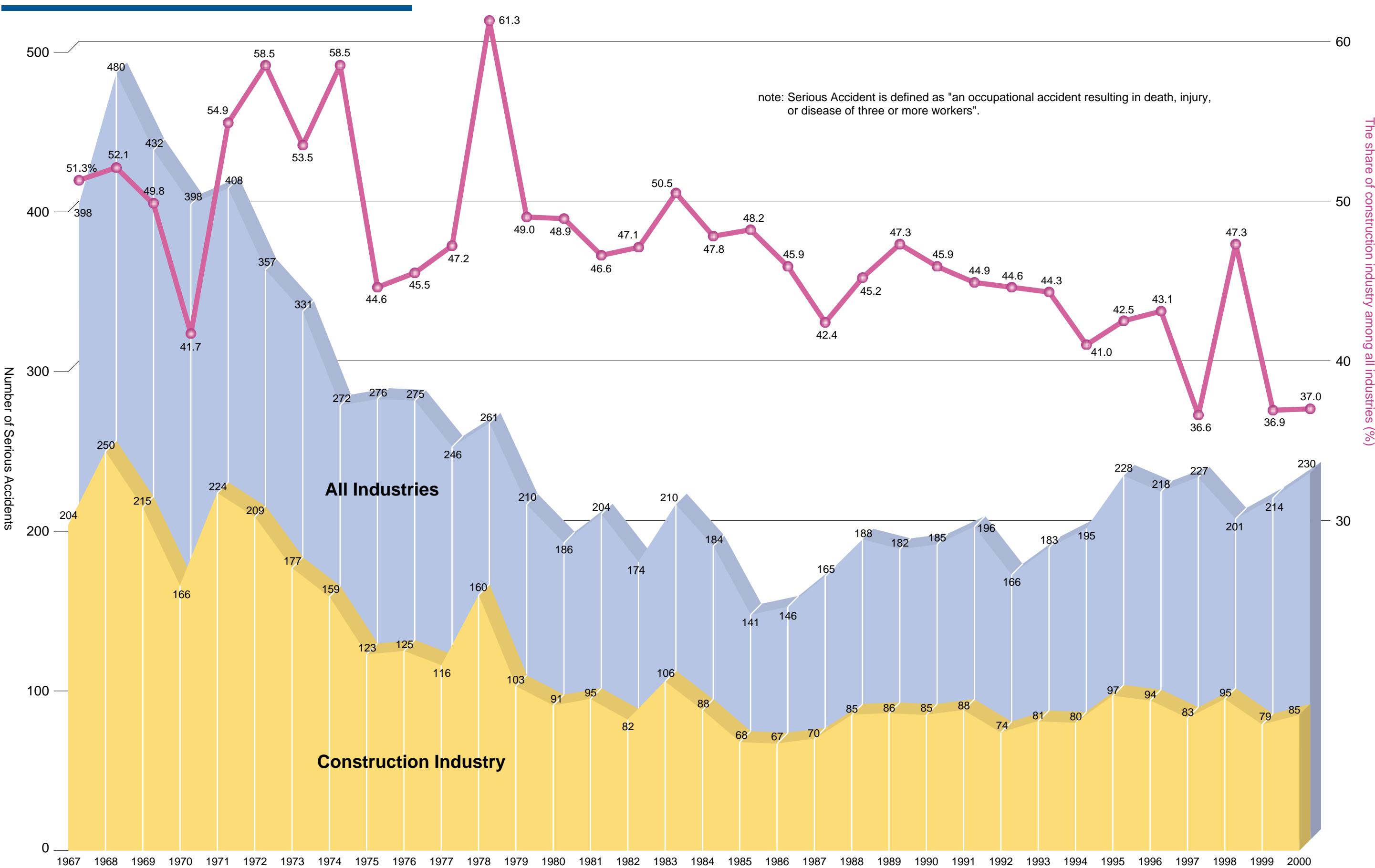
## 1.1 Trends of Number of Accidents



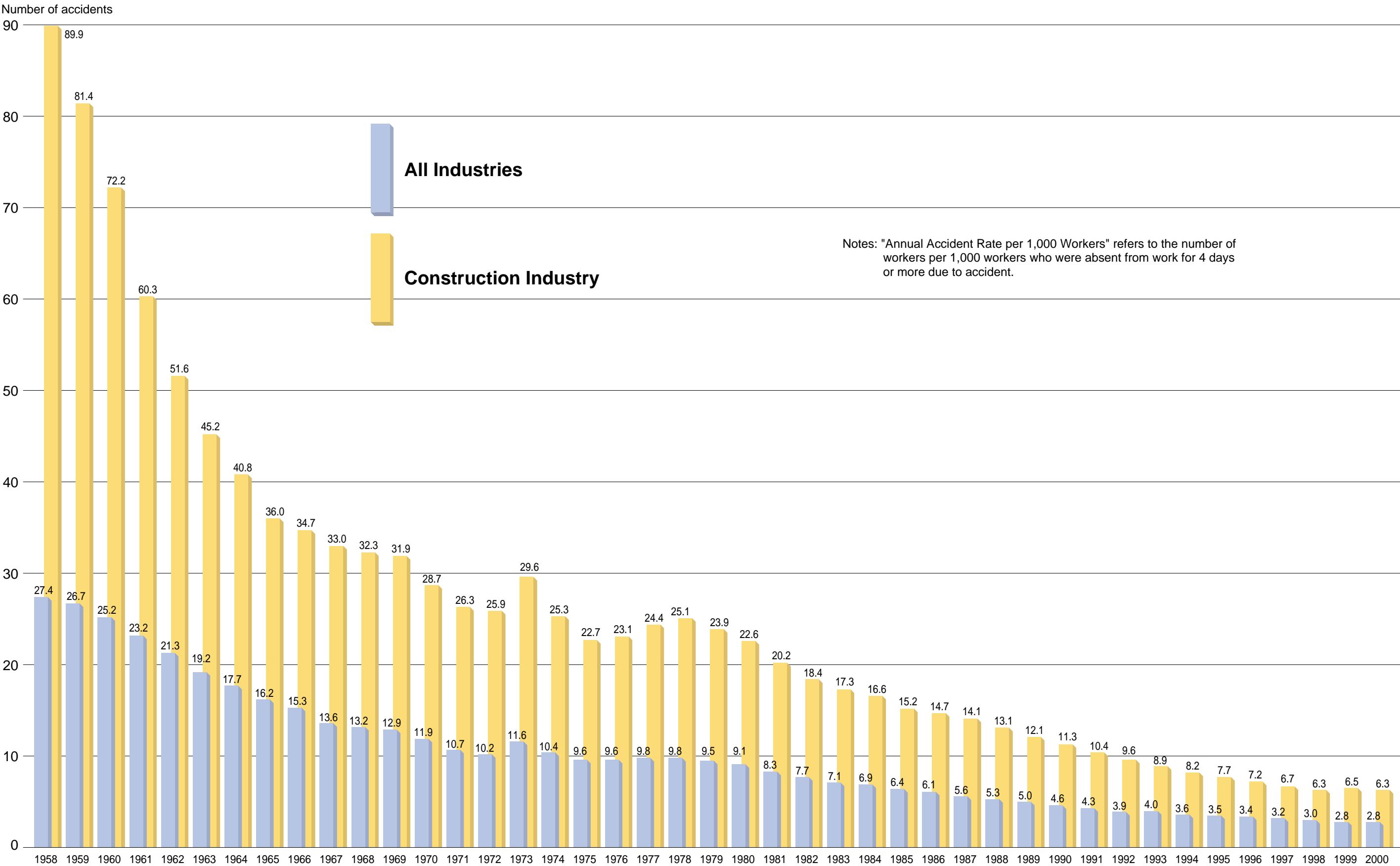
## 1.2 Trends of Number of Fatalities



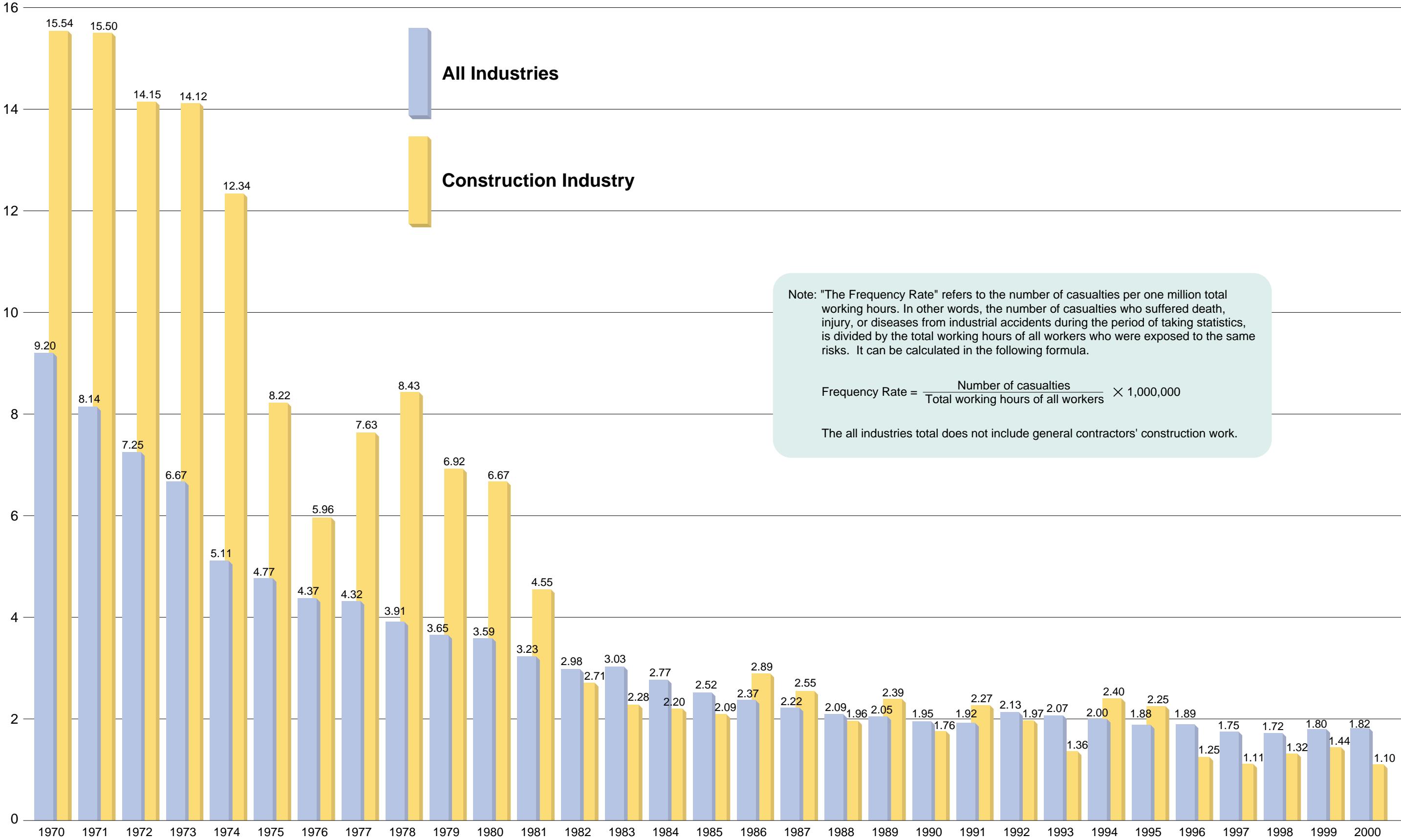
### 1.3 Trends of Occurrence of Serious Accidents

