

Fatal and non-fatal accidents in nonferrous metal making in Japan in 1999-2021

nonferrous metal making industry Code No.0111

Type of accidents in nonferrous metal making in 1999-2021

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	total	Type of accidents
fall from height	36	43	43	38	29	39	40	41	35	41	40	28	24	29	29	31	26	31	37	33	29	25	23	770	fall from height
falling to same level	42	35	46	49	37	40	36	41	42	44	40	31	28	45	31	26	36	28	27	36	42	33	43	858	falling to same level
crash	22	19	23	19	15	19	14	26	19	21	12	16	9	14	13	6	10	11	12	23	10	18	13	364	crash
struck by flying or falling object	63	73	59	47	42	65	48	52	59	46	34	33	36	38	34	34	34	38	32	29	21	24	34	975	struck by flying or falling object
collapse	12	14	13	6	14	3	11	12	21	14	10	10	5	14	10	6	15	8	5	6	10	5	6	230	collapse
crashed by	30	26	25	32	16	20	17	29	28	23	19	15	26	20	13	22	9	26	9	17	14	20	14	470	crashed by
caught in/between	192	181	188	211	173	184	151	146	165	180	117	117	134	109	124	107	104	121	104	120	113	85	97	3,223	caught in/between
cut	43	44	42	42	34	36	44	38	25	25	24	20	28	28	23	27	24	25	22	20	16	19	17	666	cut
injury to the sole of the foot	4	1	3	1	2	1	1	2	2	1		2		2		1	2	1		1		1	1	29	injury to the sole of the foot
drown			1									1				1								3	drown
contact to high/low-temperature	59	68	59	48	51	65	51	59	60	47	37	54	38	38	42	38	40	30	41	52	30	30	21	1,058	contact to high/low-temperature

engine													1					1					2	engine	
power transmission mechanism			8		4		4	4	5	8	4	3	3	4	3	4	1	4	4	7	7	3	1	81	power transmission mechanism
circular sawing machine			4		2		2	3		1		2	2	1	1	2	1	1			1	3		26	circular sawing machine
band sawing machine			2		1		2		1	2			1	1	1	1	2	1	1	2		1	1	20	band sawing machine
wood planer machine					1				1													1		3	wood planer machine
hollow chisel mortiser, wood borer					1																			2	hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine														1										1	chamfering machine, router, woodworking milling machine
chain saw																		1				1		2	chain saw
other woodworking machines					2				1		2			1		1			1					8	other woodworking machines
leveling, transporting or loading machine			2		2								1		1		1				2	1		10	leveling, transporting or loading machine
excavating machine							1		1		2	2	1	2	1		1		1		1			13	excavating machine
foundation work machine																									foundation work machine

machine			3		5		4	3	4	5	2	1	2	2	4	2	1		2	5	2			47	machine
food manufacturing machine			1		1					1														3	food manufacturing machine
printing machine							1													1				2	printing machine
industrial robot			2		3		1	2	2			1	1	1	1		1	2	3				2	22	industrial robot
other general power machines			46		49		38	31	37	45	24	28	27	27	29	21	29	29	21	29	31	25	23	589	other general power machines
felling machine																									felling machine
mobile logging machine																									mobile logging machine
skyline yarding machine																									skyline yarding machine
other mobile silviculture machine																									other mobile silviculture machine
crane			18		12		15	13	15	16	13	15	15	15	11	11	12	14	16	14	12	7	8	252	crane
mobile crane						1	1						1											3	mobile crane
derrick crane																									derrick crane
elevator, lift			2			1	2	1					1				2		1	1		1		12	elevator, lift
cargo lifting appliance																			1					1	cargo lifting appliance
gondola																									gondola
lumberyard equipment, logging cableway																									lumberyard equipment, logging cableway

