

Fatal and non-fatal accidents in nonferrous metals/rolling products in Japan in 1999-2021

nonferrous metals/rolling products industry Code No.011101

Type of accidents in nonferrous metals/rolling products 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	17	22	20	13	13	13	13	16	10	11	18	9	6	6	9	12	11	11	11	9	14	9	11	284	fall from height
falling to same level	13	11	13	18	13	11	13	13	9	7	13	9	11	9	11	8	13	11	7	7	11	11	13	255	falling to same level
crash	6	5	3	7	5	5	3	9	6	6	3	6	1	4	6	1	4	2	6	8	3	9	6	114	crash
struck by flying or falling object	21	19	18	20	14	15	11	15	12	11	9	13	11	9	8	6	11	8	13	13	4	7	10	278	struck by flying or falling object
collapse	8	4	3	1	5	1	2	7	7	4	5	2	3	5	5	3	7	2	3	3	2	2	3	87	collapse
crashed by	13	10	7	11	7	10	7	18	13	12	7	2	9	6	1	11	4	9	4	4	5	6	6	182	crashed by
caught in/between	59	57	48	66	49	54	32	42	51	51	35	29	43	23	33	40	26	38	26	28	42	33	27	932	caught in/between
cut	7	7	8	10	2	1	6	8	6	1	1	3	10	5	6	2	3	4	3	3	6	2		104	cut
injury to the sole of the foot	2			1				1		1		1		1		1				1		1		10	injury to the sole of the foot
drown																1								1	drown
contact to high/low-temperature	25	29	16	21	17	23	22	18	15	16	20	17	14	12	13	12	13	8	13	12	7	12	6	361	contact to high/low-temperature

engine													1										2	engine	
power transmission mechanism			2		2		1	2	3	3	2	1	1	1	1	2		1	3	4	4	2		35	power transmission mechanism
circular sawing machine			1					1				1		1								1		6	circular sawing machine
band sawing machine																				1				1	band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																									chamfering machine, router, woodworking milling machine
chain saw																								1	chain saw
other woodworking machines											1													1	other woodworking machines
leveling, transporting or loading machine			1		1								1		1							2		6	leveling, transporting or loading machine
excavating machine						1		1		2	2	1	1	1					1					10	excavating machine
foundation work machine																									foundation work machine

machine				1								1		1	1						1			5	machine
food manufacturing machine										1														1	food manufacturing machine
printing machine																									printing machine
industrial robot																		1						1	industrial robot
other general power machines			9	8		10	7	6	8	7	6	12	10	5	4	8	6	4	2	11	6	2	131	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			9	4		3	6	8	11	5	2	3	3	4	3	6	5	7	4	5	1	6	95	crane	
mobile crane																									mobile crane
derrick crane																									derrick crane
elevator, lift																	1		1				1	3	elevator, lift
cargo lifting appliance																									cargo lifting appliance
gondola																									gondola
lumberyard equipment, logging cableway																									lumberyard equipment, logging cableway

facilities			4		2		4	6	10	8	7	1	5	1	3	3	5	3	4	6	5	5	1	83	facilities
scaffolding							1													1				2	scaffolding
timbering																									timbering
stairs, landing stage			3		2		3	2	2		6	1	2	1	2	2	3	2	1	2	3	1	6	44	stairs, landing stage
opening			1				1	3	1		2				1			1	1				2	13	opening
roof, beam, haze, crossbeam, principal rafter					1				1	2							1		1			1		7	roof, beam, haze, crossbeam, principal rafter
working platform, boot board			3				3	5	2	9	1	4	2		3	1	2	1	2	3	3	2	2	48	working platform, boot board
passage			6		6		5	6		2	6	3	5	6	7	5	4	5	5	2	4	6	3	86	passage
building, establishment			3		1		4	2	4	1		1	3	2	1	2	1	2		6	3	2	2	40	building, establishment
other temporary buildings, establishments			1		1			2		1	1	3		1	2	1	3			2	1	2	1	22	other temporary buildings, establishments
explosive substance											4		1	1	1	1				1				9	explosive substance
inflammable substance									1	1		2	2			1				1				8	inflammable substance
inflammable gas					1			1						1						1	2			6	inflammable gas
harmful substance			3		3		9	1	1	1	1	3	6	3	3	1	2	3		4			2	46	harmful substance
radiation																									radiation
other hazards, harmful substances					1		1	2	3	1	1	1	1	2	1		2	3	1	3	3	2	2	30	other hazards, harmful substances