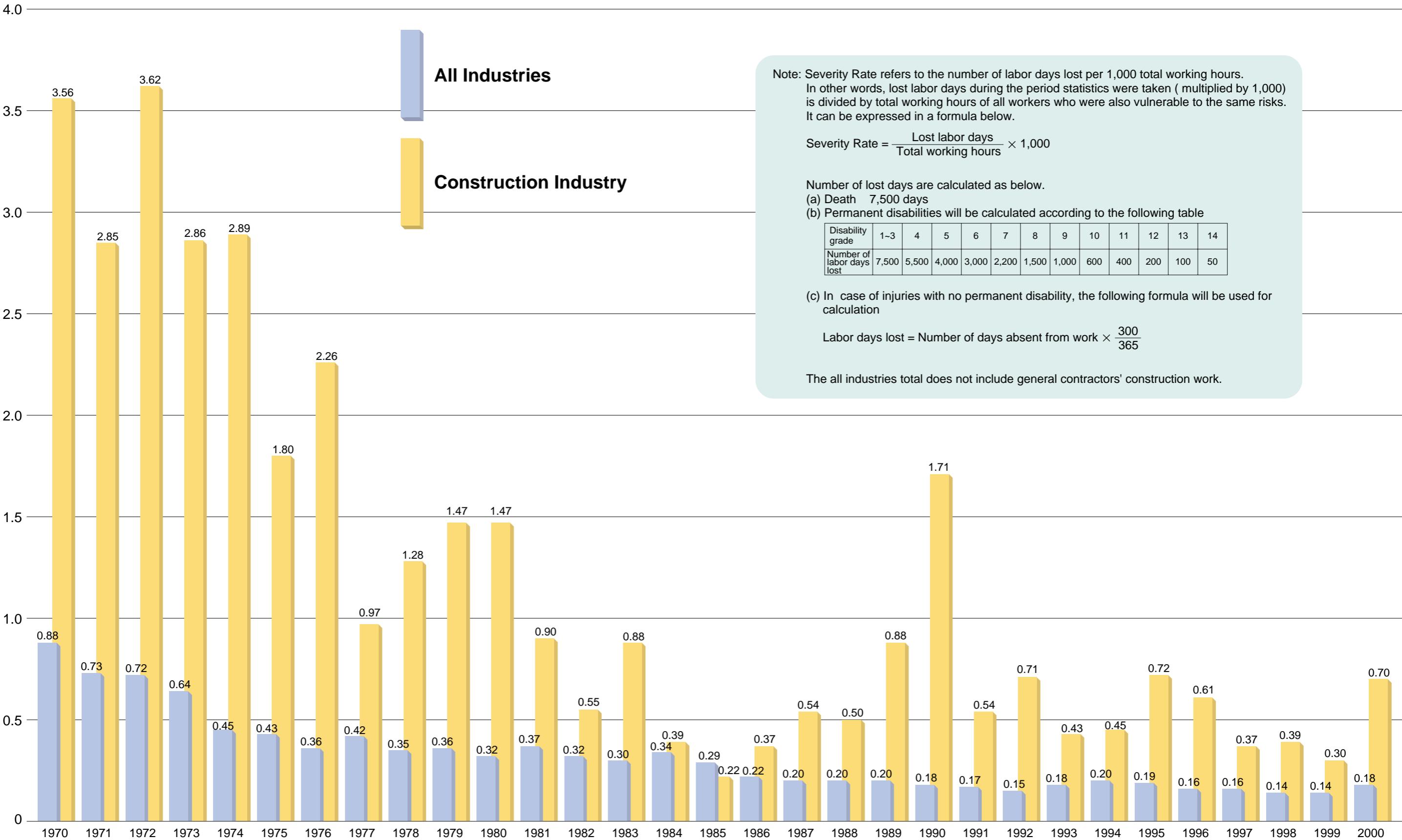


## 1.4 Trends of Annual Accident Rate per 1,000 workers

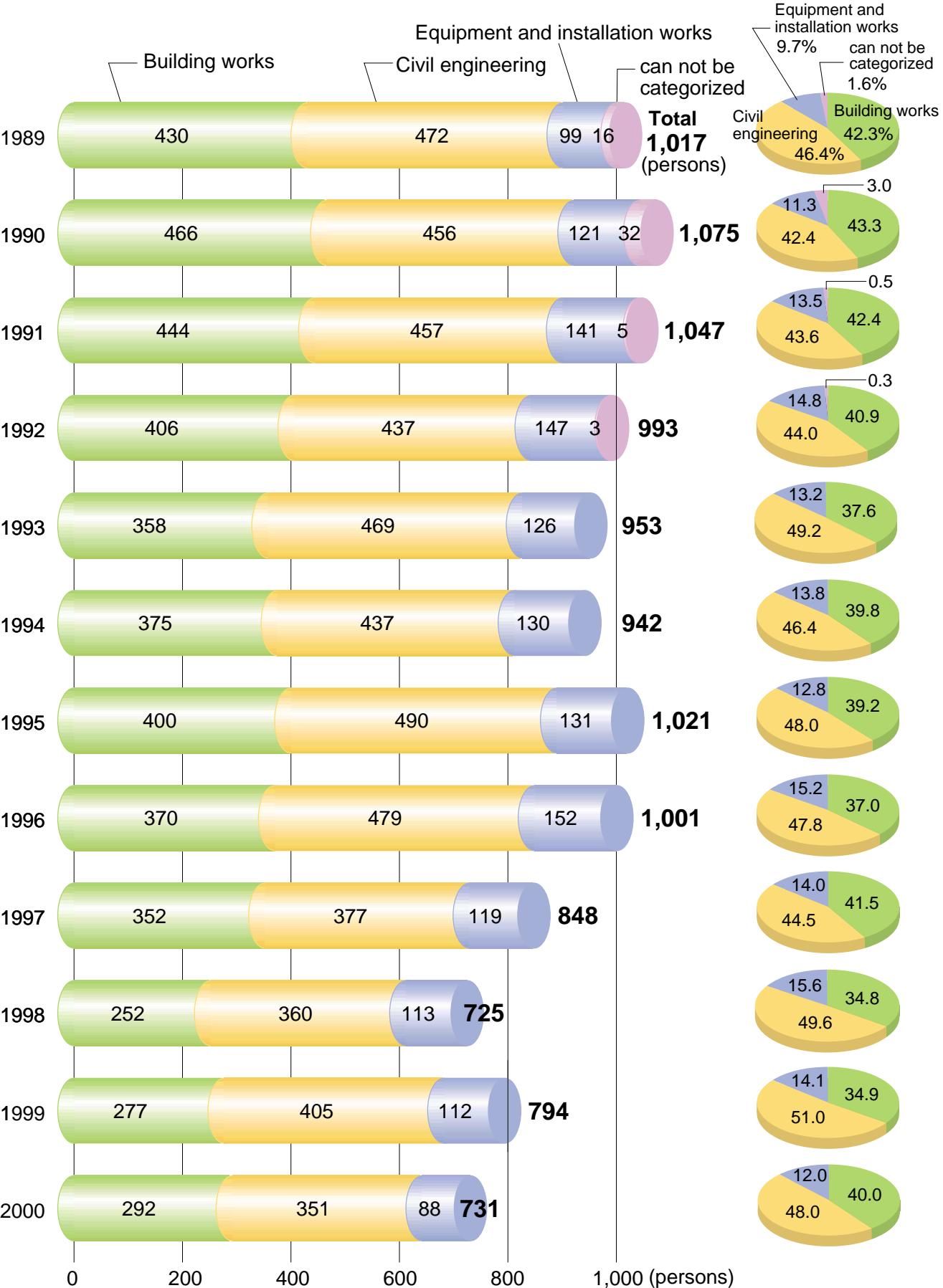


## 1.5 Trends of Frequency Rate

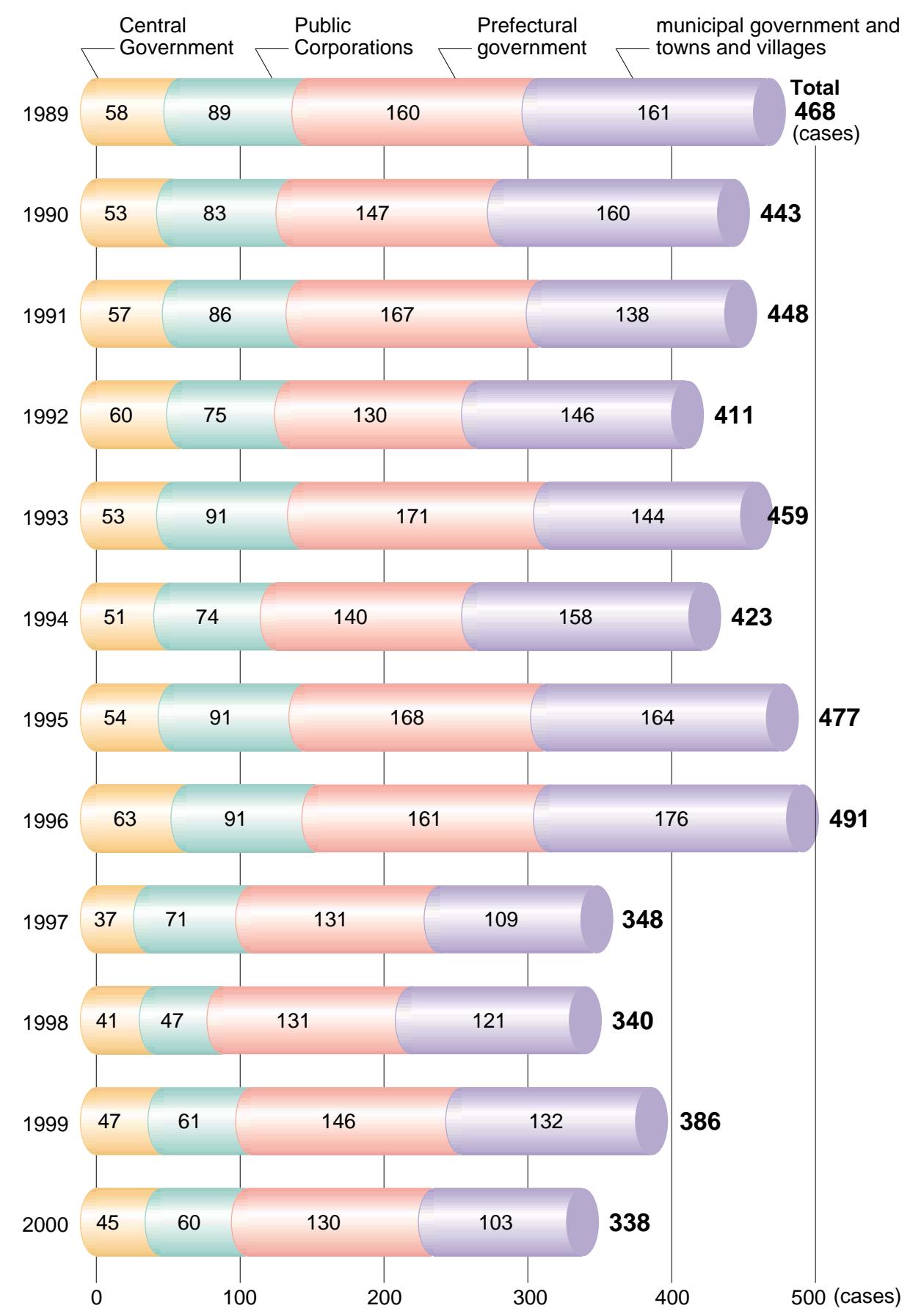




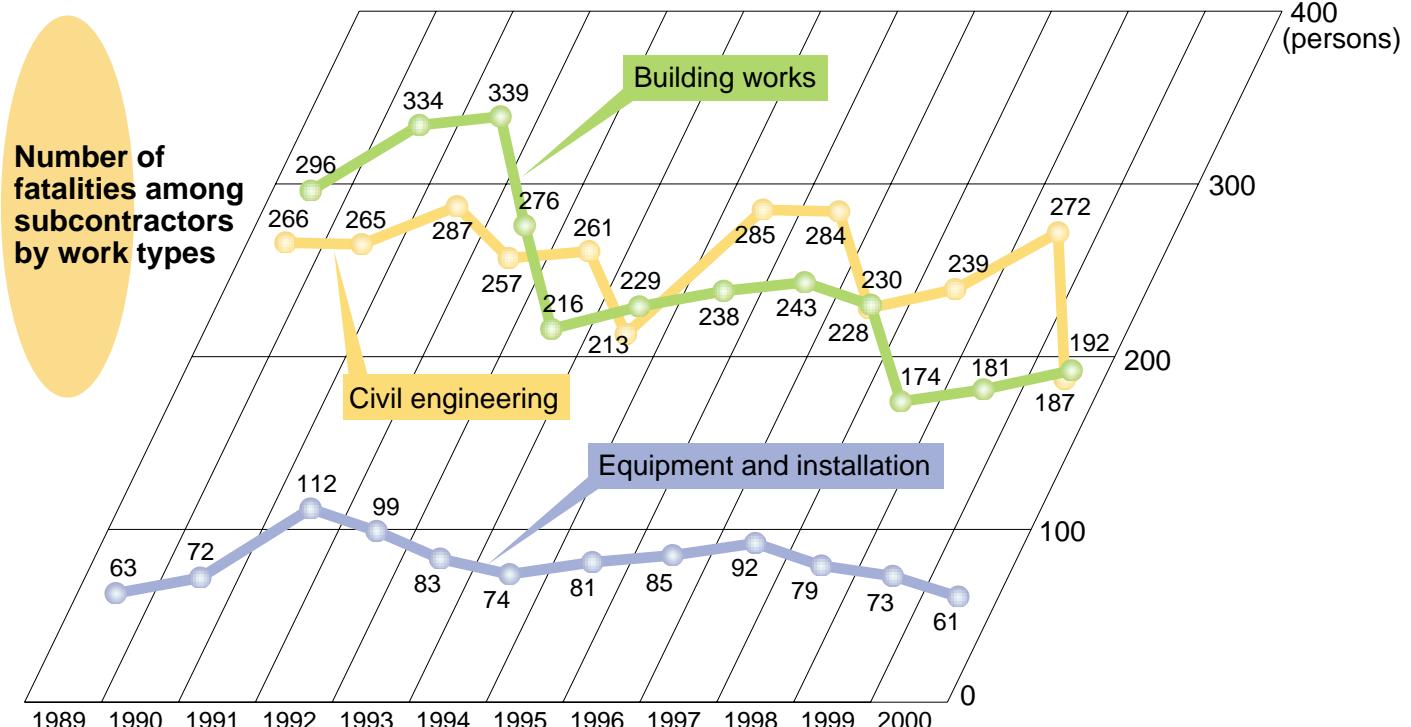
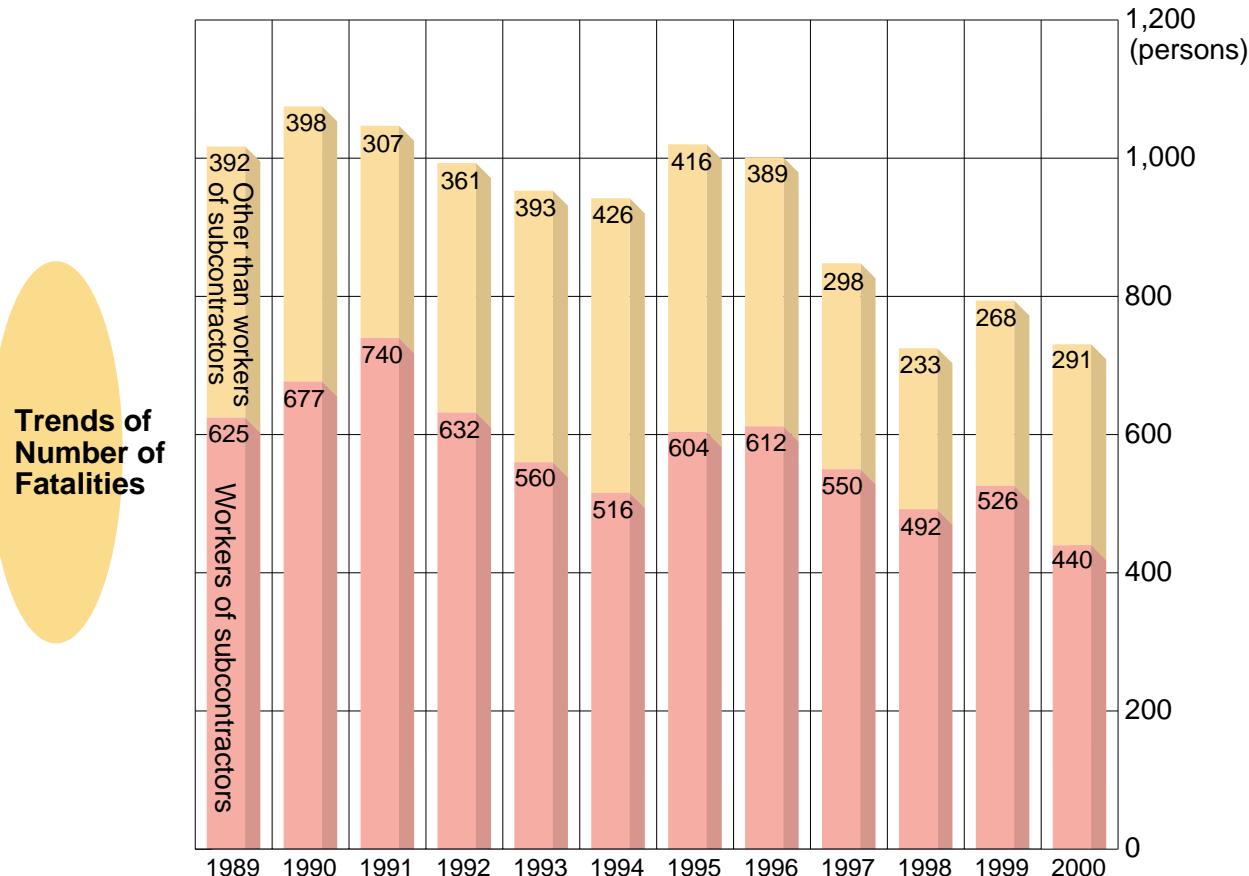
## 2.1 Trends of Number of Fatalities by Types of Work



