

## Industrial accidents in water supply/sewage construction work in Japan in 1999-2020

water supply/sewage construction work industry Code No.030110

### Type of accidents in water supply/sewage construction work in 1999-2020

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
fall from height	216	170	145	128	137	120	101	110	91	78	65	65	62	61	52	57	44	55	44	48	50	35
falling to same level	106	97	81	64	54	60	56	55	44	62	40	45	33	42	28	29	32	26	31	35	34	15
crash	65	51	35	30	21	30	26	35	22	16	17	21	17	15	16	15	23	14	8	14	11	15
struck by flying or falling object	215	201	169	141	142	125	105	94	73	89	66	68	68	68	51	41	42	34	38	28	22	23
collapse	144	119	114	96	97	78	73	68	57	70	46	39	37	46	46	42	50	30	25	36	24	26
crashed by	143	125	100	103	89	92	66	68	71	60	52	40	46	48	31	36	30	32	33	23	30	36
caught in/between	348	282	254	256	218	204	171	155	136	107	94	108	78	73	95	80	72	69	67	49	58	59
cut	51	45	49	55	33	38	31	24	30	32	27	21	19	28	29	18	17	19	20	17	12	11
injury to the sole of the foot	3	4	2	2	0	2	2	1	0	1	1	2	0	0	0	2	0	1	0	0	0	1



unclassifiable	4	2	0	-	0	-	0	2	0	1	0	0	0	0	0	0	1	0	1	0	1	0
total	1,432	1,216	1,051	975	880	818	691	669	583	586	453	457	397	428	403	364	343	316	298	299	273	268

Causal agents (middle) of industrial accidents in water supply/sewage construction work in 1999-2020

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
engine	3	0	0	-	1	-	0	0	1	5	0	0	0	1	1	1	0	0	0	0	0	0
power transmission mechanism	1	4	1	2	1	-	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0
woodworking machine	25	16	17	21	8	14	8	6	7	15	7	4	4	8	6	2	3	5	4	1	1	0
construction machine	312	242	199	229	186	191	134	140	126	112	100	102	86	93	91	85	64	63	51	42	47	47
metal manufacturing machine	25	24	18	24	25	14	19	10	15	10	10	15	11	13	17	13	9	13	6	7	5	5
general machine	21	24	27	19	16	14	17	11	11	10	11	11	10	9	7	5	7	8	7	5	7	10
mobile silviculture																	0	0	0	0	0	0

machine																						
crane	46	45	33	28	36	34	34	26	22	17	23	21	22	15	15	15	26	12	19	13	15	13
conveying machine	116	103	97	110	93	81	68	67	68	56	37	42	48	41	37	38	34	35	30	34	38	34
vehicle	41	24	25	20	30	21	14	17	18	17	6	12	2	5	14	8	7	8	6	13	11	9
pressure vessel	1	0	0	1	0	-	0	2	0	0	1	0	0	2	0	1	0	2	0	0	0	1
chemical facilities	0	0	1	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
welding equipment	0	2	1	-	2	-	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
kiln, caldron	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
electric equipment	3	0	2	1	1	1	3	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0
human power machine, tools	32	29	32	32	27	31	18	21	14	19	14	6	17	11	9	12	8	4	13	6	5	9
tools	80	69	63	42	49	43	46	41	40	40	18	20	24	30	25	19	18	15	22	11	24	12
other equipments, facilities	14	19	12	8	9	7	9	2	12	5	5	5	9	7	5	5	9	6	8	4	2	5
temporary buildings,	254	208	174	147	147	141	116	126	91	103	82	76	52	70	60	53	59	52	56	69	44	44





foundation work machine			2		12		1	4	1	0	3	2	2	2	2	1	1	0	0	1	0	1
hardening machine			18		19		12	13	7	11	11	7	4	8	11	8	5	5	1	0	5	4
demolition machine			6		5		2	2	6	5	5	8	2	6	4	4	5	1	1	1	0	2
vehicle for high lift work			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other construction machines			22		20		24	20	15	21	12	19	15	13	14	12	9	7	5	9	4	3
lathe			1		0		1	0	0	2	0	2	1	1	0	0	0	0	0	0	0	0
drill press, milling machine			0		1		1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
grinding machine, buffing machine			8		11		13	7	10	6	6	7	6	10	15	7	4	7	5	4	3	4
power press			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
forging pressure hammer			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
shearing machine			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other metal manufacturing machines			9		13		4	3	5	2	4	6	4	2	2	6	5	5	1	3	2	1