facilities			13		8		15	13	18	18	18	8	13	10	11	14	8	8	12	15	13	12	6	233	facilities
scaffolding							1	1						1			1	1		1				6	scaffolding
timbering																							1	1	timbering
stairs, landing stage			8		6		8	6	5	9	12	2	3	6	6	6	8	6	11	11	7	4	8	132	stairs, landing stage
opening			2				1	4	2		2		1	1	1			1	2			1	2	20	opening
roof, beam, haze, crossbeam, principal rafter			1		1			1	1	2			2			1	1		1			1	1	13	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			10		8		5	14	7	14	3	9	7	6	6	3	6	5	6	7	7	2	7	132	working platform, boot board
passage			21		15		12	19	10	20	22	16	15	18	17	14	12	14	14	13	12	15	15	294	passage
building, establishment			9		6		8	4	6	9	2	6	10	4	5	5	4	2	5	10	3	4	5	107	building, establishment
other temporary buildings, establishments			1		6		3	5		5	4	5	2	4	3	3	3	1	1	7	3	4	4	64	other temporary buildings, establishments
explosive substance			5							1	5		1	1	1	1				2				17	explosive substance
inflammable substance					1			5	1	3		3	3		1	5			2	3			1	28	inflammable substance
inflammable gas			1		1			2						1			1			2	4		2	14	inflammable gas
harmful substance			6		5		13	3	3	4	4	3	9	4	4	4	3	6		4		1	4	80	harmful substance
radiation																									radiation
other hazards, harmful substances			4		6		4	7	6	4	3	3	7	7	2	1	4	5	4	5	4	4	2	82	other hazards, harmful substances

metal material			80		56		74	81	77	55	42	61	54	39	49	34	45	49	33	49	28	29	41	976	metal material
lumber, bamboo			1		1			1	1	3	1			3	2						1	2	1	17	lumber, bamboo
stone, sand, substance			1		3				2				1		1	1	2	2	1	1		1	1	17	stone, sand, substance
other materials			5		9		6	9	7	10	2	7	3	5	2	8	3	3	6		3	2	3	93	other materials
load			23		15		22	19	26	27	20	11	11	10	12	9	15	14	7	13	18	19	22	313	load
machine/equipment as load			11				1	3	1	1	3	3	1	3	1		1	3	4	1	3	4	2	46	machine/equipment as load
natural ground, rock														1					1				3	5	natural ground, rock
standing tree																						1		1	standing tree
water			1									2	2						1					6	water
abnormal environment								1	1		3									1				6	abnormal environment
high/cold temperature environment			3		2		2	5	4	3	5	4		6	7	4	5	2	4	9	5	1	2	73	high/cold temperature environment
other environments			2		2		2	2	1	3	1	1	1	2	2	2	2	2	2	1	2	1	1	32	other environments
other causal agent			6		2		5	6	3	3		4	2	2	1	3	2	3	4	4	3	2	11	66	other causal agent
no causal agent			17		6		15	15	14	12	11	9	8	11	10	6	5	9	8	13	20	22	13	224	no causal agent
unclassifiable					1		2	2		1					1	1	1	1						10	unclassifiable
total			563		464		485	509	520	503	372	369	369	375	360	326	333	362	326	382	333	310	337	7,598	total

Workers age of fatal and non-fatal accidents in nonferrous metal making in 1999-2021

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Age
19 years old or less	19	20	14	23	17	20	17	14	13	16	9	9	13	8	10	2	10	11	8	11	8	6	4	282	19 years old or less
20-29	108	128	112	88	96	106	103	96	100	108	78	65	68	82	62	67	66	77	70	71	61	42	48	1,902	20-29
30-39	97	105	106	114	108	114	111	114	113	109	88	92	97	84	85	62	84	82	62	66	66	70	74	2,103	30-39
40-49	119	114	119	96	78	96	78	103	122	94	66	88	95	78	85	86	71	88	85	108	84	73	91	2,117	40-49
50-59	161	162	163	165	119	114	110	121	110	112	83	70	54	70	70	55	57	52	61	83	65	77	76	2,210	50-59
60 years old or more	56	45	49	60	46	60	66	61	62	64	48	45	42	53	48	54	45	52	40	43	49	42	44	1,174	60 years old or more
total	560	574	563	546	464	510	485	509	520	503	372	369	369	375	360	326	333	362	326	382	333	310	337	9,788	total

Workers' number of workplace of fatal and non-fatal accidents in nonferrous metal making in 1999-2021