metal material			24		19		19	28	26	17	17	23	14	12	11	6	17	12	11	18	9	8	17	308	metal material
lumber, bamboo					1				1												1	2		5	lumber, bamboo
stone, sand, substance									1													1		2	stone, sand, substance
other materials			2		3			4	1	1		3	1	2		5		2			2		2	28	other materials
load			4		3		4	6	3	6	4	2	4	4	4	4	3	6	4	5	3	5	5	79	load
machine/equipment as load			2					2			1	1		1	1			2	2		1	3	2	18	machine/equipment as load
natural ground, rock																									natural ground, rock
standing tree																									standing tree
water																									water
abnormal environment								1	1		3													5	abnormal environment
high/cold temperature environment			1		1		2	3	1	1	2			1	5	2	1		3	3		1	1	28	high/cold temperature environment
other environments			1							1	1					1		1	1					6	other environments
other causal agent			1		1		1	4	2			2	1		1	1			2	1	1		5	23	other causal agent
no causal agent			2		4		4	2	3	3	4	2	6	3	2	2	2	2	2	2	9	5	5	64	no causal agent
unclassifiable							1	1		1					1									4	unclassifiable
total			150		142		135	167	154	135	126	111	124	93	104	103	105	106	95	105	110	108	112	2,285	total

Workers age of fatal and non-fatal accidents in nonferrous metals/rolling products 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	9	11	2	5	2	4	3	2	5	3	3	1	4	1	2		1	4	4	3	3	3		75	19 years old or less
20-29	38	39	29	30	26	31	29	39	28	25	22	23	21	19	16	22	17	21	15	12	18	12	12	544	20-29
30-39	40	33	21	39	39	34	37	35	38	34	34	25	31	22	30	19	30	24	20	21	19	34	26	685	30-39
40-49	37	41	42	42	21	29	23	40	36	30	18	24	27	28	24	25	24	21	28	36	32	25	38	691	40-49
50-59	54	55	47	52	43	28	28	39	38	29	29	24	26	13	19	17	19	16	14	21	22	22	27	682	50-59
60 years old or more	12	14	9	17	11	17	15	12	9	14	20	14	15	10	13	20	14	20	14	12	16	12	9	319	60 years old or more
total	190	193	150	185	142	143	135	167	154	135	126	111	124	93	104	103	105	106	95	105	110	108	112	2,996	total

Workers' number of workplace of fatal and non-fatal accidents in nonferrous metals/rolling products 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	24	33	23	24	19	20	20	25	16	20	14	16	17	9	13	8	19	12	8	10	8	11	8	377	9 workers or less
10-29	47	35	44	42	30	36	41	39	32	27	31	33	23	27	23	28	33	24	23	30	23	22	15	708	10-29
30-49	18	30	18	39	24	20	21	28	35	23	14	11	19	13	14	14	13	17	14	12	12	19	16	444	30-49
50-99	27	36	22	23	28	16	14	31	23	23	18	18	14	14	16	13	7	20	15	20	20	19	26	463	50-99
100-299	37	33	18	27	16	23	22	28	23	22	22	16	28	18	20	20	17	20	13	13	16	16	16	484	100-299
300 workers or more	37	26	25	30	25	28	17	16	25	20	27	17	23	12	18	20	16	13	22	20	31	21	31	520	300 workers or more
total	190	193	150	185	142	143	135	167	154	135	126	111	124	93	104	103	105	106	95	105	110	108	112	2,996	total