## 2.2 Trends of Number of Fatalities in Public Works by Ordering Entity

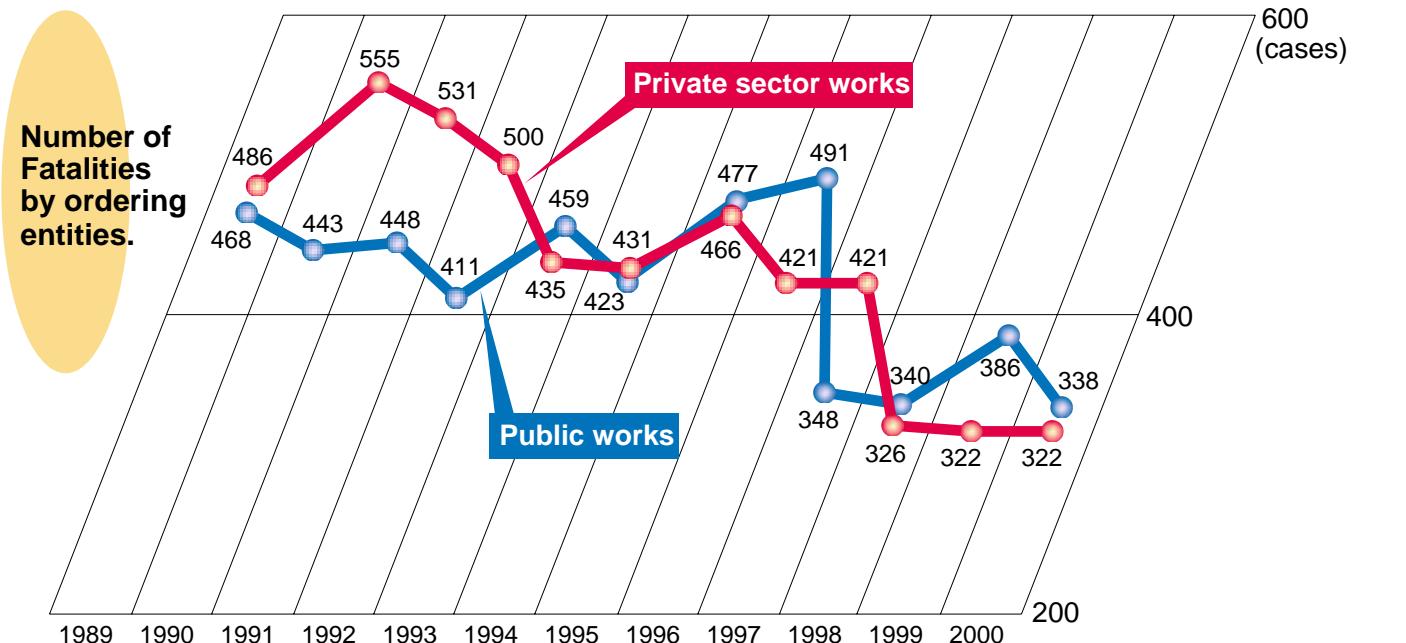
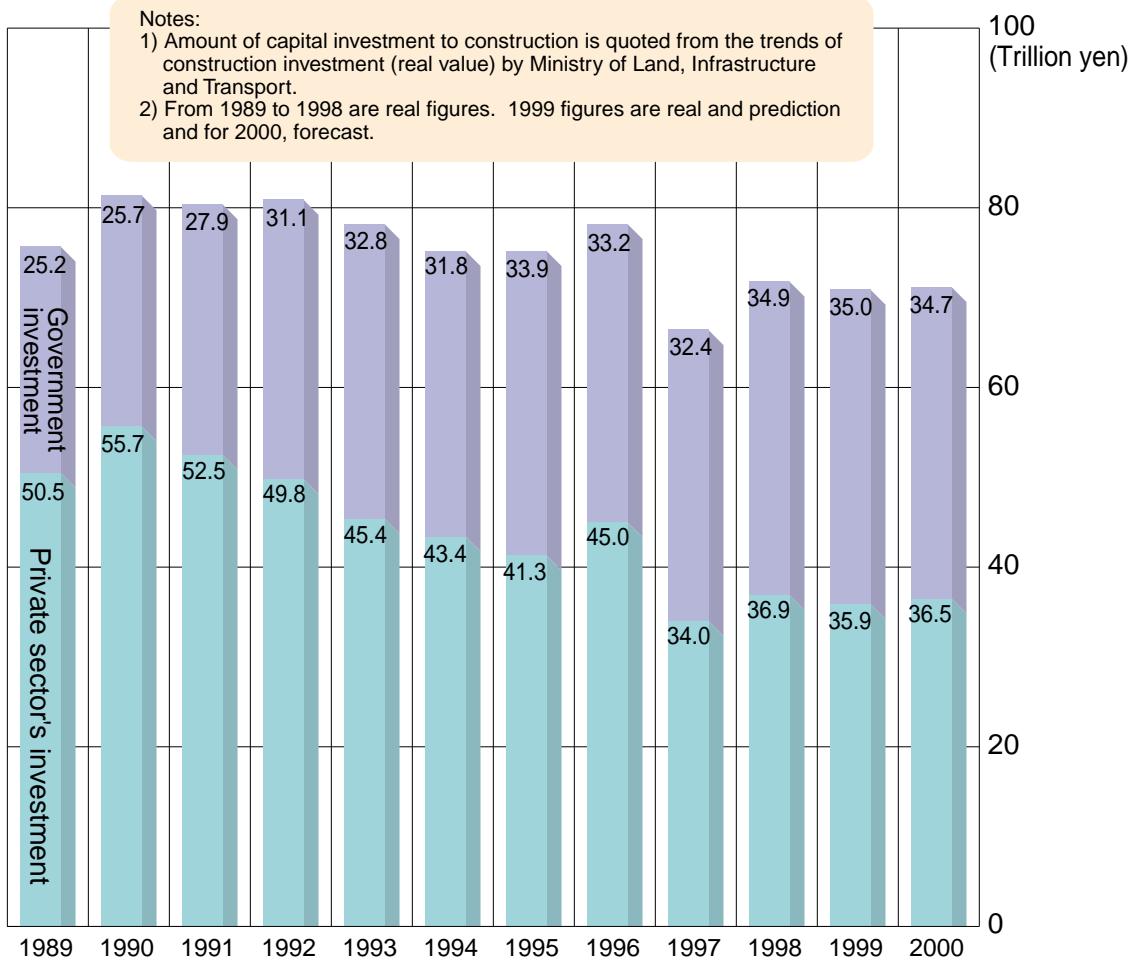


## 2.3 Trends of Number of Fatalities among Workers of Subcontractors



Note: Among the fatalities in subcontractors 6 people in 1990, and 2 in 1991 can not be categorized.

## 2.4 Trends of Amount of Construction Work Capital Investment and Number of Fatalities by Ordering Entity



## 2.5 Trends of Number of Fatalities by Accident Type



Notes: Among accident types,

1) Accidents by cranes etc. include accidents by mobile cranes, derricks, elevators, lifts for construction works, light capacity lifts, etc.

2) Accidents by motor vehicles refer to accidents caused by transportation vehicles such as trucks, micro buses, trains, steam engines, and motorcycles. It also includes accidents at project site by transportation vehicles such as dump trucks. (However, it excludes accidents caused by rail way equipment)

3) Accidents by construction machine includes those by vehicle type construction machine such as bull dozers and

shovels (for leveling of the ground, transportation, loading and excavation), by machines for foundation works such as pile driver, pile extractor, roller and other machines designated by Ministry of Labor, general construction machine such as railway equipment used at tunnel construction, or civil engineering machines, and belt conveyors, etc.

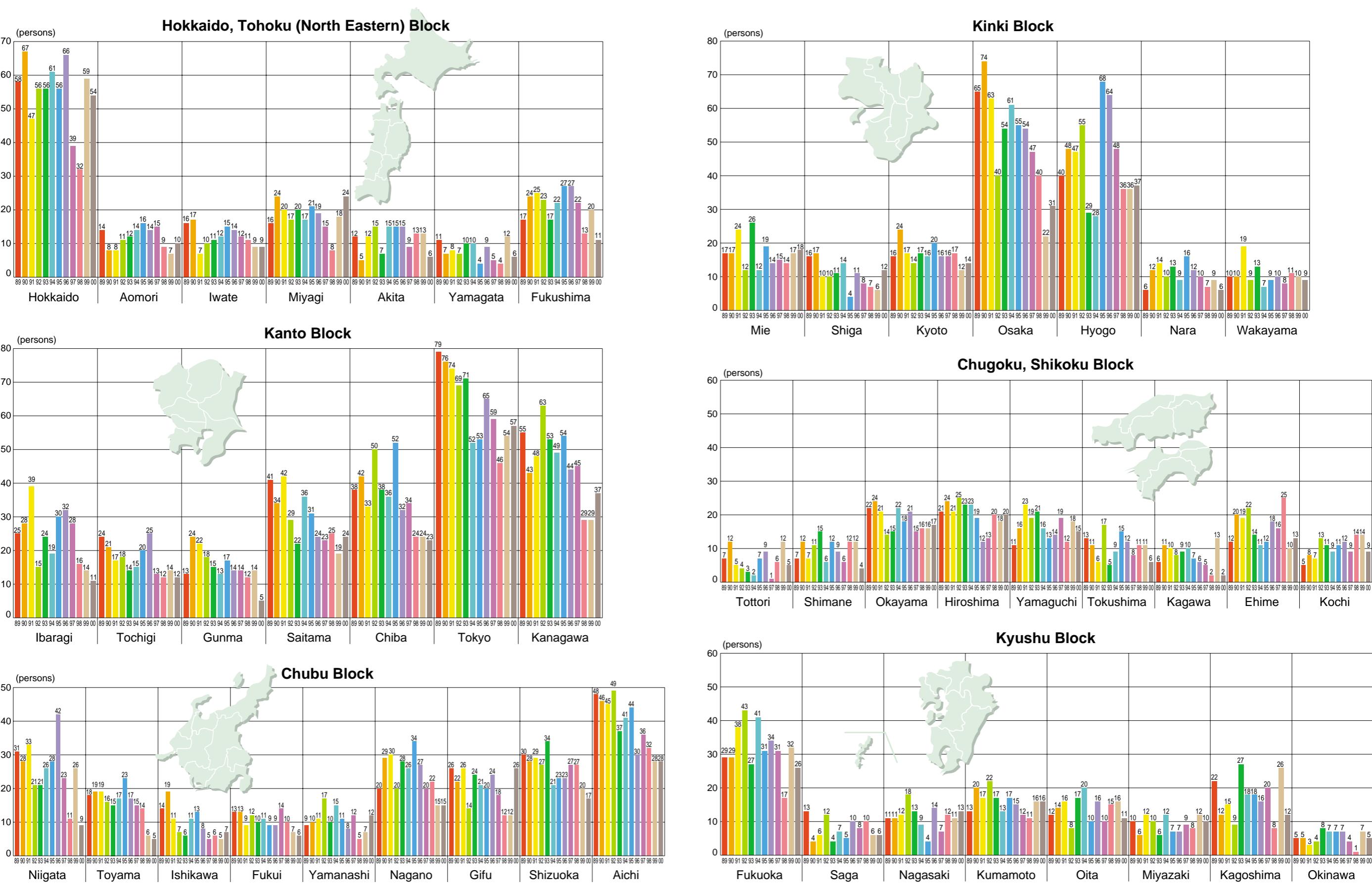
4) Accidents by explosion and fire include carbon monoxide poisoning at the time of fire.

(data prior to 1980 include oxygen deficiency and organic solvent poisoning)

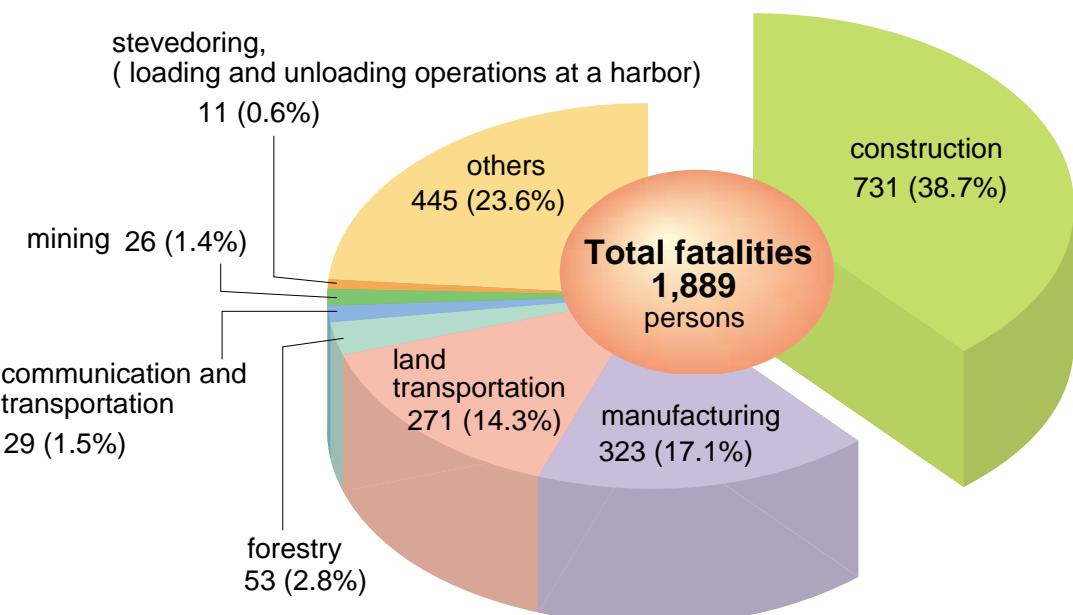
5) Accidents during handling and transportation include lifting and loading by man power and toppling.

6) Other causes of accidents include drowning, acute heart failure, and tetanus

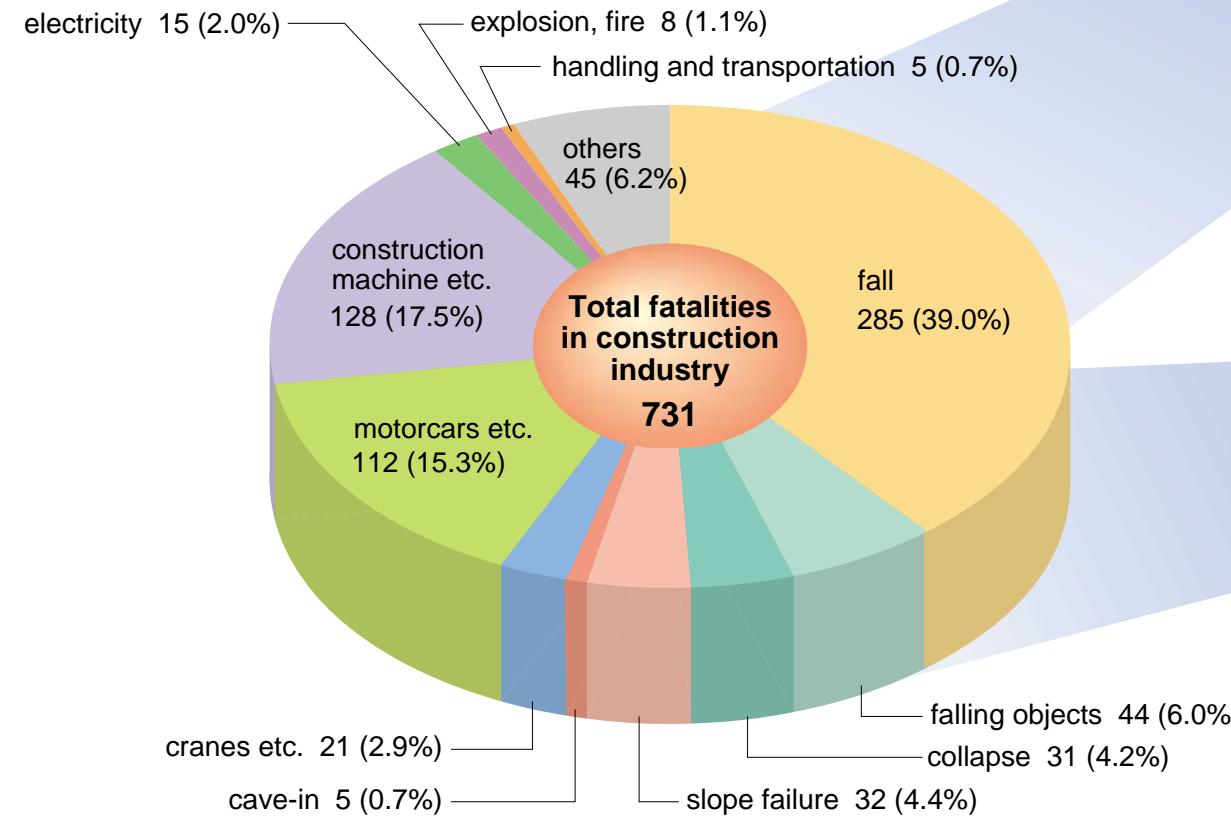
## 2.6 Trends of Number of Fatalities by Prefecture



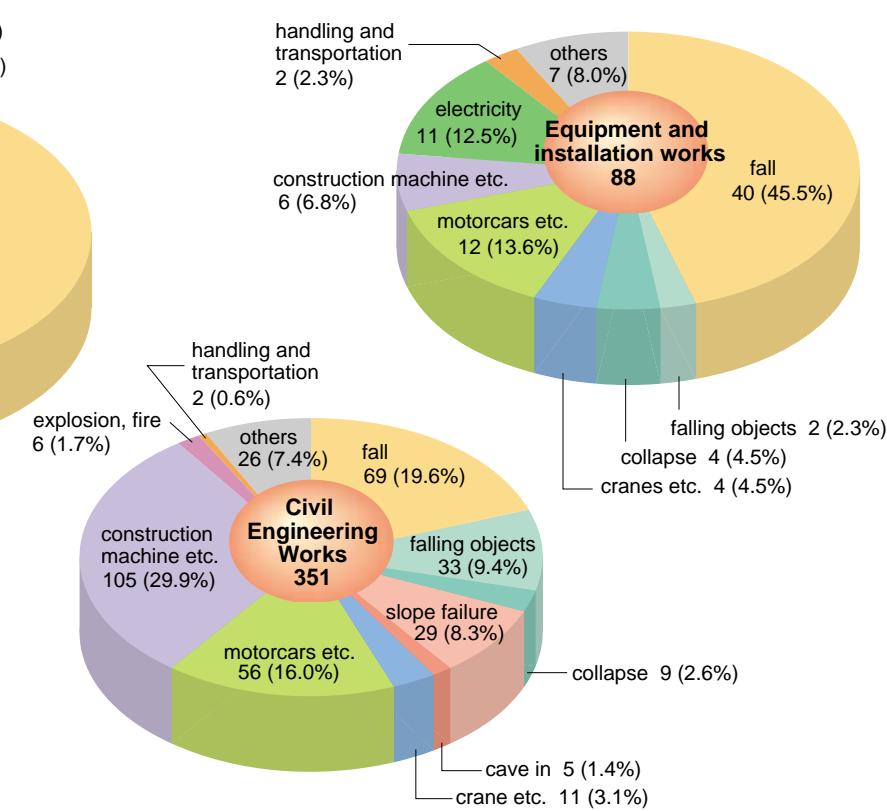
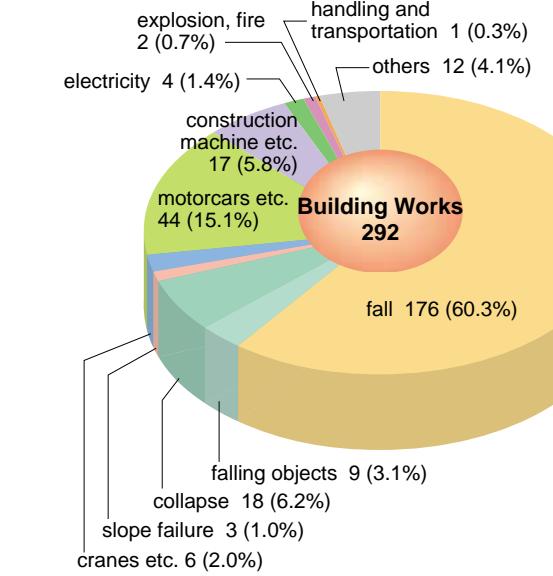
### 3.1 Fatal Accidents by Industry (2000)



