

Fatal and non-fatal accidents in steel/iron/rolling products in Japan in 1999-2022

steel/iron/rolling products industry Code No.011001

Type of accidents in steel/iron/rolling products in 1999-2022

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	2021	2022	total
fall from height	36	32	34	38	33	29	32	29	47	52	24	19	29	30	23	24	27	25	24	29	18	20	26	28	708
falling to same level	19	17	31	25	26	22	18	23	33	25	12	32	15	28	21	18	21	22	24	25	24	29	25	30	565
crash	19	14	18	9	6	9	16	13	16	14	10	8	11	10	8	12	9	4	6	17	8	8	13	8	266
struck by flying or falling object	49	46	43	46	38	42	34	38	38	32	25	32	32	25	21	25	20	18	21	33	22	10	26	24	740
collapse	16	14	11	15	12	12	11	12	11	12	6	6	15	7	3	4	8	4	8	13	6	2	4	10	222
crashed by	24	26	21	26	22	24	19	29	28	20	10	19	13	15	14	15	11	9	12	19	8	11	14	13	422
caught in/between	103	105	113	91	96	101	91	87	86	92	70	66	60	68	67	67	51	58	70	68	53	41	61	74	1,839
cut	14	9	10	11	6	9	9	6	13	7	8	5	9	13	5	8	4	1	6	4	5	4	7	6	179
injury to the sole of the foot	1	1		1	1	2	1	1											2						10
drown					1							1	5												7
contact to high/low-	11	18	28	16	18	25	19	22	15	16	17	19	18	14	21	21	9	19	14	28	13	20	14	19	434

temperature																									
contact to harmful substance	6		7	5	2	2	10	2	1	7	1	2	1	2	2	2	3	1	5	1	6	1	5	4	78
electric shock	2	1	2		1	3	1	1	2	1		2	3	1					1		1	1		23	
explosion	6	1	1	1	2	1		5	5	3	3	3	1	1		8				2	1	2		46	
burst	1	2								1	1	1		1						1		1		9	
fire				1	1	1	1	1	2	1	1			1	2		3	2		3			3	23	
traffic accident (public road)		2	3	1	1	6	1	1	5	3	2	2	3	4	2	1	2	4		1	1	2		3	50
traffic accident (others)			1		1	1	1	2				1						1							8
reaction to motion/improper motion	13	15	13	14	15	11	17	14	13	13	7	8	9	4	11	13	5	8	15	14	10	14	11	17	284
others		2	1	4	1	2	2	1		2	2		3	2	2	1		1		3	2	4	38	3	76
unclassifiable									1												1	1		1	4
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Causal agents (large) of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

Causal (L) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
machine	76	78	79	64	60	68	60	69	60	63	46	45	46	52	43	49	34	38	49	45	39	28	42	49	1,282

crane, conveying machine	56	51	60	55	63	58	58	60	63	59	45	44	45	47	35	38	32	39	30	51	22	22	36	38	1,107
other equipment	35	52	56	62	46	55	58	46	56	61	38	44	43	45	52	32	35	33	36	47	35	45	28	34	1,074
temporary buildings, establishments	40	30	42	35	25	32	38	36	39	43	23	33	27	37	28	30	32	33	31	42	28	28	40	41	813
substance, material	89	65	79	62	65	65	50	54	78	53	36	45	44	30	28	48	30	22	39	54	29	24	46	49	1,184
load	13	15	8	18	10	11	8	11	11	12	4	4	5	6	6	9	6	2	8	4	12	7	8	7	205
environment	4	2	8	3	1	4	3	3	2	4	3	6	12	2	4	4	1	5	5	10	4	6	3	8	107
others	7	12	5	5	13	9	8	8	7	6	4	5	5	7	6	9	3	5	9	9	9	11	45	14	221
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Causal agents (middle) of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