Month of fatal and non-fatal accidents in nonferrous metals/rolling products 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	20	9	16	10	11	14	7	13	14	10	13	8	7	14	8	6	15	7	9	4	10	10	5	240	January
February	10	28	9	19	15	7	12	10	8	10	17	10	12	4	13	8	10	11	10	11	10	5	7	256	February
March	11	19	18	18	14	17	10	12	18	16	6	10	12	4	6	10	3	9	11	7	9	13	10	263	March
April	19	21	17	15	7	7	13	17	12	12	7	14	11	12	10	4	12	4	4	14	7	6	18	263	April
May	9	18	19	18	18	7	9	17	14	13	10	11	9	8	7	12	6	12	10	7	7	7	12	260	May
June	21	10	10	12	12	19	12	11	14	15	14	12	17	4	7	6	11	12	10	7	12	8	12	268	June
July	21	17	14	21	16	12	15	20	15	6	11	6	6	8	5	12	13	13	8	15	10	10	8	282	July
August	14	17	6	16	18	11	22	8	13	8	6	11	9	12	13	8	7	10	9	10	11	15	5	259	August
September	19	8	10	13	6	10	8	15	15	11	8	8	10	6	8	12	5	12	13	8	14	7	8	234	September
October	15	18	7	18	11	14	12	14	13	10	11	13	10	8	13	8	7	6	3	9	8	10	7	245	October
November	15	18	10	17	6	13	9	20	11	10	10	3	13	10	9	11	10	4	3	8	7	6	11	234	November
December	16	10	14	8	8	12	6	10	7	14	13	5	8	3	5	6	6	6	5	5	5	11	9	192	December
total	190	193	150	185	142	143	135	167	154	135	126	111	124	93	104	103	105	106	95	105	110	108	112	2,996	total

Prefecture of fatal and non-fatal accidents in nonferrous metals/rolling products 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		3			2							1					1		1	1	1			10	Hokkaido	
Aomori			3				1			2	1	5	4			1		1							18	Aomori
Iwate										1				1								1			3	Iwate

Miyagi	5		1					1		1					3	2	4	1		2				20	Miyagi	
Akita	4	10	6		1		3	3	7	2	3	3	1	3	1	2	1	1	2		4	8		65	Akita	
Yamagata	1						1		2	2					1	2	2		5				1	17	Yamagata	
Fukushima	4	8	8		6		2	4	8	4	4	5	4	5	6	5	3		3	4	2	4	8	97	Fukushima	
Ibaraki	11	9	11		8		5	7	10	3	5	9	3	3	4	5	6	7	6	6	5	8	6	137	Ibaraki	
Tochigi	14	6	7		7		4	6	9	5	6	8	3	4	3	5	5	4	1	6	10	6	5	124	Tochigi	
Gunma	4	5	3		1		9	12	5	3	4	7	6	2	2	2	3	3	3	3	4		1	82	Gunma	
Saitama	9	11	14		11		11	11	14	8	16	10	10	7	9	7	5	9	5	12	7	9	11	206	Saitama	
Chiba	7	6	6		3		4	6	2	2		1	9	2	2	3	5	7	3	6	7	4	3	88	Chiba	
Tokyo	9	4	5		4		4	5	4	3	2			2	6	1	3	2	3	3	2	2	1	65	Tokyo	
Kanagawa	5	2	4		1		3	4	1	4	1	3	6		4			4	1	1	1		4	49	Kanagawa	
Niigata		6	6		3		2	8	2	3	2	1	5	8	5	1	2	3	3	2	4	6	4	76	Niigata	
Toyama	10	8	2		4		3	8		9	7		3	3	5	7	6	2	7	3	4	2	5	98	Toyama	
Ishikawa																										Ishikawa
Fukui	3	6			6		1	1	3	2	1	1	1	2		1		4	1	3	1	2	3	42	Fukui	
Yamanashi	1																							1	Yamanashi	
Nagano	3	3	4		3		1	2	1	1		1		2		1	1	1			1		4	29	Nagano	
Gifu	5	3	3		7		14	6	2	3	1	1	3	2	1		3			2		2	1	59	Gifu	
Shizuoka	11	10	7		5		5	10	8	7	10	6	3	4	5	10	5	2	5	3	2	9	10	137	Shizuoka	
Aichi	10	23	14		10		14	14	15	12	16	10	17	6	10	8	9	10	12	10	10	7	5	242	Aichi	
Mie	7	7	2		6		6	3	2	5	1	4		3	4	1	2	2	1		5	5	5	71	Mie	
Shiga	3	3	3		4		2	2	1	2	1	1	3	2	1	5	1	3	1	2	2	1	1	44	Shiga	
Kyoto	9	8	4		9		5	11	13	2	4	3	10	4	4	2	8	5	1	4	7	6	2	121	Kyoto	