centrifugal machine			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mixer, grinder			2		1		0	0	1	0	0	0	0	0	0	1	3	0	0	1	0	0
roll machine (except printingroll machine)			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
injection molding machine			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
food manufacturing machine			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
printing machine			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
industrial robot			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other general power machines			25		15		17	11	10	10	11	11	10	9	7	4	4	8	7	4	7	10
felling machine																	0	0	0	0	0	0
mobile logging machine																	0	0	0	0	0	0
skyline yarding machine																	0	0	0	0	0	0
other mobile silviculture machine																	0	0	0	0	0	0









scaffolding			9		5		7	4	4	1	1	3	2	1	3	4	2	0	4	2	2	4
timbering			38		18		10	7	15	14	17	5	6	4	7	4	9	2	2	3	0	2
stairs, landing stage			7		10		6	6	2	5	5	1	2	8	5	1	2	5	2	6	4	4
opening			9		14		9	10	10	9	8	5	2	6	7	5	4	8	4	8	6	3
roof, beam, haze, crossbeam, principal rafter			2		5		2	2	1	1	1	1	4	0	1	0	0	2	3	2	1	1
working platform, boot board			18		17		7	15	9	17	8	7	5	7	6	8	6	4	4	4	2	6
passage			20		17		21	25	13	17	14	19	8	14	10	7	12	11	18	17	11	8
building, establishment			48		33		34	38	26	29	19	21	13	22	16	17	12	12	10	17	14	10
other temporary buildings, establishments			23		28		20	19	11	10	9	14	10	8	5	7	12	8	9	10	4	6
explosive substance			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inflammable substance			3		1		1	0	1	1	0	0	0	1	0	0	2	0	0	0	0	1
inflammable gas			1		0		0	4	1	3	0	0	1	2	0	0	0	0	2	0	1	0
harmful substance			5		0		0	2	1	0	3	1	1	0	1	2	1	0	2	5	0	1

radiation			0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other hazards, harmful substances			3		0		3	0	0	1	1	0	1	2	2	0	0	1	0	0	2	1
metal material			100		73		66	52	34	37	29	32	27	37	23	31	29	21	17	20	17	14
lumber, bamboo			6		7		6	1	4	4	5	3	3	3	3	1	2	6	4	1	1	4
stone, sand, substance			22		21		18	10	11	12	10	12	9	6	9	7	4	6	5	6	4	4
other materials			39		14		27	19	20	14	15	16	7	11	10	10	8	9	8	5	7	13
load			23		15		10	14	10	11	14	10	8	6	6	8	7	2	5	7	5	1
machine/equipment as load			9		7		4	6	2	7	5	1	2	4	4	3	2	3	0	1	0	0
natural ground, rock			103		83		55	61	55	56	36	38	33	37	34	31	31	30	19	25	24	22
standing tree			0		0		3	2	2	2	4	2	1	1	0	1	3	0	0	2	1	1
water			4		1		0	1	0	5	0	0	8	0	0	1	0	0	0	0	0	1
abnormal environment			2		0		0	0	0	2	1	1	0	0	0	0	0	5	0	0	0	0
high/cold temperature			3		0		3	3	3	2	1	8	2	4	4	4	1	3	2	5	3	7

environment																						
other environments			10		3		2	7	6	5	2	6	5	2	3	3	1	0	2	4	1	1
other causal agent			1		11		0	1	4	1	2	2	1	1	6	2	0	2	3	3	0	2
no causal agent			15		13		6	14	4	10	10	7	2	6	11	3	6	4	5	10	6	5
unclassifiable			0		0		0	2	0	3	1	1	0	0	0	0	2	0	1	0	1	0
total			1,051		880		691	669	583	586	453	457	397	428	403	364	343	316	298	299	273	268

Workers age of industrial accidents in water supply/sewage construction work in 1999-2020