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	2021	2022	total
engine		1	1					1								1					1				5
power transmission mechanism	4	1	1	6	3		6	3	2	5	1	1	3	6	2	2	3	1	4	4	3		5	1	67
woodworking machine	1		2	1		1	1			1	1				1	1	1			1		1	1		14

demolition machine							1													1					2
vehicle for high lift work										1						1									2
other construction machines				1																					1
lathe			2	1		1	1	2	2	2		2		2	2	1	1					1			20
drill press, milling machine			2	2		2	3		1	1	1	2		1	1	2				1		1	2	22	
grinding machine, buffing machine			3	2		2	4	7	1	2	2	3	7	3	1	1	1	2			1	2	4	48	
power press			8	3		6			2	2				1	1	1	2	7	5	1	6	3	4	52	
forging pressure hammer			3	3		6	4	7	8	2	4	5	4	3	3	2	3	2	2	2		3	3	69	
shearing machine			1	2		2	1	2	2	1		1		3	3	1	1	2			1			23	
other metal manufacturing machines			24	14		15	24	14	19	12	14	13	19	17	15	6	15	12	13	11	7	16	16	296	
centrifugal machine			4							1				1			1							7	
mixer, grinder			1	3		2	1	2		1			1		1				1	3		1		17	
roll machine (except printingroll machine)			10	9		3	6	12	7	9	4	6	5	2	4	5	6	5	4	7	4	4	4	116	

pressure vessel														1	1										2
other pressure vessels							1		1																2
chemical facilities				2									2									1			5
gas welding equipment			4				4	2	3	1	2	1	3	1	1	1		1		1		1	1	2	29
arc welding equipment							2	3	1	1	1	2		1	2	2						1		1	17
other welding equipment			1				1			2				1						1	1			1	8
kiln, caldron			6		5		2	11	8	8	8	9	5	5	10	2	4	4	7	2	7	9	3	6	121
industrial dryer											1								1					2	
other kiln, caldron								1	1	1			1		1			2	1					1	9
transmission					1				1				1											1	4
electric power facilities			1		1			1		1					1	1				3			1	1	12
other electrical equipment					1		1					1	3		1	1		1							9
human power cranes			1				1						1	1								1	1		6
human power hauling equipment					2		1	2	5	3	2	1	3	1	5	3	1	1	1	3	1	3	4	1	43

human power machine			1				1	1	1			1				2				1			1	9	
hand tool			7		3		4	4	11	7	3	5	3	7	3	1	3	1	4	3	3	4	3	3	82
ladder			8		4		3	7	12	12	3	5	4	4	5	5	4	3	8	2	5	4	1	5	104
slinging tool			13		11		4	3	4	5	7	3	4	1	6	5	3	5	4	7	5	2	5	5	102
other tools			5		5		8	5	4	7	6	4	4	6	6	4	7	7	1	7	5	6	3	1	101
other equipment, facilities			9		11		25	6	4	12	5	12	9	14	11	7	10	8	9	17	7	12	6	6	200
scaffolding							1	2	2	1	1		1	1	1		1		3						14
timbering																									
stairs, landing stage			3		4		6	5	7	7	3	3	5	9	5	9	9	5	7	13	2	3	7	13	125
opening			3		2		2	1	4	3	2	2	5	4	1	1	3	2	1	3	1	1	2	1	44
roof, beam, haze, crossbeam, principal rafter					1		1	1			1		1				1					1			7
working platform, boot board			9		5		3	6	7	8	3	4	5	5	4	8	1	7	2	4	8	5	4	3	101
passage			16		6		17	12	10	12	8	16	5	9	9	4	12	11	12	10	10	8	17	11	215
building, establishment			9		5		3	4	6	9	2	4	3	3	5	5	3		3	8	3	5	7	5	92
other temporary buildings,			2		2		5	5	3	3	3	4	2	6	3	3	2	8	3	4	4	5	3	8	78