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	total	Workers scale
9 workers or less	104	112	111	82	88	93	99	76	74	70	53	52	58	59	48	38	50	50	35	47	33	45	34	1,511	9 workers or less
10-29	142	136	156	157	120	151	140	138	128	122	94	100	84	109	108	95	105	81	97	97	74	71	78	2,583	10-29
30-49	85	83	82	101	70	75	69	91	89	72	53	54	62	59	45	50	52	53	48	58	48	44	52	1,495	30-49
50-99	80	93	84	74	87	70	78	87	93	91	57	69	45	54	60	57	51	79	55	67	57	53	66	1,607	50-99
100-299	95	100	83	78	62	68	61	76	75	94	67	60	72	63	67	52	51	76	57	75	77	63	63	1,635	100-299
300 workers or more	54	50	47	54	37	53	38	41	61	54	48	34	48	31	32	34	24	23	34	38	44	34	44	957	300 workers or more
total	560	574	563	546	464	510	485	509	520	503	372	369	369	375	360	326	333	362	326	382	333	310	337	9,788	total

Month of fatal and non-fatal accidents in nonferrous metal making in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month
January	48	44	44	46	32	52	40	43	46	45	26	21	22	42	28	22	37	33	26	27	27	29	23	803	January
February	44	56	44	40	32	41	43	31	53	42	33	29	37	31	29	28	29	43	32	32	35	25	22	831	February
March	48	55	45	53	40	50	39	40	59	49	35	33	40	30	24	29	19	34	37	36	28	36	33	892	March
April	45	52	55	61	42	27	41	52	45	38	30	30	28	34	33	19	31	18	26	31	23	20	39	820	April
May	50	58	48	47	50	35	33	36	41	40	30	37	27	29	35	26	33	32	31	31	26	22	30	827	May
June	53	40	53	34	47	46	41	40	45	46	40	40	39	24	27	24	32	32	30	28	28	24	31	844	June
July	56	37	54	62	46	41	41	46	47	43	30	29	35	34	27	30	38	39	27	48	26	23	29	888	July
August	44	44	42	38	46	44	53	35	42	34	29	32	22	36	35	34	18	36	29	26	33	26	26	804	August
September	50	43	48	47	36	52	42	49	42	49	24	21	24	20	36	30	21	31	29	32	31	24	28	809	September
October	29	45	39	44	36	44	45	54	40	44	30	43	32	34	44	31	21	22	19	27	31	32	25	811	October
November	52	54	54	45	28	41	42	46	33	32	31	19	39	39	26	30	31	22	20	32	31	28	20	795	November
December	41	46	37	29	29	37	25	37	27	41	34	35	24	22	16	23	23	20	20	32	14	21	31	664	December
total	560	574	563	546	464	510	485	509	520	503	372	369	369	375	360	326	333	362	326	382	333	310	337	9,788	total

Prefecture of fatal and non-fatal accidents in nonferrous metal making in 1999-2021

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Prefecture
Hokkaido	1	4	1		4		4		2	1	3	3	1	4	1	1	1	1	8	3	2	2	2	49	Hokkaido
Aomori	3	2	3				3	2	3	6	4	6	5		2	2	1	1	3	5	1	1	1	54	Aomori
Iwate	2	3	1		3		2	2	5	6		4	3	3	2	3		2	6	2	2	2	3	56	Iwate