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
19 years old or less	40	39	20	19	13	15	12	7	5	2	7	5	5	9	13	7	7	6	5	4	5	1
20-29	279	237	217	184	149	133	97	98	70	78	52	51	45	45	45	37	39	31	34	34	22	37
30-39	194	192	162	146	151	159	126	112	120	108	88	95	99	69	58	68	46	50	47	38	33	44
40-49	227	185	178	154	168	140	107	122	100	94	73	81	68	84	88	77	79	69	69	74	60	58
50-59	401	310	279	279	223	220	226	171	180	160	122	110	91	95	91	65	71	77	55	66	57	50
60 years old or more	291	253	195	193	176	151	123	159	108	144	111	115	89	126	108	110	101	83	88	83	96	78
total	1,432	1,216	1,051	975	880	818	691	669	583	586	453	457	397	428	403	364	343	316	298	299	273	268



April	116	53	48	58	44	44	40	43	31	27	21	28	25	26	29	25	14	21	16	12	18	11
May	77	60	50	53	50	37	40	40	28	32	27	27	25	19	18	21	19	17	27	22	15	19
June	80	89	78	65	52	51	39	29	27	27	30	36	24	25	24	23	22	18	25	20	12	21
July	108	87	81	57	68	57	43	44	50	33	37	18	28	29	25	39	35	24	20	28	31	16
August	121	88	84	69	69	55	44	53	40	51	40	27	40	45	27	23	28	24	23	22	21	36
September	105	89	86	93	59	72	58	44	30	50	40	31	30	39	36	20	29	25	19	24	20	23
October	120	119	100	95	84	78	66	62	50	61	40	49	36	37	36	41	29	29	28	30	30	28
November	134	107	97	114	85	73	81	66	65	37	46	58	36	42	46	42	35	36	28	29	28	20
December	130	118	93	87	72	78	46	83	61	48	29	32	29	31	42	25	27	36	27	22	28	21
total	1,432	1,216	1,051	975	880	818	691	669	583	586	453	457	397	428	403	364	343	316	298	299	273	268

Prefecture of industrial accidents in water supply/sewage construction work in 1999-2020

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hokkaido	71	70	59		40		22	29	22	15	18	15	16	10	17	20	10	19	17	15	13	13
Aomori	16	16	20		8		8	10	2	13	8	9	7	8	7	3	3	5	4	5	4	1
Iwate	17	26	16		16		11	9	11	7	4	7	9	4	7	3	5	7	3	5	13	6
Miyagi	31	17	16		18		5	11	10	10	8	8	10	17	13	11	9	12	3	5	8	8
Akita	15	17	18		18		16	6	6	10	6	4	5	7	5	5	10	2	6	2	7	5



Yamagata	17	13	15		8		18	21	16	6	3	8	6	5	8	4	8	7	11	6	5	7
Fukushima	29	24	19		14		12	9	11	11	7	7	8	10	7	11	6	6	6	5	7	6
Ibaraki	39	24	34		25		15	17	20	19	18	11	12	20	18	10	13	7	13	6	8	6
Tochigi	25	18	11		12		8	5	8	8	5	9	3	2	2	4	2	2	5	1	7	1
Gunma	36	38	18		27		19	9	11	13	15	10	6	10	6	3	5	3	3	9	3	9
Saitama	49	48	29		37		28	22	20	25	17	20	10	17	20	12	23	15	14	16	12	16
Chiba	40	36	35		26		22	30	22	27	21	27	18	14	26	18	13	4	9	14	12	12
Tokyo	86	68	53		58		54	63	36	60	33	41	34	54	52	40	40	30	40	29	20	25
Kanagawa	80	62	49		46		46	54	50	35	20	29	37	24	19	18	17	25	17	23	13	24
Niigata	36	42	34		22		24	30	15	17	16	9	10	10	5	4	4	7	4	8	5	3
Toyama	20	23	26		15		15	7	14	6	6	6	10	11	6	6	11	4	3	5	7	5
Ishikawa	7	10	7		10		5	3	6	3	9	7	3	5	2	2	4	2	2	2	1	2
Fukui	16	15	14		10		10	8	5	3	3	5	5	9	4	3	4	5	4	7	2	3
Yamanashi	11	10	16		5		3	10	5	7	2	4	3	2	1	2	5	2	2	2	2	0
Nagano	38	31	30		20		8	11	5	18	8	7	8	1	5	9	7	5	3	9	6	1
Gifu	39	26	25		25		8	13	9	13	8	11	3	5	6	7	5	4	6	4	3	4
Shizuoka	34	37	27		18		20	15	22	10	15	11	9	7	13	13	9	6	9	7	3	5
Aichi	77	68	47		39		38	38	44	33	32	18	23	23	18	26	13	12	17	17	14	22
Mie	32	39	29		16		13	19	10	16	14	9	8	12	13	6	9	9	7	5	3	5