environment							1	1						1									2	6	
high/cold temperature environment			2		1		2	2		4	2	3	5	1	2	3	1	4	4	6	4	4	2	5	57
other environments			5						2			2	1		1	1			1	1		2	1	1	18
other causal agent			3		7			1	3	2	1	1	2	3		1	2		2	5	2	3	37	2	77
no causal agent			2		6		8	7	4	4	3	4	3	4	6	7	1	4	7	4	5	8	8	11	106
unclassifiable																1		1			2			1	5
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Workers age of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less	13	8	9	9	11	11	7	8	13	9	12	6	10	5	3	6	7	4	8	8	6	4	6	2	185
20-29	57	54	62	54	47	64	48	51	55	66	45	47	55	57	32	46	37	41	39	51	36	32	45	41	1,162
30-39	50	51	57	50	46	51	56	59	66	58	29	47	51	46	50	53	36	38	55	55	31	34	58	54	1,181
40-49	77	58	57	64	62	61	56	51	51	50	37	32	37	44	36	31	44	44	47	62	50	45	62	50	1,208
50-59	102	108	116	99	92	83	86	89	93	76	56	64	48	41	50	50	30	27	36	56	29	29	51	52	1,563
60 years old or more	21	26	36	28	25	32	30	29	38	42	20	30	26	33	31	33	19	23	22	30	26	27	26	41	694
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Workers' number of workplace of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	46	48	65	45	49	33	33	40	43	34	23	15	17	19	22	21	18	14	13	24	18	14	16	18	688
10-29	65	76	71	47	46	62	53	47	48	56	33	34	37	37	35	26	29	25	28	37	29	29	58	41	1,049
30-49	45	27	44	40	22	40	28	22	39	28	16	19	18	29	13	22	12	24	14	25	16	19	25	23	610
50-99	25	31	38	48	39	32	19	28	33	37	23	32	35	23	26	29	16	21	31	36	18	19	24	27	690
100-299	71	63	62	70	67	67	76	76	76	76	56	57	57	66	52	49	52	50	51	73	44	43	78	65	1,497
300 workers or more	68	60	57	54	60	68	74	74	77	70	48	69	63	52	54	72	46	43	70	67	53	47	47	66	1,459
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Month of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	24	25	31	20	30	23	25	25	32	27	19	22	15	20	20	12	19	24	16	21	20	16	17	24	527
February	28	30	20	22	13	27	24	29	22	22	18	22	21	20	16	19	10	11	16	18	9	19	18	23	477
March	28	28	39	24	26	25	17	25	33	23	15	22	25	21	13	17	14	16	13	21	12	14	12	22	505
April	25	18	35	29	23	32	19	25	16	40	14	14	21	20	20	18	14	20	14	23	21	17	28	20	526
May	22	27	22	26	15	26	27	27	23	26	22	10	17	21	18	21	13	13	24	19	23	10	21	17	490
June	25	25	42	23	21	28	27	19	31	30	13	21	20	19	20	14	20	10	15	22	14	10	23	21	513

July	32	24	20	22	19	24	24	20	23	23	23	26	20	16	16	19	14	15	17	25	21	21	20	20	504
August	31	26	30	32	25	25	26	23	33	20	11	15	17	14	22	17	7	11	17	24	19	19	45	23	532
September	23	29	23	27	39	20	34	27	24	24	19	20	25	14	10	26	23	15	21	32	11	15	21	17	539
October	23	37	27	25	28	28	21	24	32	14	18	23	18	16	13	23	16	15	15	27	5	9	14	23	494
November	29	23	27	23	22	16	23	20	24	28	9	17	14	23	19	16	11	13	16	15	10	15	20	15	448
December	30	13	21	31	22	28	16	23	23	24	18	14	14	22	15	17	12	14	23	15	13	6	9	15	438
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Prefecture of fatal and non-fatal accidents in steel/iron/rolling products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido	7	2	17		9		5	9	8	10	9	8	9	9	5	6	8	6	10	15	7	4	7	6	176
Aomori	1		4				1	2	9	3	1			2	1	2	2	1	3	1	1	1	2		37
Iwate	2	1	3		1			2	1	5			2			1	1			1			1	1	22
Miyagi	2	4	6		5		4	3	4	7	4	3	7	3	4	4	4	1	7	5	6	3	1	2	89
Akita					1			1	1			1	1						1	1					7
Yamagata		4						2		1			1									1			9
Fukushima	2	3	3		2		4	1	1						1	1	1	1				1	2	2	25
Ibaraki	11	10	13		10		7	8	8	14	6	15	14	8	8	9	14	10	15	12	7	3	11	10	223
Tochigi	7	4	11		6		4	3	7	3		1	5	6	4	1		2		3	3	2	3	1	76
Gunma	4	2	4		4		8	7	5	12	3	4	1	6	3	5	2	3	3	6	6	1	6	2	97