Miyagi	8	2	7		9		5	10	2	5	5	7	4	2	8	3	8	7		4	4	5	2	107	Miyagi
Akita	6	10	6		2		3	6	8	3	5	3	3	5	2	4	3	4	3		6	8	1	91	Akita
Yamagata	10	1	7		3		8	5	6	7	2	4	2	2	4	5	3	4	8	6	3	4	4	98	Yamagata
Fukushima	14	15	15		17		8	11	15	9	4	6	5	9	17	10	8	3	6	7	6	5	13	203	Fukushima
Ibaraki	27	30	36		24		20	22	37	21	13	19	13	11	13	12	18	16	18	17	13	15	13	408	Ibaraki
Tochigi	23	18	18		13		15	21	18	8	10	10	8	12	7	13	9	8	5	12	18	12	10	268	Tochigi
Gunma	14	8	12		5		16	16	14	12	5	9	9	9	7	6	9	9	5	11	8	5	5	194	Gunma
Saitama	47	55	47		43		40	36	43	42	31	31	26	31	28	26	21	22	23	31	20	27	24	694	Saitama
Chiba	17	14	13		9		8	12	10	15	11	12	21	11	12	12	13	13	13	12	12	11	15	266	Chiba
Tokyo	28	12	17		14		10	14	10	14	10	3	6	7	10	10	6	8	3	11	7	8	2	210	Tokyo
Kanagawa	19	17	20		11		19	14	16	15	7	7	20	9	11	10	12	18	8	11	15	4	11	274	Kanagawa
Niigata	6	14	11		7		10	13	8	13	7	8	10	15	9	5	13	7	7	5	11	10	7	196	Niigata
Toyama	34	27	13		20		24	30	22	22	22	15	17	26	12	18	15	19	20	16	17	14	18	421	Toyama
Ishikawa		5	2		3		1		1	1	1	2	3	2	2		3	1	1		1	1	2	32	Ishikawa
Fukui	5	9	4		8		2	4	6	4	7	7	2	6	4	3	2	6	4	5	2	4	3	97	Fukui
Yamanashi	2	6	6		6		5	4	1	3	3	3	3	2	2	2	1	4	3	1	2	1	2	62	Yamanashi
Nagano	14	24	12		22		14	14	14	12	7	11	13	10	11	8	9	11	8	11	6	7	14	252	Nagano
Gifu	15	18	16		17		22	18	14	22	10	10	7	12	12	9	12	10	9	14	9	18	18	292	Gifu
Shizuoka	34	36	34		15		27	27	40	29	23	18	11	16	18	25	14	17	13	25	15	18	24	479	Shizuoka
Aichi	39	52	59		34		39	43	43	32	38	30	35	28	29	22	30	36	27	26	27	28	27	724	Aichi
Mie	17	19	16		21		13	8	15	16	6	15	6	13	13	8	9	9	9	4	9	11	13	250	Mie
Shiga	8	8	11		10		16	13	11	21	4	6	9	13	6	7	5	10	6	9	7	3	6	189	Shiga
Kyoto	13	13	15		14		13	14	19	14	9	9	14	9	9	6	10	7	3	7	10	6	7	221	Kyoto

Osaka	65	50	52		40		45	56	51	58	35	35	42	41	34	28	41	33	34	47	28	26	29	870	Osaka
Hyogo	24	22	22		21		19	17	23	22	29	13	20	18	17	16	13	13	9	14	12	10	11	365	Hyogo
Nara	1	1	1		2		3	5	1	2	6	5	1	1	2	5	2	3	3	4	1		1	50	Nara
Wakayama	1	1	1				1	1	2		1			1			1	1	1	1				13	Wakayama
Tottori		2			2		1	2	1			1	2				2	1	1			1		16	Tottori
Shimane							2	1				2					2				1			8	Shimane
Okayama	9	12	17		7		8	13	7	11	11	12	5	8	10	10	7	13	18	20	8	7	11	224	Okayama
Hiroshima	9	6	9		11		14	16	10	10	8	13	6	8	11	2	5	9	5	1	10	7	11	181	Hiroshima
Yamaguchi	10	10	4		1		6	5	9	8	5	3	4	3	6	4	3	7	5	5	8	5	4	115	Yamaguchi
Tokushima	1	3			2		2	3	1	1			1			1			1	1		1	1	19	Tokushima
Kagawa	5	4	7		8		2	1	4	4	3	1	4	4	3	2		3		3		2	1	61	Kagawa
Ehime	2	2	6		5		6	4	3	4	3	4	6	1		7	1	6	3	3	3	1	2	72	Ehime
Kochi																	1		2			2	1	6	Kochi
Fukuoka	13	13	22		15		8	11	14	14	14	14	10	11	17	13	12	11	13	15	13	9	12	274	Fukuoka
Saga		1	3				4	1						1	1				1				1	13	Saga
Nagasaki	4		6		3		1	1	1	2	1	1	2		2	1	1	2	1	2	3			34	Nagasaki
Kumamoto	5	21	5		7		6	7	2	4	2	1	3	4		5	3	2	5	4	7	4	4	101	Kumamoto
Oita	4	2	2		2		3	2	4	5	6	3	1	2	2	1	2	2	4	3	1	2	1	54	Oita
Miyazaki		1	1		4		3	4	3	3		1	3	3	3	1		2		3				35	Miyazaki
Kagoshima		1	2				2		1	1	1	2	3	1	1		2		1	1	4	1		24	Kagoshima
Okinawa	1		1				2			1				1				1			1	2		10	Okinawa
total	560	574	563		464		485	509	520	503	372	369	369	375	360	326	333	362	326	382	333	310	337	8,732	total