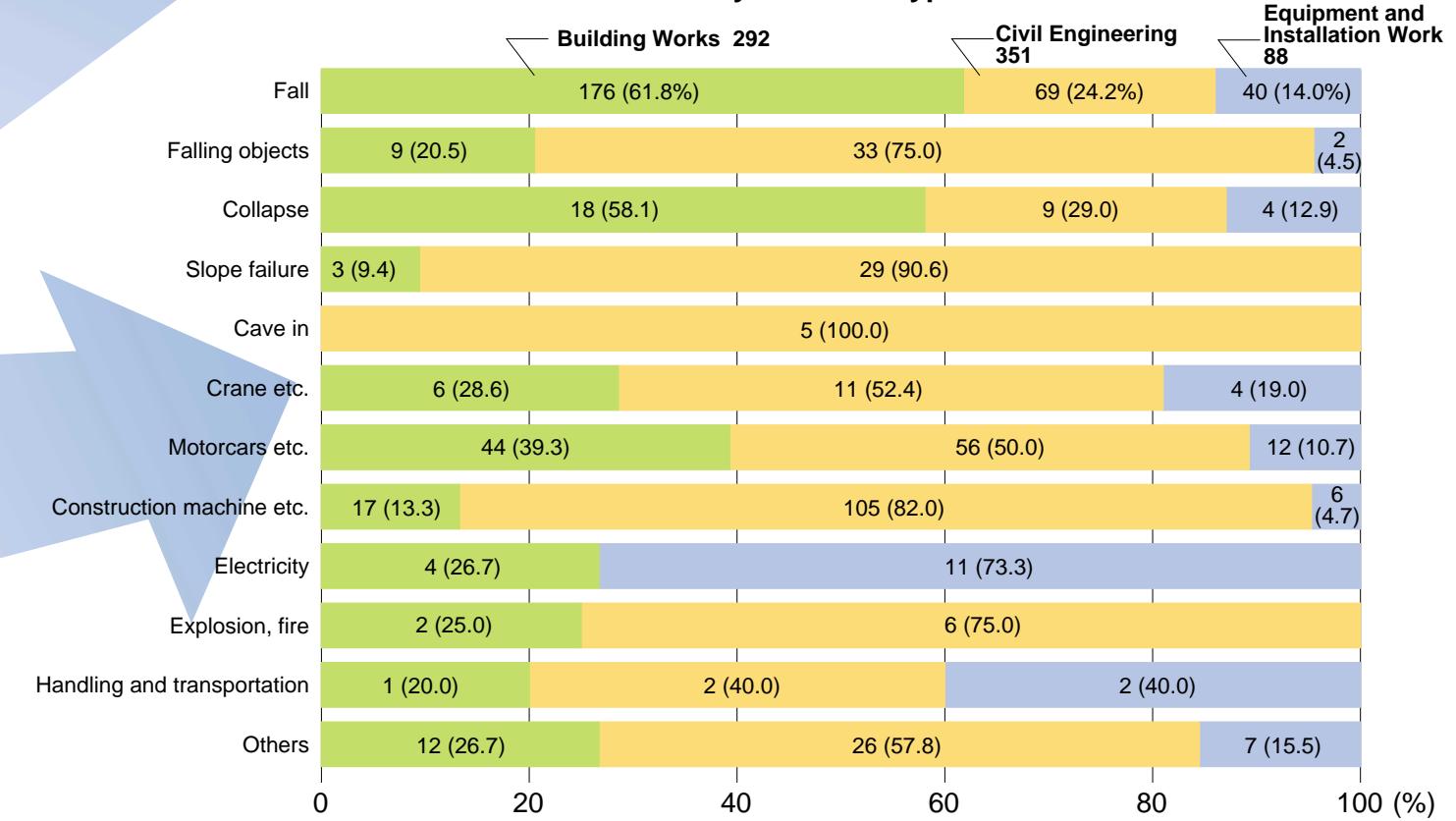
### 3.2 Fatal Accidents by Work Type and Accident Type (2000)



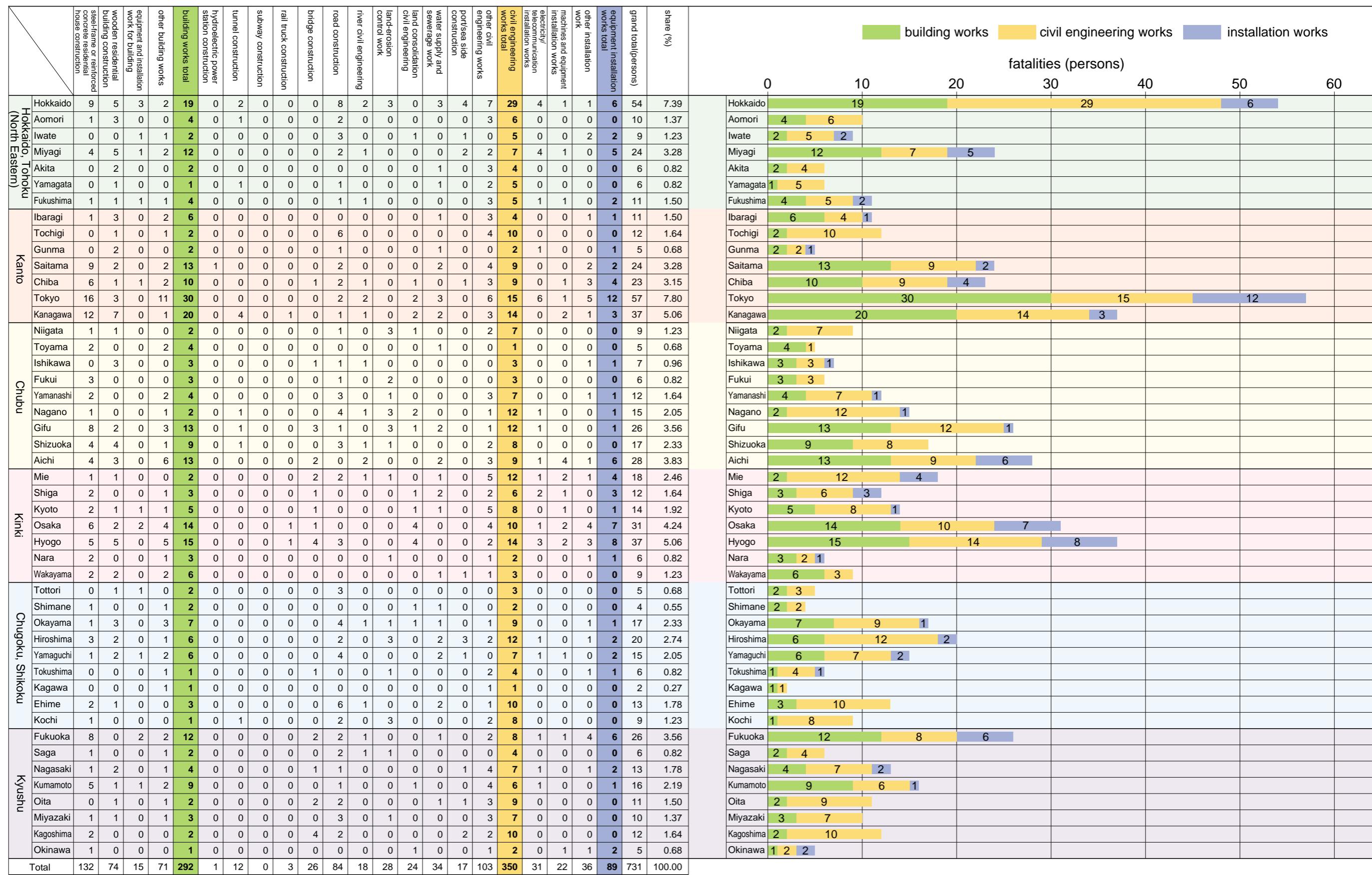
#### By Work Types



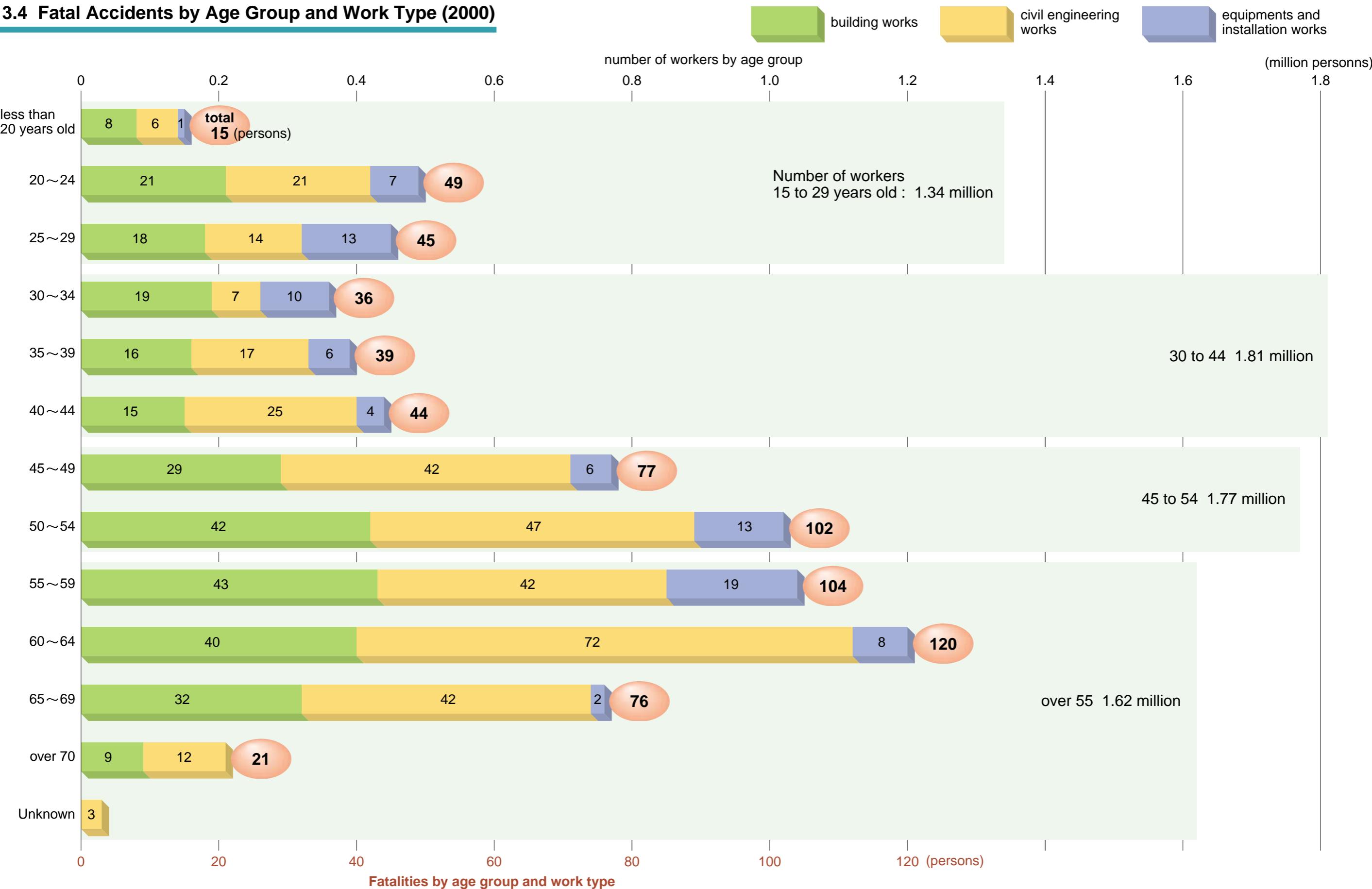
#### By Accident Types



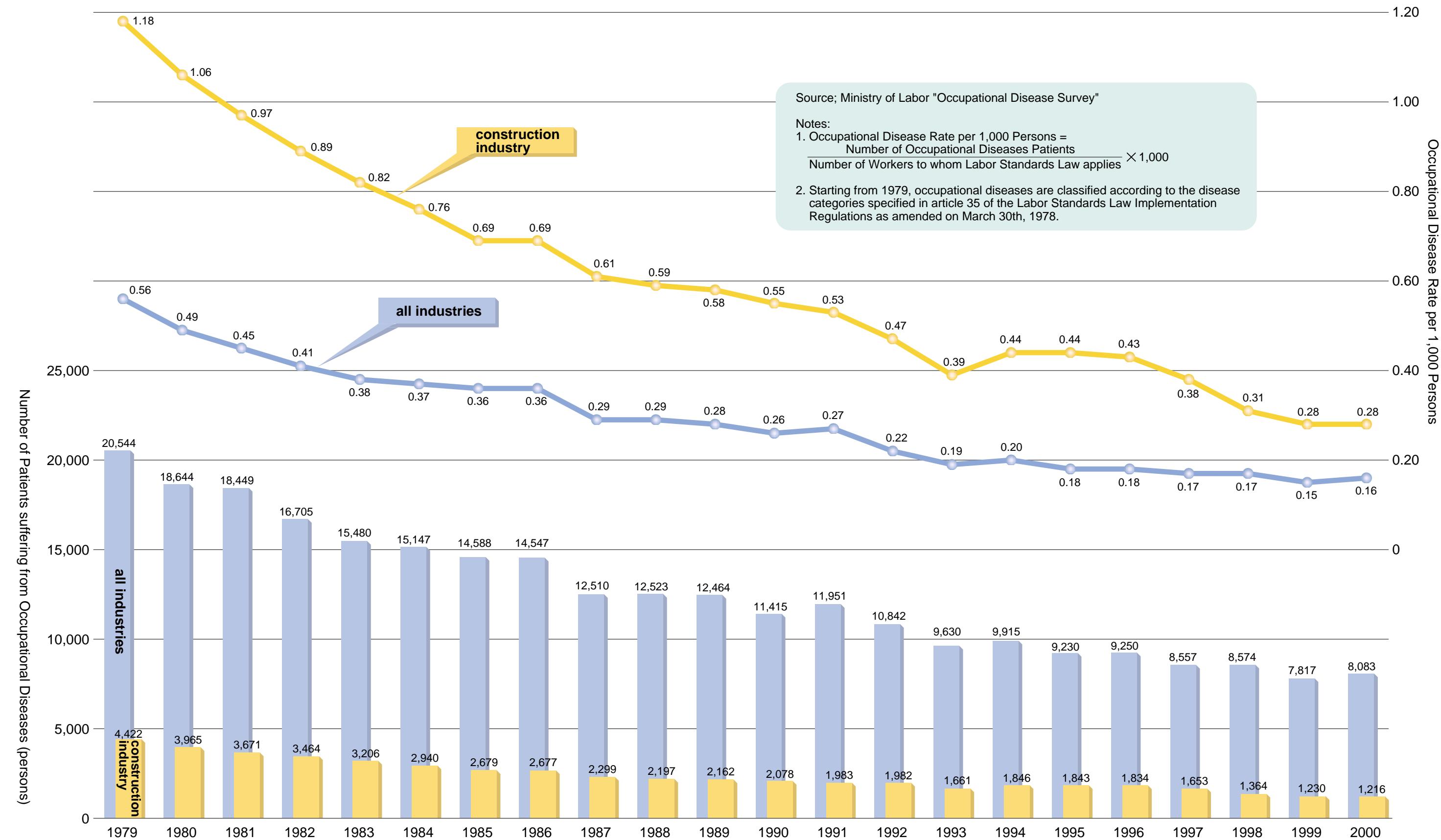
### 3.3 Fatal Accidents by Prefecture and Work Type (2000)