Saitama	15	17	22		10		12	13	12	8	10	5	1	13	4	4	3	4	4	6	9	5	6	4	187
Chiba	17	24	29		11		21	23	24	15	14	12	13	12	14	11	13	17	11	17	9	13	20	17	357
Tokyo	14	15	13		9		12	3	6	10	9	5	7	5	4	4	5	2	3	5	5	2	4	5	147
Kanagawa	20	17	12		16		9	16	7	10	2	8	12	9	3	10	5	3	13	9	6	7	11	12	217
Niigata	7	7	6		10		13	10	9	19	13	13	19	12	10	10	11	9	14	11	7	4	6	15	235
Toyama	11	5	4		1		2	7	7	8	4	4		2	3	3	3	3	4	3	2	6	5	5	92
Ishikawa	3	3	3		2		2		3	2	1	2	8	4	3	2	3	1	1	5		2	4	1	55
Fukui	2	2	3		2		1	2	2	2	4	1	1	3	1	1			1	3	3	1	3	2	40
Yamanashi	5							1								1									7
Nagano	2						1	2	2	1						1				1			2		12
Gifu	5	3	3		2		3	1	3	4	3	3		1	3	2	1	4	1	1	2	1		2	48
Shizuoka	2	3	1		1		2		1	3	3	2		1					2	2	1	7	6	4	41
Aichi	36	21	30		22		27	25	37	31	19	24	19	23	21	27	14	19	21	32	24	19	17	21	529
Mie	4	2	1		4		3	3	1		2	1		2	1		2		1	1	1	1	1	2	33
Shiga	2	1	1		5		1	4	9	2	4	1	5		1	2	1	4		2	2		1	1	49
Kyoto	1	3			2		1	2	6	3	1	2	3	1	1		2	6	2	2	3	2	2		45
Osaka	37	44	61		46		30	31	44	38	18	31	20	36	37	36	23	32	21	34	22	34	57	38	770
Hyogo	25	31	20		30		35	30	33	25	16	24	20	15	25	30	13	14	27	28	8	15	27	19	510
Nara		4	1				1	6		3		2	1		2	1	1		1		3	2	3	1	32
Wakayama	12	9	8		12		6	8	7	7	9	6	9	4	4	3	3	1	3	5	5	2	5	5	133
Tottori	1		2				1		1			1					1	1							8

Shimane	1	6	3				3	6	1	1	2	1	2	2	1	1		1	2	2	2			6	43
Okayama	7	9	8		5		17	10	12	9	12	11	9	6	3	7	4	4	7	11	7	5	4	10	177
Hiroshima	9	13	14		13		17	13	10	15	5	10	10	15	8	11	6	9	12	15	7	7	13	15	247
Yamaguchi	12	6	7		9		9	13	7	8	2	6	2	8	5	4	8	2	4	2	6	4	2	6	132
Tokushima	1	3	2					1	3	2	1	1	2	1		2				2			3	1	25
Kagawa	1	1	1						1	2	2	3	1	2	1	1					1	1	1	1	20
Ehime		4					1										1	1		1					8
Kochi			3		3								2					2		2	1		1	2	16
Fukuoka	25	10	13		19		14	12	13	7	15	11	9	10	12	4	9	8	7	9	7	9	4	10	237
Saga		2			1			1		1	1				1	1				2				1	11
Nagasaki	2	1					1	2		1	1		1		1			1	1		1			1	14
Kumamoto	2	1	3		1				3		1	1	1				1	1		1		1		1	18
Oita		4	2		8		5	1	7	9	2	3	9	4	7	5	7	4	4	3	3	5	2	5	99
Miyazaki	1	2			1				1								1		1		1			1	9
Kagoshima																									
Okinawa	2	2						3					1	1		6				1			5	2	23
total	320	305	337	304	283	302	283	287	316	301	199	226	227	226	202	219	173	177	207	262	178	171	248	240	5,993

Fatal and non-fatal accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more.

Data of 2022 year do not include Covid-19 cases. Data of 2020 & 2021 year include Covid-19 cases. Fatal and non-fatal data are same situation.