centrifugal machine																								centrifugal machine	
mixer, grinder						1		2																3	mixer, grinder
roll machine (except printingroll machine)	1	1	3		2						1			1										9	roll machine (except printingroll machine)
injection molding machine			1			1			1		2		1											6	injection molding machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot							1			1		1		1										4	industrial robot
other general power machines	2		1	1	1	1		1		2		1			1	2					1			14	other general power machines
felling machine																									felling machine
mobile logging machine																									mobile logging machine
skyline yarding machine																									skyline yarding machine
other mobile silviculture machine																									other mobile silviculture machine
crane												1	1				1							3	crane
mobile crane																									mobile crane
derrick crane																									derrick crane
elevator, lift		1																						1	elevator, lift

hand tool																								hand tool			
ladder								1		1										1				3	ladder		
slinging tool																									slinging tool		
other tools																									other tools		
other equipment, facilities	2													1										1	4	other equipment, facilities	
scaffolding																										scaffolding	
timbering																										timbering	
stairs, landing stage																										stairs, landing stage	
opening																										opening	
roof, beam, haze, crossbeam, principal rafter																									1	1	roof, beam, haze, crossbeam, principal rafter
working platform, boot board	1																									1	working platform, boot board
passage																											passage
building, establishment		2								1	1															5	building, establishment
other temporary buildings, establishments	1																									2	other temporary buildings, establishments
explosive substance	1																									3	explosive substance
inflammable substance		1																								2	inflammable substance

inflammable gas			1			1																	2	inflammable gas		
harmful substance					1																		1	2	harmful substance	
radiation	1																							1	radiation	
other hazards, harmful substances																									other hazards, harmful substances	
metal material	1		1			1																		5	metal material	
lumber, bamboo																									lumber, bamboo	
stone, sand, substance																									stone, sand, substance	
other materials																									other materials	
load			2																					2	load	
machine/equipment as load																									machine/equipment as load	
natural ground, rock																									natural ground, rock	
standing tree																									standing tree	
water			1																					1	water	
abnormal environment									1		3													4	abnormal environment	
high/cold temperature environment																								3	high/cold temperature environment	
other environments																									other environments	
other causal agent																								1	1	other causal agent

100-299	4	3	2	1	3	2		1	1	1	4	1	2	1	4	2		3	1						36	100-299
300 workers or more	4	4	4	3			2		3	3	1	1			1	2				1	1			1	31	300 workers or more
total	15	9	14	7	4	7	4	9	8	5	7	3	5	5	9	7	3	5	2	2	2	1	3	136	total	

Month of fatal accidents in nonferrous metal making in 1999-2021

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Month	
January	1		1						2						1		1	2	1						9	January
February	1	1	2					1	1	1						3	1	1							12	February
March		1	1	1				2	1				1	1	1	1		1			1				12	March
April		2	2	1				2		1			1	1	3	1									14	April
May	3	3				2		1		1		2	1	2		1							1		17	May
June				1			1	1		1	4	1				1			1						11	June
July	4		1	1	1				1						1									1	10	July
August	1	1	1	1	1	1	1				1		1	1				1			1			1	13	August
September	1	1	1		1	3	1	1		1			1												11	September
October	1		2		1	1									2		1				1				9	October
November	2		3	1			1	1	3						1								1		13	November
December	1			1							2										1				5	December
total	15	9	14	7	4	7	4	9	8	5	7	3	5	5	9	7	3	5	2	2	2	1	3	136	total	

Prefecture of fatal accidents in nonferrous metal making in 1999-2021