### 3.4 Fatal Accidents by Age Group and Work Type (2000)

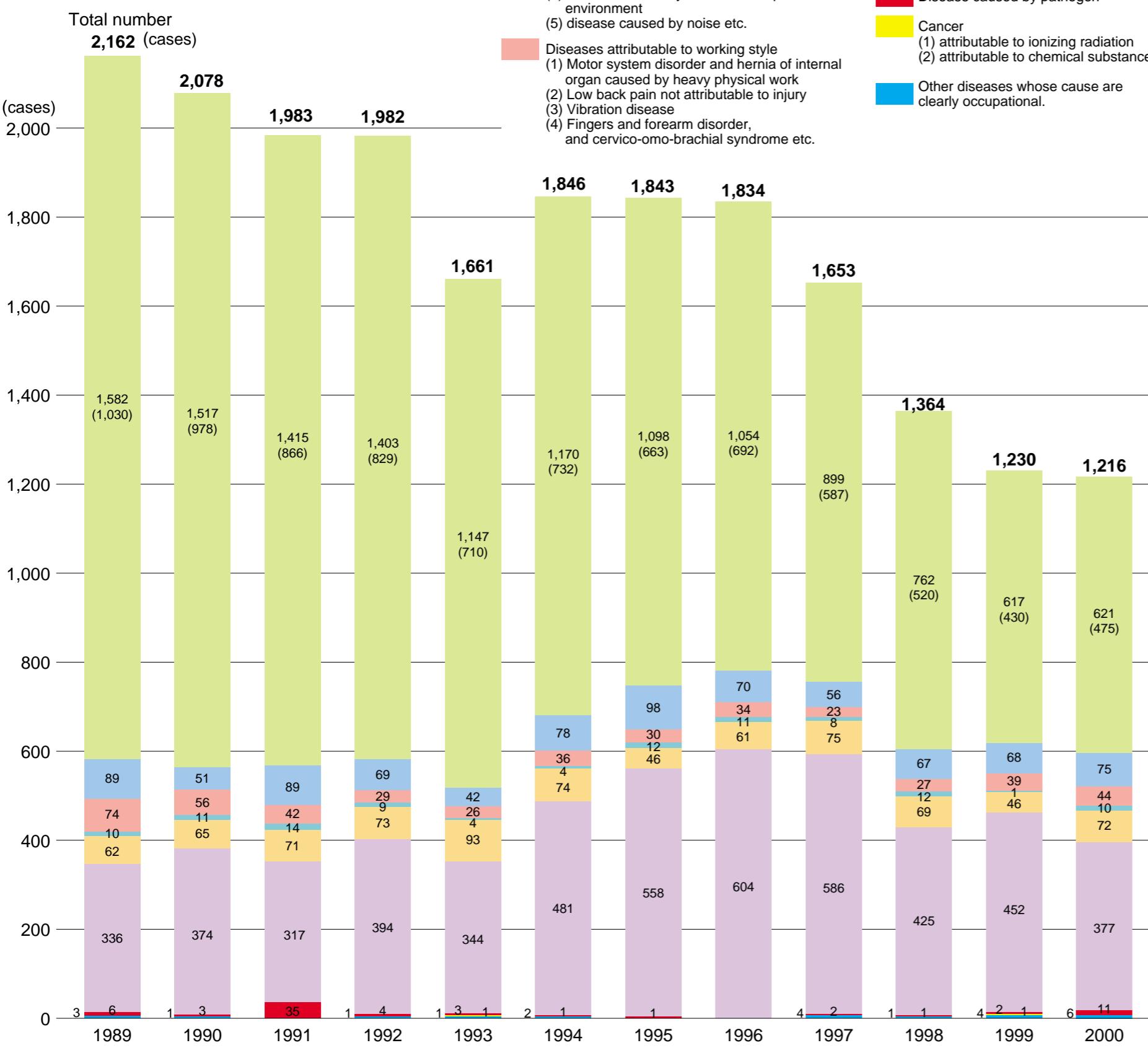


#### 4.1 Trends of Number of Occupational Diseases and the Annual Rate per 1,000 Workers



## 4.2 Occupational Diseases by Cause

## **Situation of Occurrence in Construction Industry**



Source: Ministry of Labor "Occupational Disease Survey"

Notes: 1. The table shows diseases resulting in four or more days absence.

## 2. Disease classification are based on

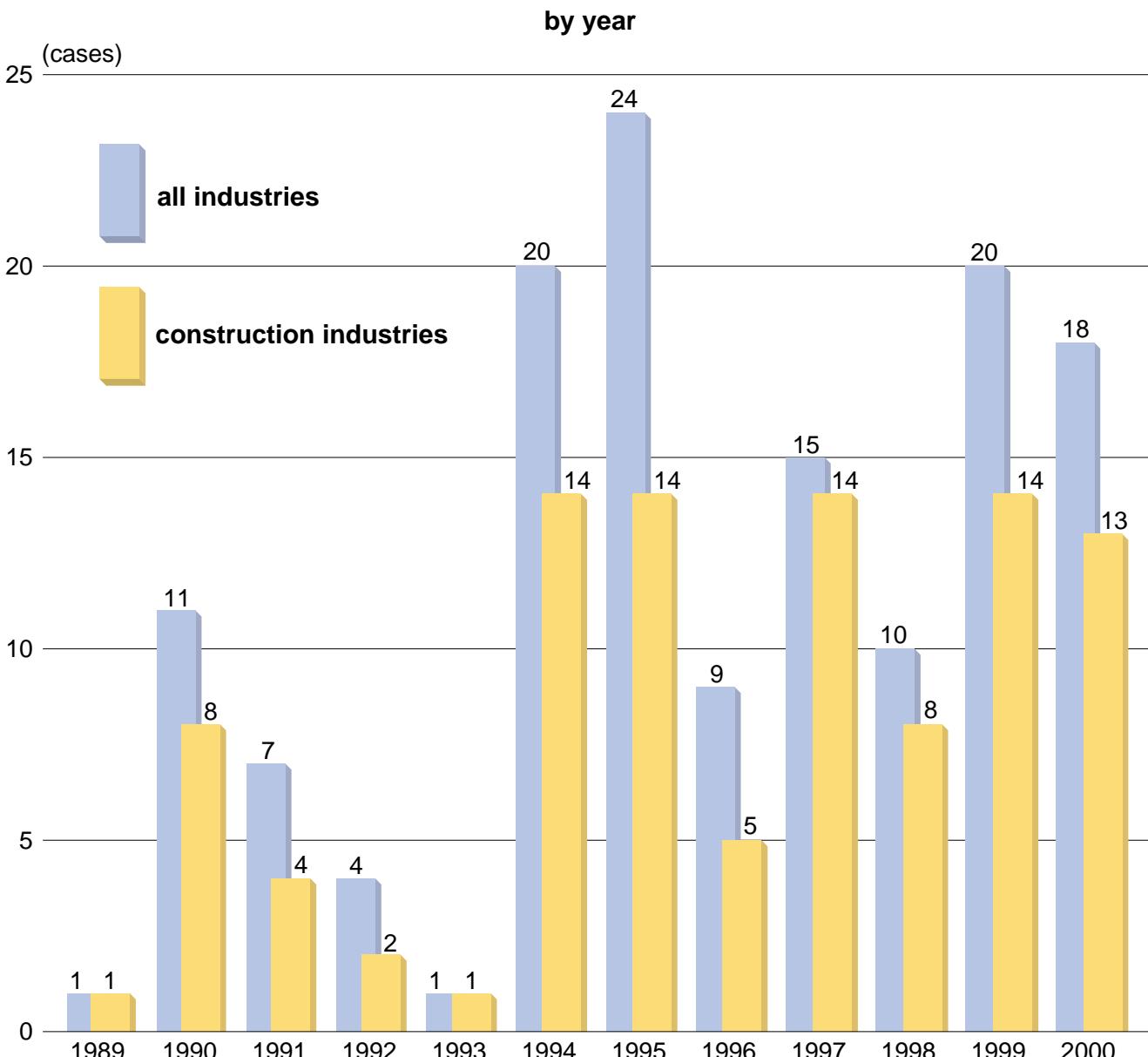
Implementation Regulation  
2. The institution shall submit the following documents to the MBB:

3. The statistical figures represent the number of diseases occurred within the year shown and recognized as and before 31st of March.

## **Comparison table on occurrence of diseases in construction industry and allindustries**

												Total
year		industry		disease classification		Other diseases whose cause are clearly occupational.		Cancer				
						Pneumoconiosis and pneumoconiosis complications		Disease caused by pathogen				
				Diseases caused by chemical substance (cancer exempted)		Oxygen deficiency						
				Diseases attributable to working style	Diseases caused by physical factors	Diseases resulting from injury	Numbers in () shows low back pain					
1989	construction industry	1,582 (1,030)	89	74	10	62	336	6	3	2,162		
	all industries	9,485 (7,628)	727	680	26	290	1,201	42	13	12,464		
1990	construction industry	1,517 (978)	51	56	11	65	374	3	1	2,078		
	all industries	8,759 (6,925)	501	543	23	308	1,185	87	1	11,415		
1991	construction industry	1,415 (866)	89	42	14	71	317	35		1,983		
	all industries	9,146 (6,560)	860	370	30	340	1,103	92	5	11,955		
1992	construction industry	1,403 (829)	69	29	9	73	394	4	1	1,982		
	all industries	8,323 (6,235)	729	240	20	323	1,140	64	2	10,842		
1993	construction industry	1,147 (710)	42	26	4	93	344	3	1	1,666		
	all industries	7,306 (5,743)	524	290	17	383	1,025	75	6	9,630		
1994	construction industry	1,170 (732)	78	36	4	74	481	1	2	1,840		
	all industries	7,183 (5,556)	733	235	21	386	1,259	74	9	9,915		
1995	construction industry	1,098 (663)	98	30	12	46	558	1		1,843		
	all industries	6,451 (5,035)	726	290	23	311	1,326	92	3	9,230		
1996	construction industry	1,054 (692)	70	34	11	61	604			1,834		
	all industries	6,521 (5,191)	513	293	22	322	1,477	94	8	9,250		
1997	construction industry	899 (587)	56	23	8	75	586	2	4	1,653		
	all industries	6,034 (4,962)	321	287	25	386	1,415	74	15	8,557		
1998	construction industry	762 (520)	67	27	12	69	425	1	1	1,364		
	all industries	6,002 (4,896)	567	320	21	309	1,201	142	12	8,574		
1999	construction industry	617 (430)	68	39	1	46	452	2	1	1,230		
	all industries	5,388 (4,559)	395	357	9	229	1,276	111	1	51	7,817	
2000	construction industry	621 (475)	75	44	10	72	377	11	6	1,210		
	all industries	5,405 (4,622)	461	438	21	302	1,180	215	61	8,083		

#### 4.3 Trends of Occurrence of Heat Stroke



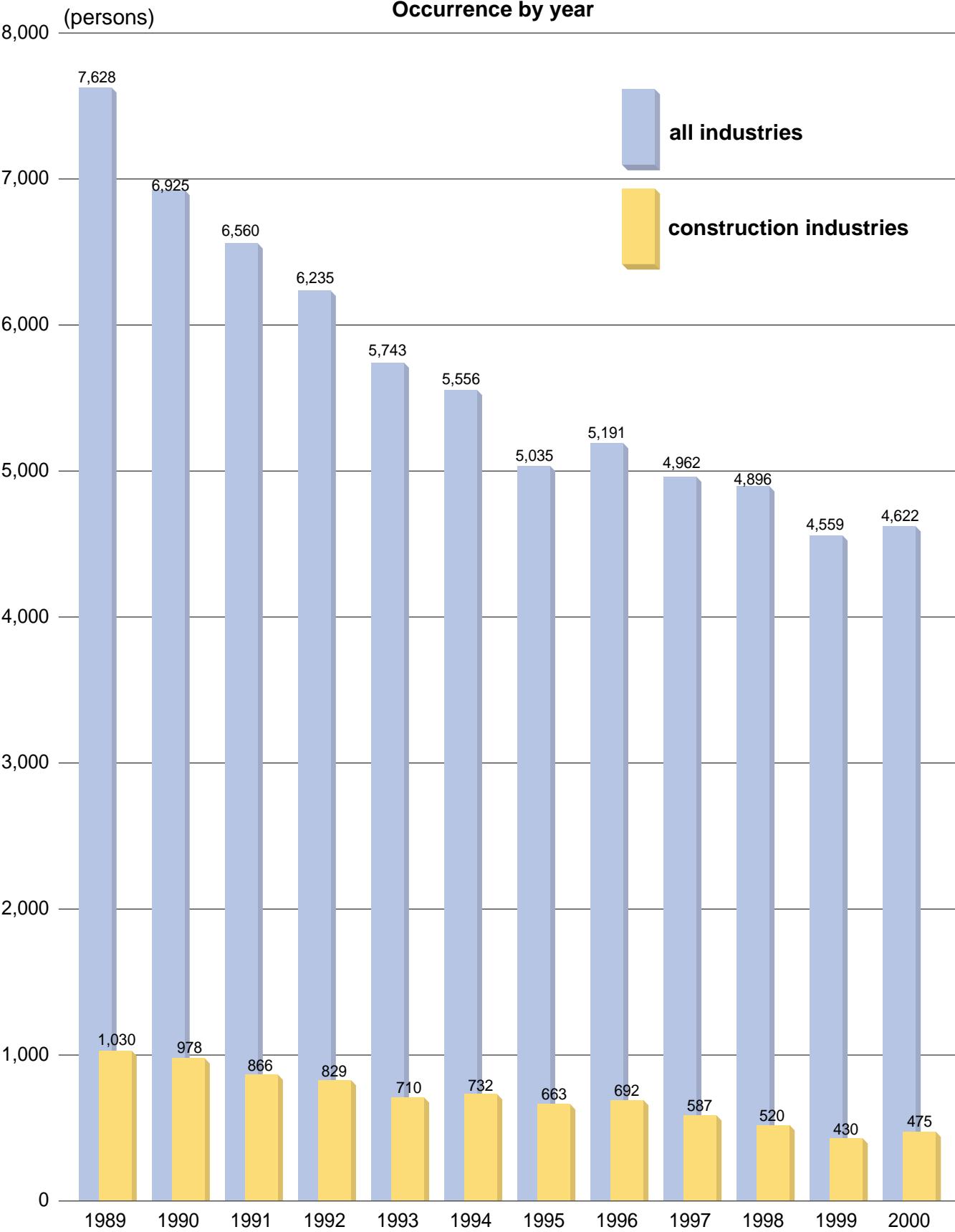
#### Heat Stroke

Heat Stroke is a body temperature disorder and circulation disorder, occurring under extremely hot circumstances, and can be classified as follows according to the symptoms.