Data of 2011 year include fatal and non-fatal accidents caused by Great East Japan Earthquake in 2011.

drown					1							1	5											7	
contact to high/low-temperature		1		2	1		2		3					1	1		1	1		1				14	
contact to harmful substance	2		1	1	1	1	5	1						1					1	1	3		2	2	22
electric shock			1			1			1				2											5	
explosion	1						2	1	1						1	1					1			8	
burst														1										1	
fire															1					1				2	
traffic accident (public road)						1																		1	
traffic accident (others)																									
reaction to motion/improper motion																									
others													1									1		2	
unclassifiable																									
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

Causal agents (large) of fatal accidents in steel/iron/rolling products in 1999-2022

demolition machine																								
vehicle for high lift work																								
other construction machines										1													1	
lathe									1														1	
drill press, milling machine																								
grinding machine, buffing machine																								
power press																								
forging pressure hammer			1		1		2																4	
shearing machine				1									1										2	
other metal manufacturing machines			1					1		2		1	1				1		1				8	
centrifugal machine															1								1	
mixer, grinder																								
roll machine (except printingroll machine)				1			1			1		1			2								6	

environment			1				1	1						1									2	7	
high/cold temperature environment		1					1							1										3	
other environments																									
other causal agent																									
no causal agent																					1			1	
unclassifiable																									
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

Workers age of fatal accidents in steel/iron/rolling products in 1999-2022

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
19 years old or less			1		1							1													3
20-29	3		3	2	1		2	2	4	2		3	4	2		3	2	2		6	1		2		44
30-39	2			1	3	1		1	2	2	1	1		1	4			3	1	2	1	3	1	1	31
40-49	6			3	2	4	3	1	3	1	3	1		6	1	1	3	3	4	2	6	1	3	3	60
50-59	6	4	4	7	3	4	6	7	8	2		1	4		2	3	2	1		2	1	1	1	3	72
60 years old or more			2	3	1	1	1	4		3			3	1	1	2		3							25
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

Workers' number of workplace of fatal accidents in steel/iron/rolling products in 1999-2022

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
9 workers or less	1					1	1	2		1				1				1		2					10
10-29	1		1	1	2		1		1	1			1	1	2	1		1	1						15
30-49	1			2			1	2	2			1		1			2				2	1		3	18
50-99	1		2	1	1			2	1	2			5			2	1		1	3	2		1		25
100-299	7	1	3	1	2	3	2	3	2	2	3	2	1	3	4	3	2	6	2	3	1	4	5	2	67
300 workers or more	6	3	4	11	6	6	7	6	11	4	1	4	4	4	2	3	2	4	1	4	4		1	2	100
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

Month of fatal accidents in steel/iron/rolling products in 1999-2022

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
January	2		1		3	1	2		1	2		2		1	1		1	2			1	2	1		23
February	1		1		1			1	1		1				1	1	1	3	1	1			1	2	17
March	2	3	1				1	1	2	1		1	7	1		1	1			2	1				25
April	2		1	2	1		4		2	1	1	1		1		2			1	3			1		23
May			2	2	1		2	4		1	1		1	1		1			1		4		1	1	23
June	2			2	1	1		1	1	2		2	1	2	1			1				1	1	2	21

July	2	1	1	1	2		1	2		1					2	1	1	1		1	1				18
August	1			1		3			2				1		1		1		1				1		12
September	2		1	2		2		1	2								1	1		1	2	1			16
October	1			2		2		2	1	1			1	1				1		2		1		1	16
November	1			1	2	1	1	1	4		1	1		1	1	1	1	2	1	2				1	23
December	1		2	3			1	2	1	1				2	1	2		1					1		18
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

Prefecture of fatal accidents in steel/iron/rolling products in 1999-2022

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total
Hokkaido			1			1		2									1		1	1	1				8
Aomori									3																3
Iwate													1												1
Miyagi													5						1	1	1				8
Akita																									
Yamagata																									
Fukushima																									
Ibaraki	2	1				1	1			1					1			1			1		1		10
Tochigi																							1		1
Gunma			1	2										1									1		5

Shimane																							1	1	
Okayama		1	1				3		3			1		1	1			1			1			1	14
Hiroshima	1			1		1				1			1	1				1		1	2				10
Yamaguchi	1		1	2					1														2		7
Tokushima																1									1
Kagawa																									
Ehime																									
Kochi																									
Fukuoka	1				4	1		2			1		1		2		1				1	2			16
Saga																				1					1
Nagasaki																									
Kumamoto																									
Oita					1		1			1			2		1	1		2	1					1	11
Miyazaki																			1						1
Kagoshima																									
Okinawa																									
total	17	4	10	16	11	10	12	15	17	10	4	7	11	10	8	9	7	12	5	12	9	5	7	7	235

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

Return to https://www.jisha.or.jp/english/statistics/2022e_industry.html