Kumamoto	19	16	15		18		7	6	5	4	4	6	6	10	7	4	0	4	4	4	2	3
Oita	22	13	8		12		8	11	11	6	1	7	3	11	3	4	5	5	3	2	4	6
Miyazaki	13	12	7		4		4	6	0	2	0	2	2	5	1	3	0	3	2	1	4	3
Kagoshima	14	12	10		10		5	5	10	7	4	7	2	5	9	5	3	5	5	7	2	1
Okinawa	5	1	1		5		3	5	0	5	2	3	2	3	3	2	3	1	2	3	3	4
total	1,432	1,216	1,051		880		691	669	583	586	453	457	397	428	403	364	343	316	298	299	273	268

Industrial accidents mean fatal and non-fatal injuries with work absence of 4 days and more. Data of 2011 year include Industrial accidents caused by Great East Japan Earthquake in 2011.

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm> (MHLW, Japan)

Return to [https://www.jisha.or.jp/english/statistics/2020e\\_industry.html](https://www.jisha.or.jp/english/statistics/2020e_industry.html)

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 Fatal accidents in water supply/sewage construction work in Japan in 1999-2020

water supply/sewage construction work industry Code No.030110

Type of fatal accidents in water supply/sewage construction work in 1999-2020

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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machine, tools																						
tools	1	2	2	0	2	0	1	3	2	1	1	0	0	0	0	0	0	1	0	0	0	0
other equipments, facilities	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
temporary buildings, establishments	8	5	4	6	4	9	1	1	1	4	3	0	2	0	0	2	1	0	1	1	3	1
hazards, harmful substances	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1
materials	3	1	1	2	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
load	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
natural environment	19	7	12	5	11	6	1	4	9	13	4	6	9	5	5	3	3	1	2	2	5	4
other causal agent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no causal agent	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
unclassifiable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	62	32	40	31	34	25	12	18	24	31	15	15	15	7	9	11	10	6	8	4	12	12

Causal agents (small) of fatal accidents in water supply/sewage construction work in 1999-2020







shearing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other metal manufacturing machines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
centrifugal machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mixer, grinder	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
roll machine (except printingroll machine)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
injection molding machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
food manufacturing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
printing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
industrial robot	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other general power machines	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
felling machine																	0	0	0	0	0	0	0
mobile logging machine																	0	0	0	0	0	0	0















50-59	15	7	13	11	10	4	2	5	8	6	5	6	5	2	2	1	1	2	0	2	0	2
60 years old or more	18	11	10	10	9	10	6	7	6	9	4	2	5	2	4	4	4	3	4	1	7	4
total	62	32	40	31	34	25	12	18	24	31	15	15	15	7	9	11	10	6	8	4	12	12

### Workers' number of workplace of fatal accidents in water supply/sewage construction work in 1999-2020

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
9 workers or less	27	14	23	16	21	15	6	11	10	20	9	9	7	3	6	7	6	0	6	3	4	9
10-29	29	12	15	8	7	5	4	5	13	10	2	6	5	4	1	2	4	6	1	1	7	3
30-49	5	3	2	4	3	4	1	1	1	1	3	0	3	0	2	1	0	0	0	0	1	0
50-99	1	2	0	0	3	0	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0
100-299	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300 workers or more	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	62	32	40	31	34	25	12	18	24	31	15	15	15	7	9	11	10	6	8	4	12	12

### Month of fatal accidents in water supply/sewage construction work in 1999-2020

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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Fukuoka	3	0	2	0	3	0	0	1	3	5	2	1	1	1	1	0	0	0	0	0	0	1
Saga	0	0	1	0	0	1	0	0	0	0	0	2	0	0	1	0	1	0	0	0	0	0
Nagasaki	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0
Kumamoto	2	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
Oita	1	1	1	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0
Miyazaki	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Kagoshima	3	0	0	0	1	0	1	0	1	1	1	0	0	0	1	1	0	0	0	0	0	0
Okinawa	1	0	0	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
total	62	32	40	31	34	25	12	18	24	31	15	15	15	7	9	11	10	6	8	4	12	12

Data sources: <https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm> (MHLW, Japan)

Return to [https://www.jisha.or.jp/english/statistics/2020e\\_industry.html](https://www.jisha.or.jp/english/statistics/2020e_industry.html)