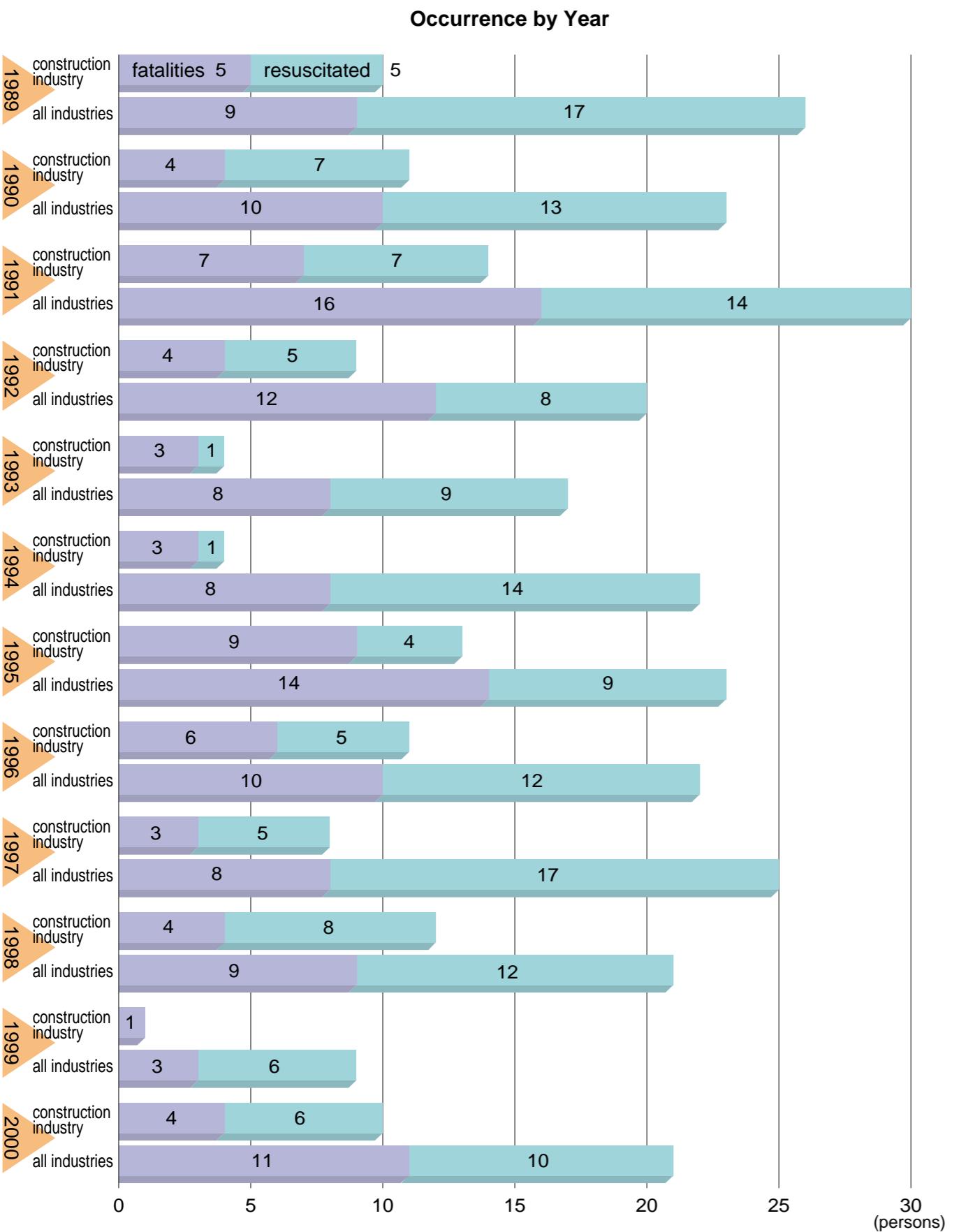
<b>Sun stroke</b>	Has the highest fatality rate among "heat strokes", and needs emergency treatment. In many cases, the patient suddenly falls unconscious. Before the symptom shows, the patient may have had a headache, bad feeling, buzzing in the ears, feeling irritated, or vomiting or diarrhea. These are attributable to central nerve system disorder caused by rise of body temperature or brain temperature.
<b>Heat cramp</b>	Muscles of limbs or abdomen ache, and the patient has spasmodic cramp. Sometimes, cramp start while the worker is taking a bath after work, or while he is sleeping. By sweating a lot, the worker lost a lot of salt, and failure to supply salt resulted in above symptoms.
<b>Heat prostration</b>	The worker feels lethargy, despondency, and dizziness. Sometimes he/she may get muddled and collapse. These are attributable to increase of heart beat over certain limit, due to continuous exposure to heat.
<b>Heat exhaustion</b>	At its early stage, the worker feels terribly thirsty, and experiences urine decrease. Dizziness, abnormal sense of limbs, difficulty in walking are seen, and sometimes he/she may even faint. These are attributable to increased burden to heart and abnormal blood distribution caused by blood thickened by a lot of sweating.



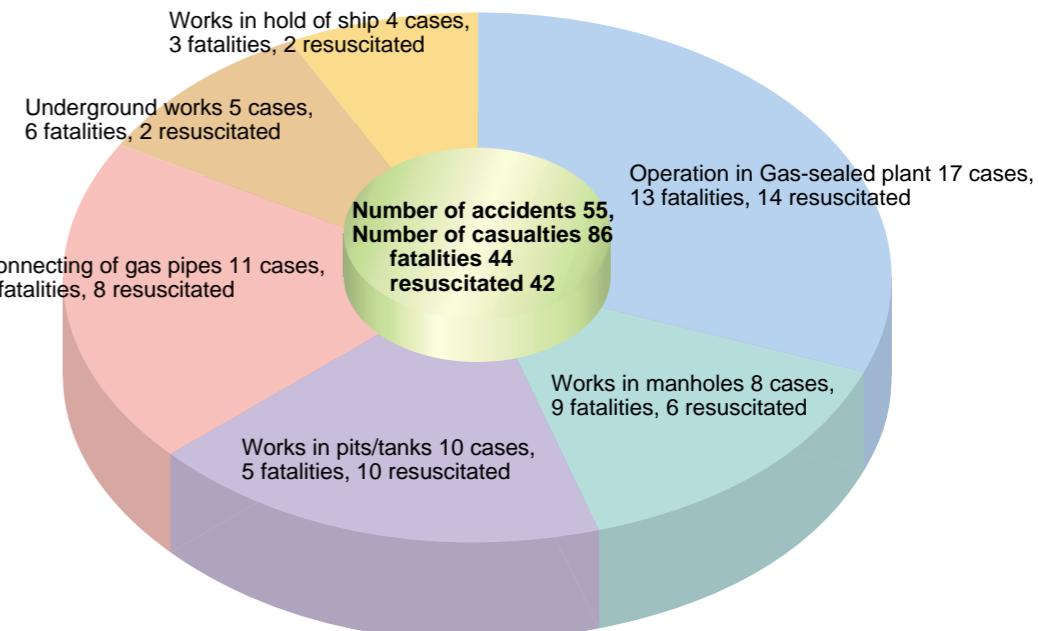
#### 4.4 Trends of Occurrence of Low Back Pain



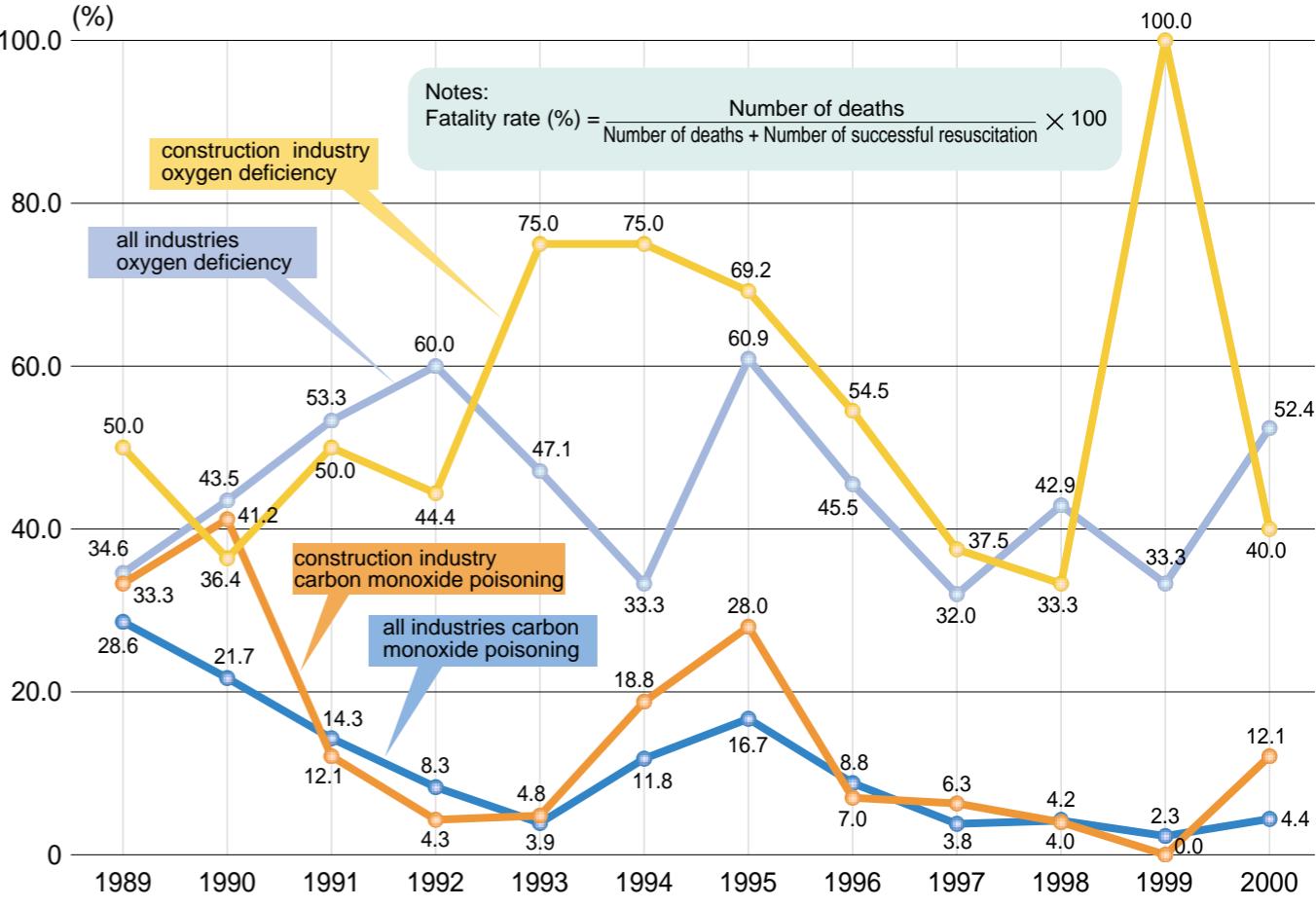
## 4.5 Trends of Occurrence of Oxygen Deficiency Cases



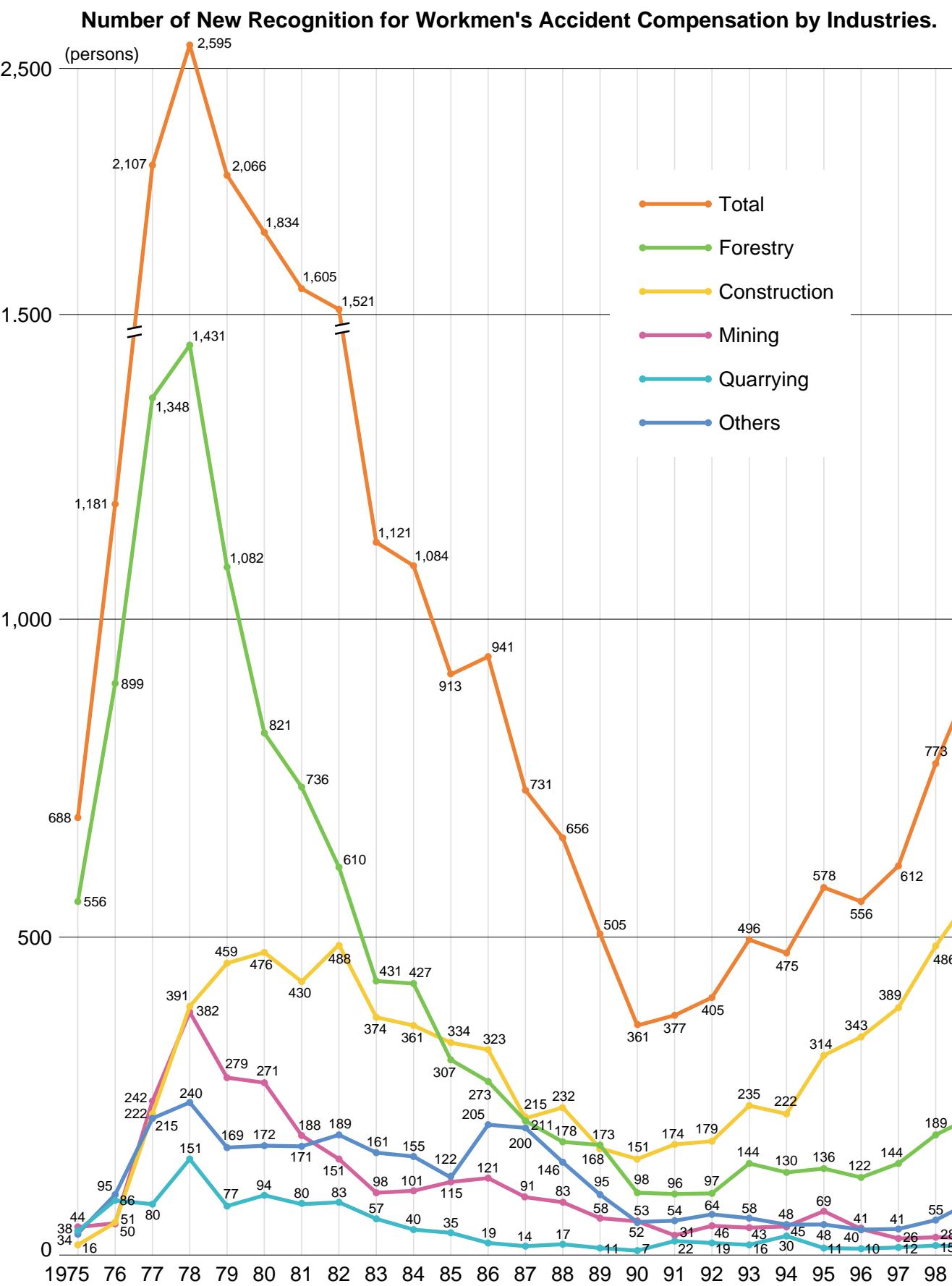
Number of Oxygen Deficiency Accidents by types of work



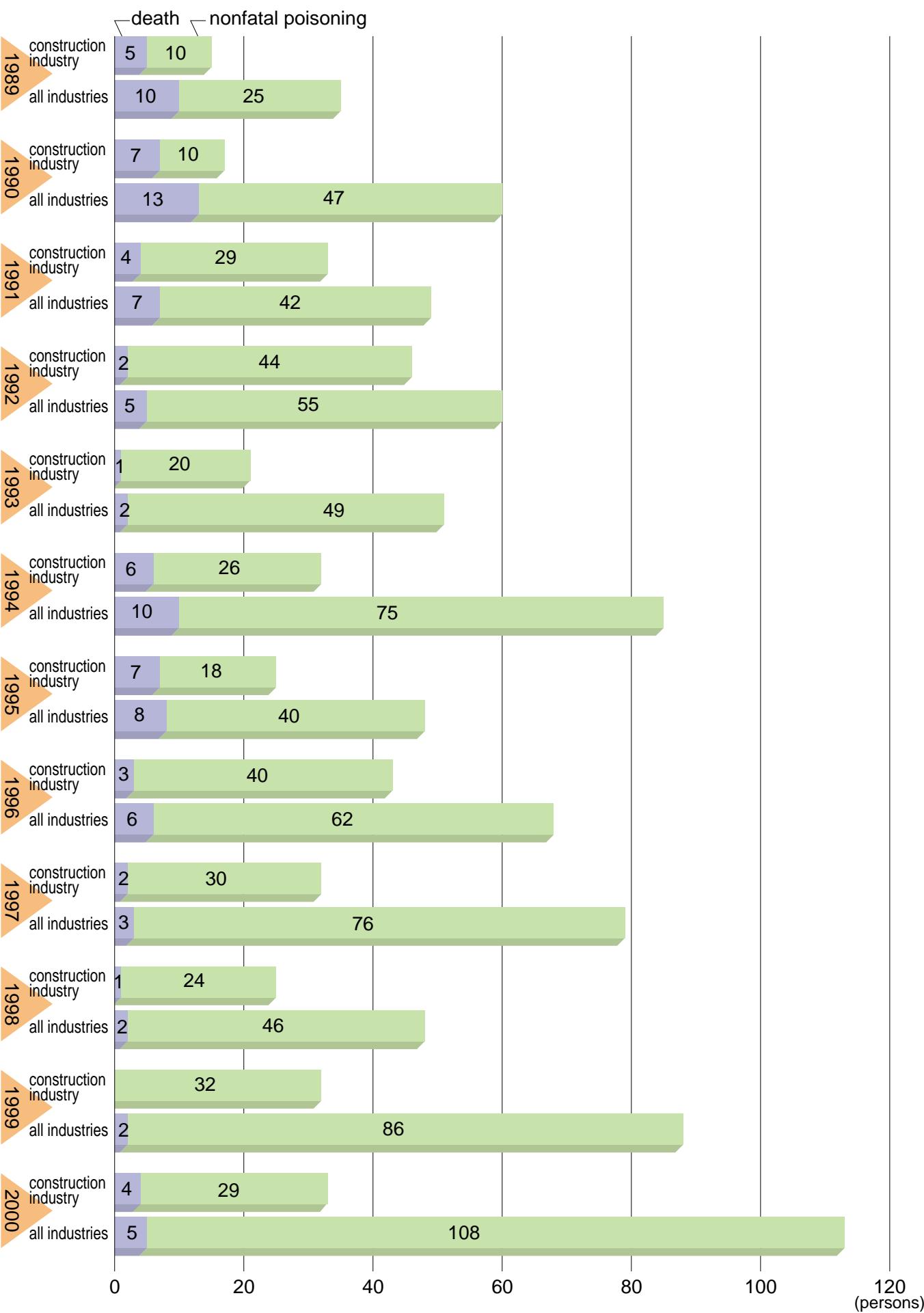
Comparison of Fatality Rates of Oxygen Deficiency and Carbon Monoxide Poisoning



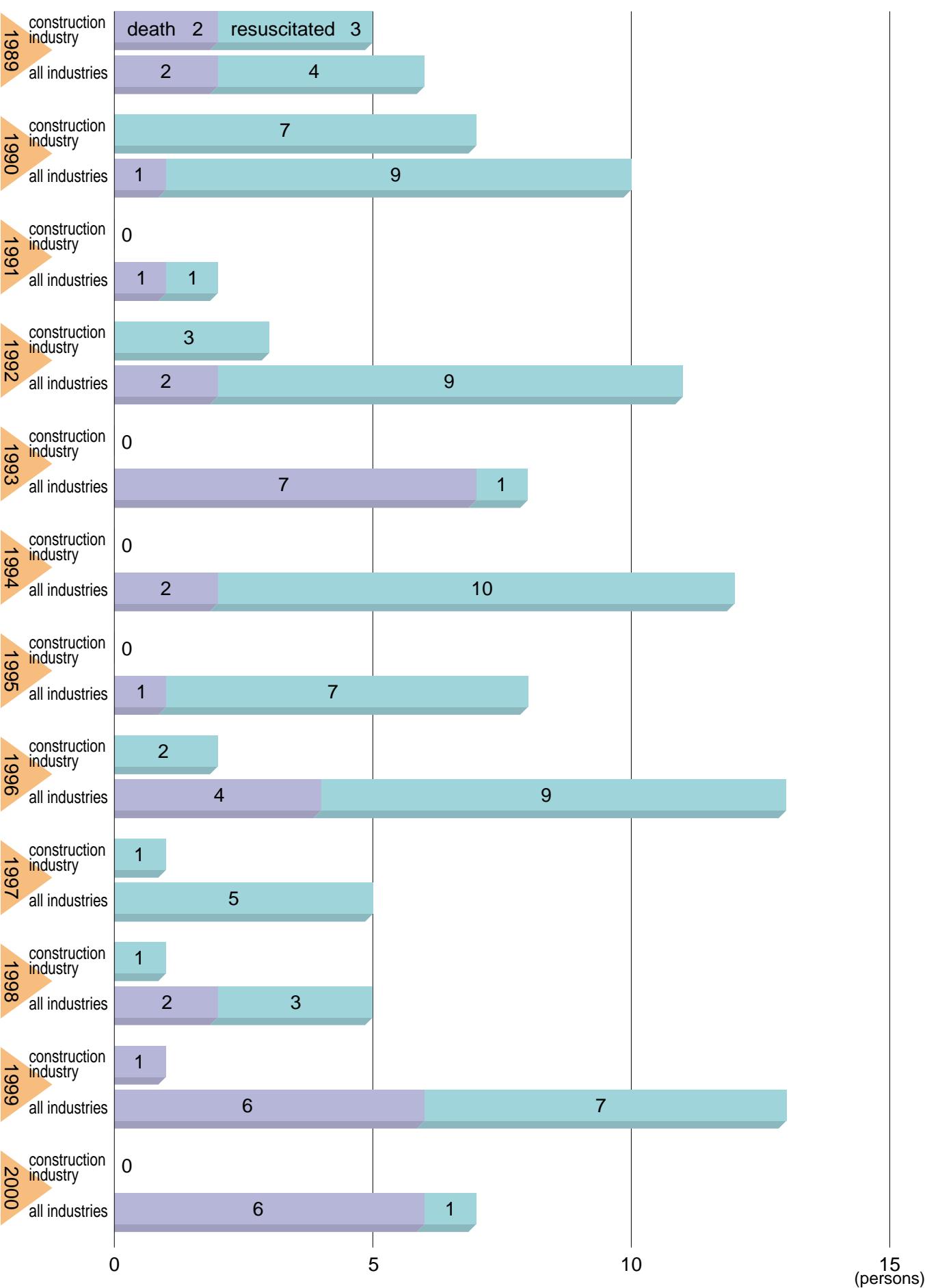
## 4.6 Trends of Occurrence of Vibration Disorder Cases



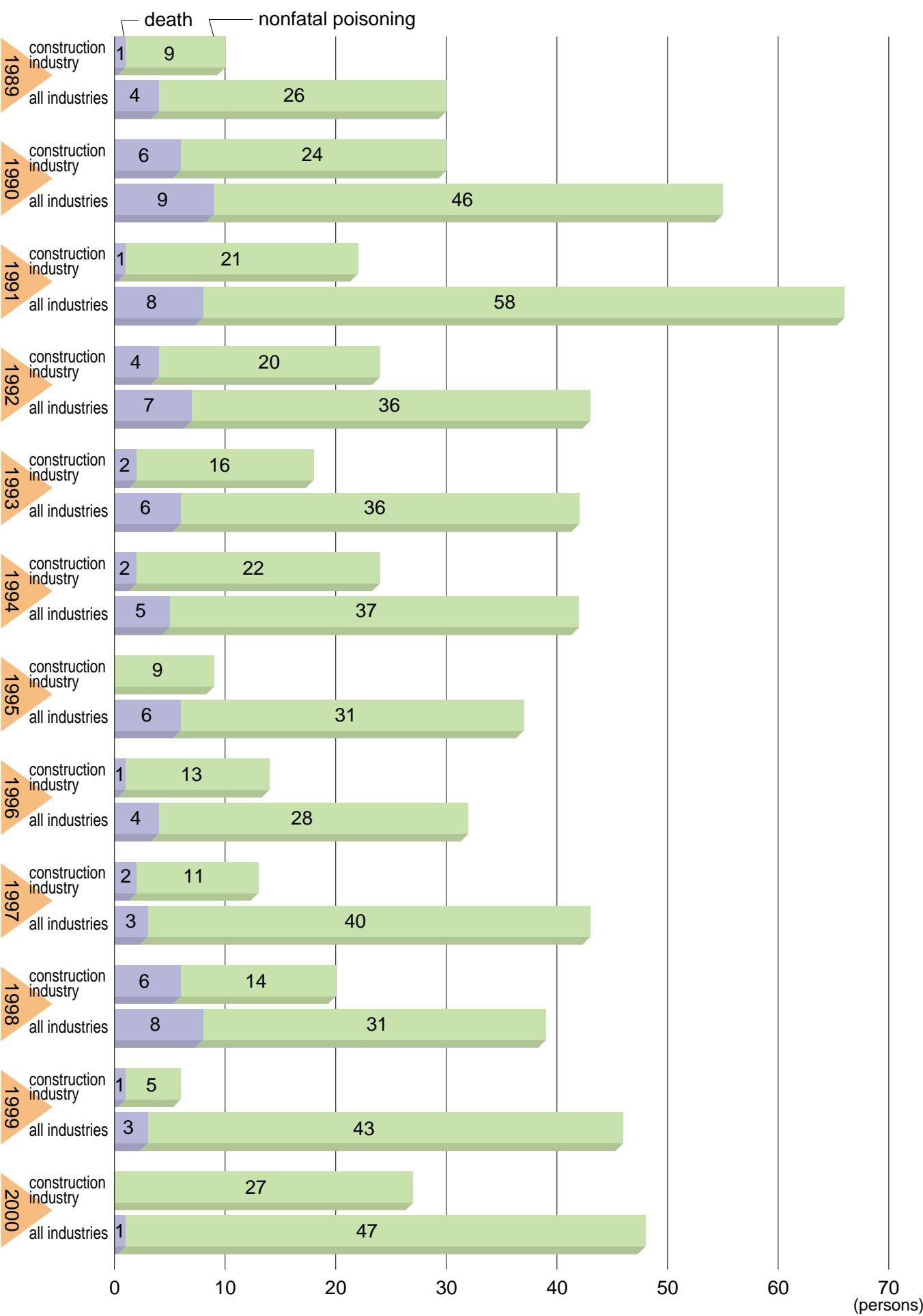
## 4.7 Trends of Occurrence of Carbon Monoxide Poisoning



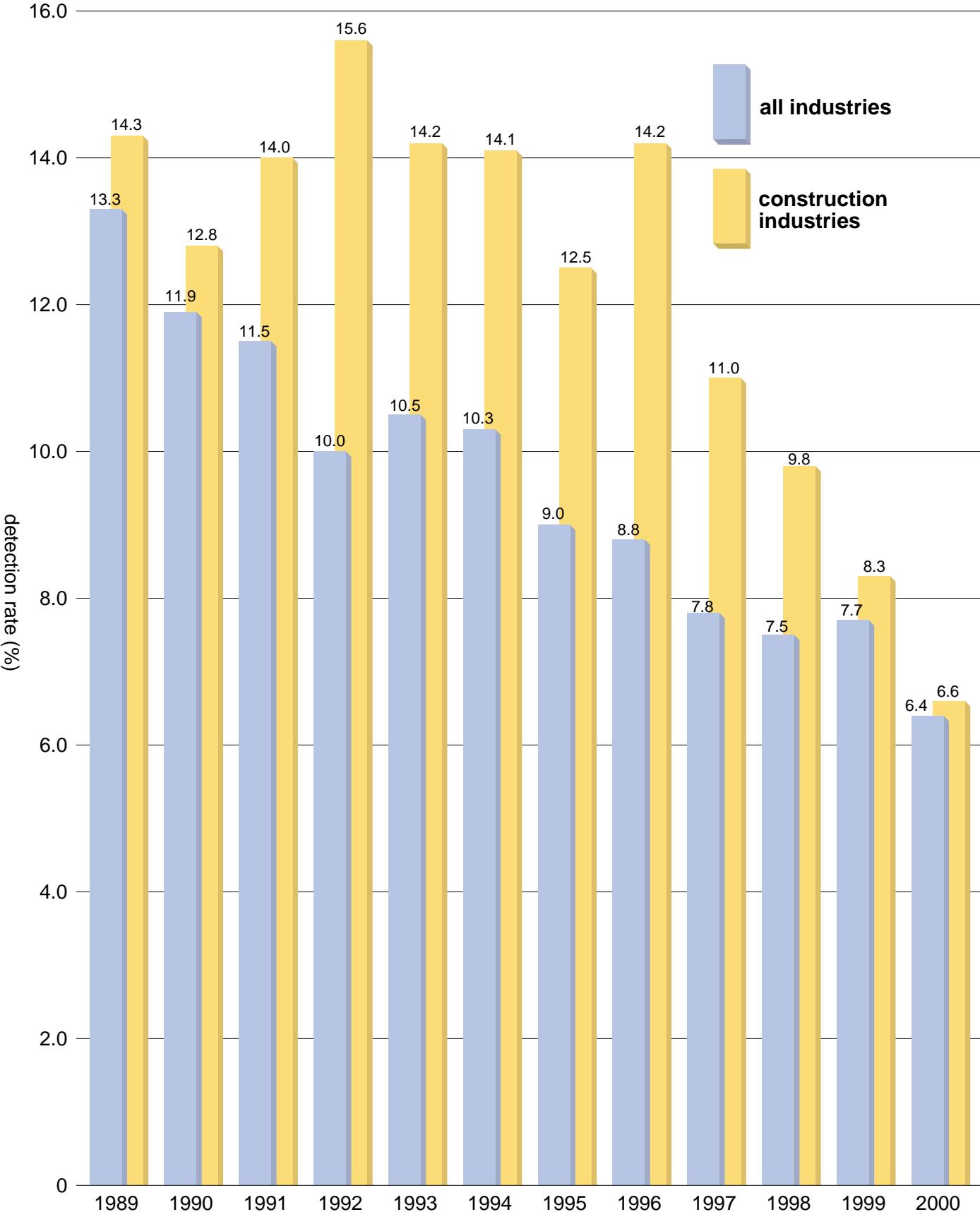
## 4.8 Trends of Occurrence of Hydrogen Sulfide Poisoning



## 4.9 Trends of Occurrence of Organic Solvent Poisoning



#### 4.10 Trends of Abnormality Detection Rate of Pneumoconiosis Screenings



Pneumoconiosis Cases with Breakdown by Management Class

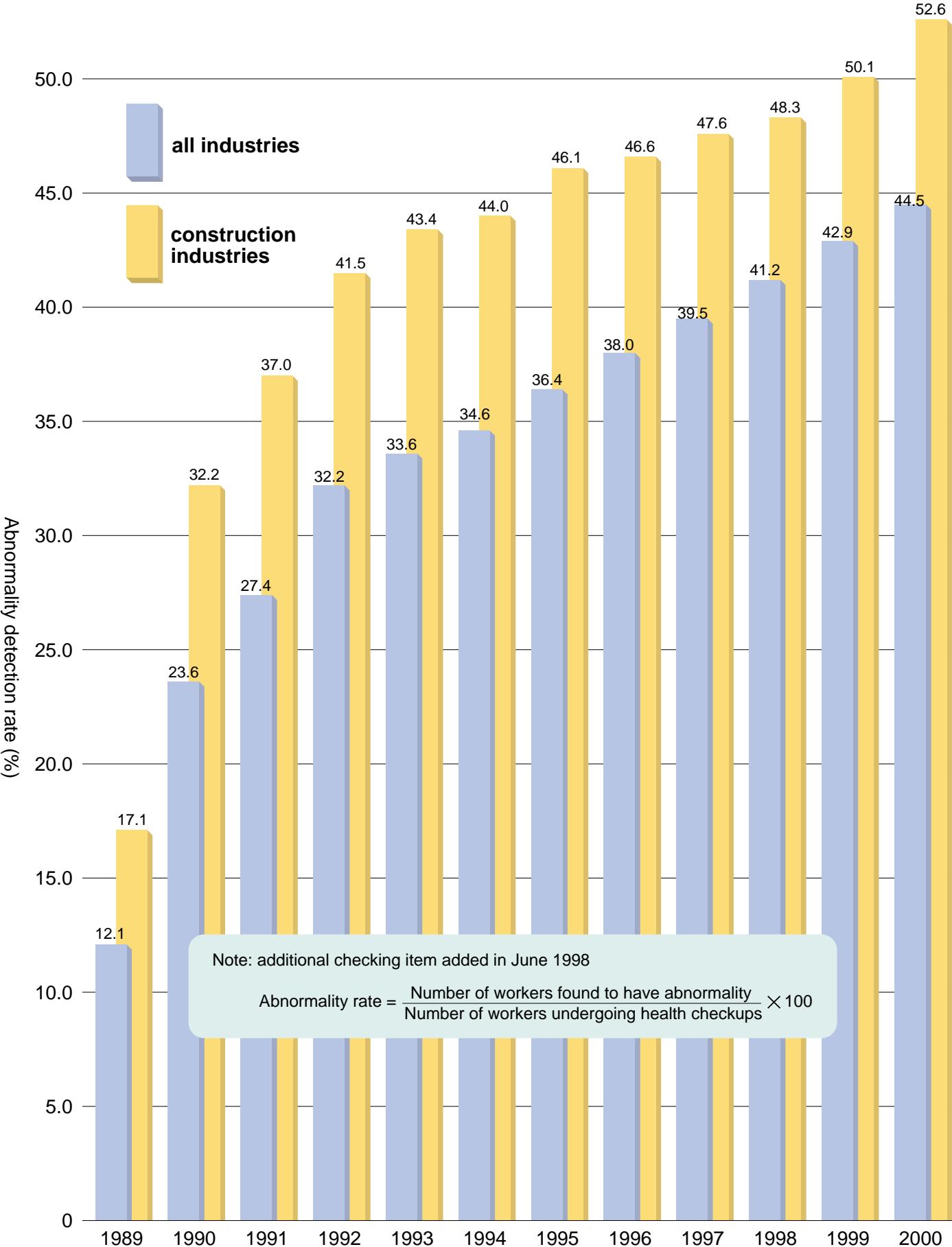
Classification	year	Number of workers undergoing pneumoconiosis screening (A)	Management 1	Management 2	Management 3	Management 4	Number of persons found to have abnormality (B) M2 + M3 + M4	Number of persons found to have complications	Abnormality detection rate (%) (B)/(A) × 100
All industries	1989	219,624	190,330	25,364	3,864	66	29,294	63	13.3
	1990	216,420	190,605	22,184	3,557	74	25,815	93	11.9
	1991	229,139	202,815	22,799	3,475	50	26,324	47	11.5
	1992	220,988	198,905	18,782	3,249	52	22,083	63	10.0
	1993	219,607	196,545	19,888	3,138	36	23,062	27	10.5
	1994	215,174	193,055	19,107	2,969	43	22,119	54	10.3
	1995	212,586	193,411	16,304	2,761	110	19,175	71	9.0
	1996	209,520	191,000	15,958	2,520	34	18,512	32	8.8
	1997	214,819	198,076	14,626	2,087	29	16,742	40	7.8
	1998	206,138	190,460	13,514	1,993	22	15,529	20	7.5
	1999	191,432	176,600	13,143	1,677	12	14,832	58	7.7
	2000	187,323	175,270	10,610	1,421	22	12,053	24	6.4
Construction industry	1989	12,350	10,589	1,277	468	10	1,761	4	14.3
	1990	11,558	10,082	1,052	401	23	1,476	30	12.8
	1991	9,438	8,115	933	384	6	1,323	8	14.0
	1992	7,966	6,716	836	402	12	1,250	13	15.6
	1993	9,596	8,237	898	455	6	1,359	5	14.2
	1994	9,112	7,826	816	456	14	1,286	19	14.1
	1995	9,478	8,293	762	409	14	1,185	18	12.5
	1996	8,380	7,190	765	413	12	1,190	11	14.2
	1997	9,509	8,465	657	380	7	1,044	21	11.0
	1998	10,115	9,127	629	354	5	988	3	9.8
	1999	10,493	9,627	569	294	3	866	7	8.3
	2000	10,813	10,096	474	240	3	717	7	6.6

Source: Survey of Pneumoconiosis Screening Results

Notes:

- The statistics do not cover non-routine screenings conducted upon application
- Pneumoconiosis management class 1 refer to condition with no abnormality
- Pneumoconiosis management class 2 refers to those whose x-ray photographs show type 1 image and no particular recognizable disorder to lungs' function.
- Pneumoconiosis management class 3 refers to those whose x-ray photographs show type 2 image with no particular recognizable disorder to lungs' functions.
- Pneumoconiosis management class 4 refers to those whose x-ray photographs show type 4 images (the large shade occupies more than three quarters of embryonate). Or those whose x-ray photographs show type 1, 2, 3 or 4 (only those whose large shade occupy less than one third of embryonate) and clearly recognizable lung disorder.

## 4.11 Trends of Abnormality Detection Rate at Regular Health Examinations



The Result of Regular Health Checkups

classification	year	Number of workers undergoing health checkups	Number of workers found to have abnormality	Ratio of workers with abnormality
All industries	1989	9,232,997	1,117,564	12.1
	1990	10,009,681	2,367,251	23.6
	1991	10,911,023	2,990,890	27.4
	1992	10,825,454	3,483,525	32.2
	1993	11,187,605	3,762,451	33.6
	1994	11,317,518	3,920,311	34.6
	1995	11,331,900	4,124,407	36.4
	1996	11,284,849	4,288,473	38.0
	1997	11,549,676	4,567,081	39.5
	1998	11,158,358	4,595,662	41.2
Construction industry	1999	11,426,033	4,901,172	42.9
	2000	11,451,050	5,097,590	44.5
	1989	322,623	55,264	17.1
	1990	346,860	111,571	32.2
	1991	377,232	139,661	37.0
	1992	379,225	157,291	41.5
	1993	390,676	169,690	43.4
	1994	408,184	179,769	44.0
	1995	417,725	192,476	46.1
	1996	431,102	200,977	46.6
	1997	447,407	213,109	47.6
	1998	472,089	227,483	48.3
	1999	466,132	233,482	50.1
	2000	443,505	233,227	52.6

# 5.1 Industrial accident by countries

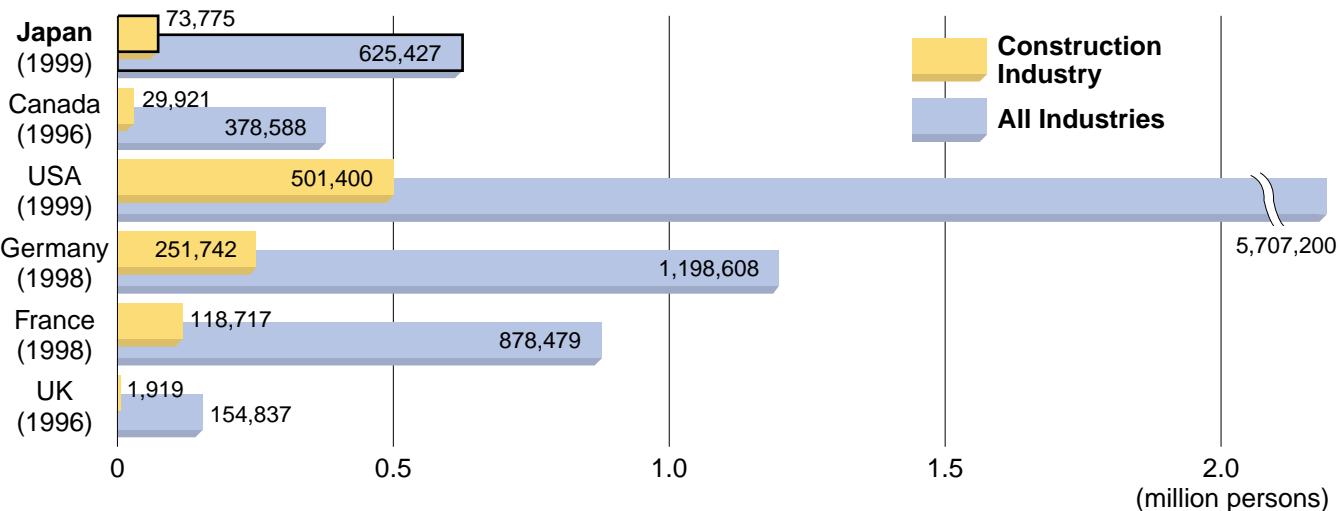
Note) Source

- 1) ILO Yearbook of Labour Statistics
- 2) Data from Japan International Center for Occupational Safety and Health
- 3) Data from Conference of Safety and Health Organization in the Asia Pacific Region Construction Industry
- These statistics are converted into graph on the basis of data 1). As for shortage of the data 1), data of 2) and 3) are extracted.
- 4) Data of UK is from HSE.

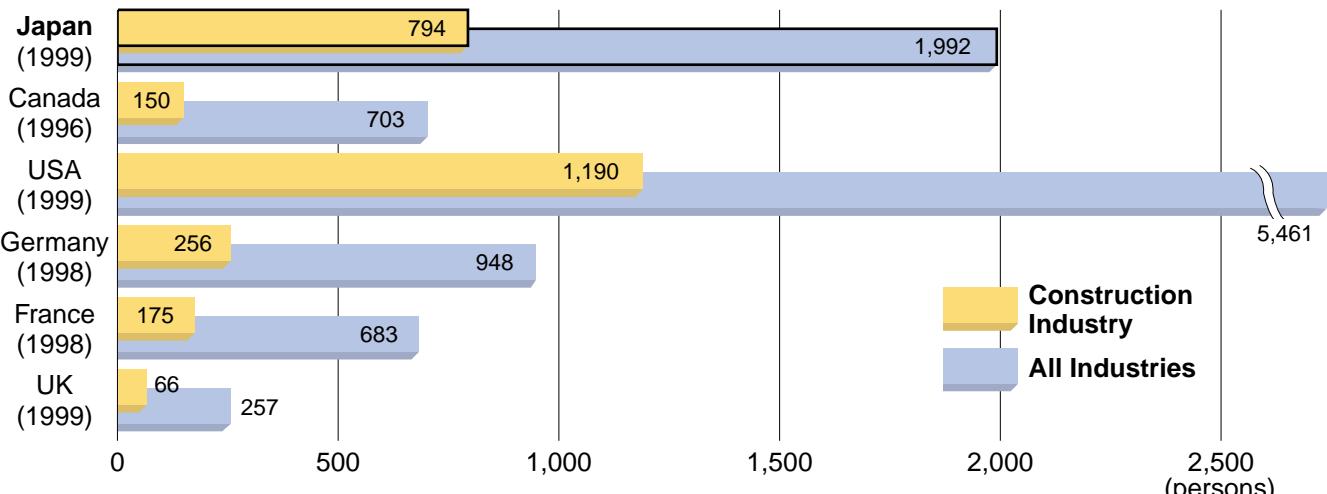
The number of the deaths and injuries of each country refer to following data:

- 1) Japan : Number of workers newly receiving labour accident insurance benefit
- 2) Canada : The number of the deaths and injuries requiring absence (include commuting accidents)
- 3) USA : The number of the deaths and injuries requiring medical treatment
- 4) Germany : The number of the deaths and injuries who became an object of labour accident insurance
- 5) France : The number of the deaths and injuries who became an object of labour accident insurance
- 6) UK : The number of the deaths and injuries requiring absence (exclude commuting accidents)

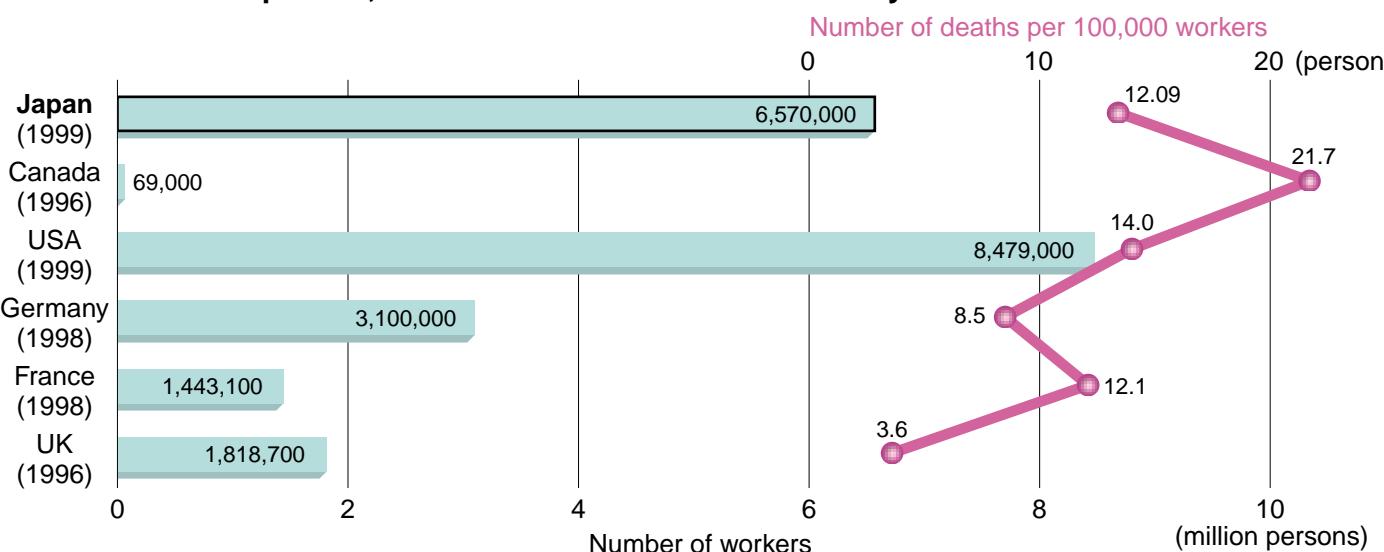
## Number of deaths and injuries



## Number of deaths



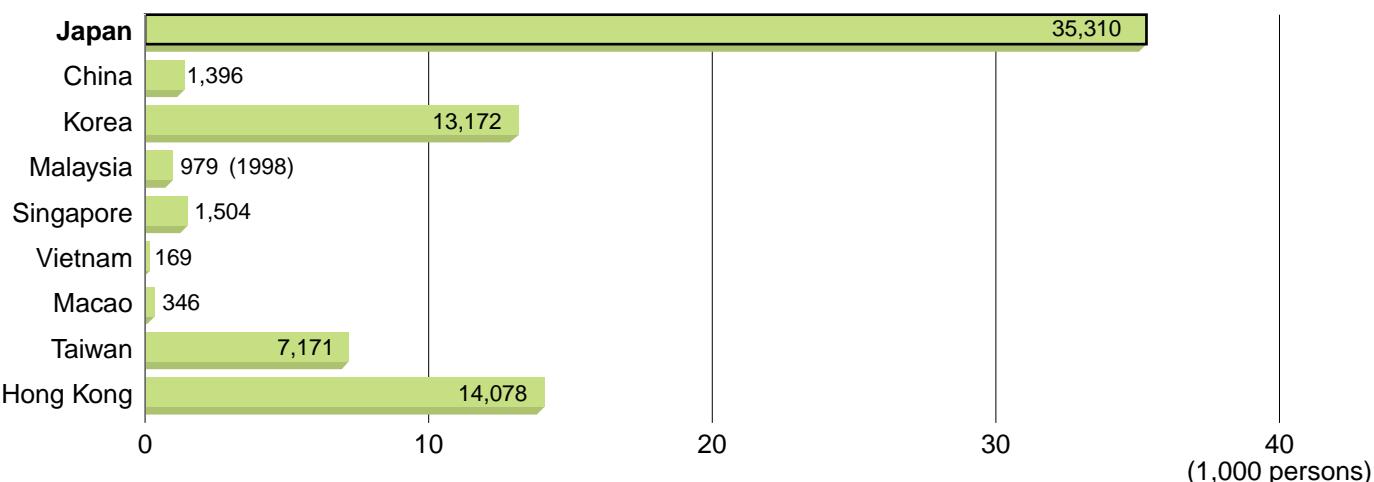
## Number of workers in construction industry and number of deaths per 100,000 workers in construction industry



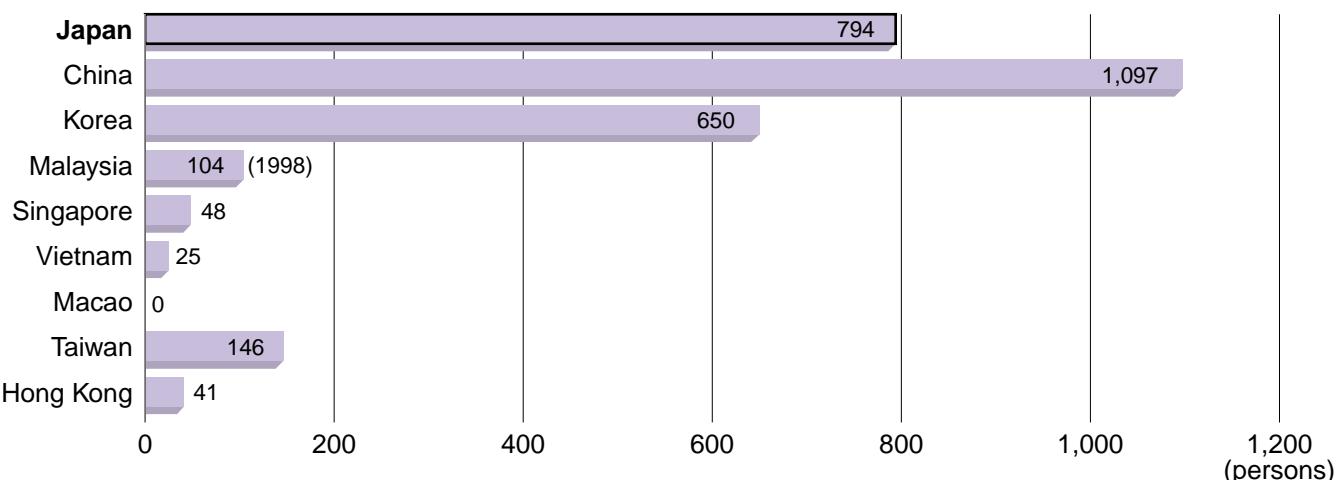
## 5.2 Industrial accidents of Asia Pacific area

Note) the Japanese number of deaths is from "Report on employees casualties" and it differs from "Number of workers newly receiving labour accident insurance benefit".

### Number of deaths and injuries requiring absence for 3 (4) or more days



### Number of deaths (1999)



### Number of workers (approximate number) and number of deaths per 100,000 workers (1999)