Osaka	21	14	7		9		10	13	13	16	10	10	9	10	8	12	11	4	10	13	9	11	7	227	Osaka	
Hyogo	5	7	6		8		3	7	2	6	12	3	9	5	4	1	3	1	2	1	3	2	6	96	Hyogo	
Nara							1	1		1	1		1			1								6	Nara	
Wakayama	1							1	1									1						4	Wakayama	
Tottori		2			1			1					1				1		1					7	Tottori	
Shimane																										Shimane
Okayama	5	6	2		1			1	2		1	4		2	3	4	3	8	5	3	2		1	53	Okayama	
Hiroshima	2		1		4		6	2	6	2	3	1		2	2		2	3			3	2	6	47	Hiroshima	
Yamaguchi	6	8	3		1		4	3	7	7	2	1	2	3	4	3	2	7	4	4	5	5	4	85	Yamaguchi	
Tokushima		2			1		2	1																6	Tokushima	
Kagawa	3	1	4		3		1		3	3	2	1	3		1	1				1				27	Kagawa	
Ehime	2	1	2		4		2	3	2	2	2	2	2			4	1	4	2	1	1	1	2	40	Ehime	
Kochi																							1	1	Kochi	
Fukuoka	6	5	5		4		2	3	4	4		4	2	3	4	3	3	3	1	4	1			61	Fukuoka	
Saga																										Saga
Nagasaki	2		1										1		1									5	Nagasaki	
Kumamoto		5	1		4		1	5	1	4	1	1	2	1		2	3	1	3	3	4	2	4	48	Kumamoto	
Oita	2	1	2		1		2	2	2	3	6	3			1	1	1	1	3	2	1	2	1	37	Oita	
Miyazaki									1				1					1						3	Miyazaki	
Kagoshima			2				1		1	1	1	1		1										8	Kagoshima	
Okinawa			1											1				1			1	2		6	Okinawa	
total	190	193	150		142		135	167	154	135	126	111	124	93	104	103	105	106	95	105	110	108	112	2,668	total	

injury to the sole of the foot																									injury to the sole of the foot	
drown															1										1	drown
contact to high/low-temperature	1									1															2	contact to high/low-temperature
contact to harmful substance					1				1		3														6	contact to harmful substance
electric shock	1																								1	electric shock
explosion	1		1			1					2				3										8	explosion
burst																										burst
fire		1																							1	fire
traffic accident (public road)																	1								1	traffic accident (public road)
traffic accident (others)																										traffic accident (others)
reaction to motion/improper motion																										reaction to motion/improper motion
others																								1	1	others
unclassifiable																										unclassifiable
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total	

total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total
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Causal agents (small) of fatal accidents in nonferrous metals/rolling products in 1999-2021

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Causal (S) agents
engine																									engine
power transmission mechanism		1				1																		2	power transmission mechanism
circular sawing machine																									circular sawing machine
band sawing machine																									band sawing machine
wood planer machine																									wood planer machine
hollow chisel mortiser, wood borer																									hollow chisel mortiser, wood borer
chamfering machine, router, woodworking milling machine																									chamfering machine, router, woodworking milling machine
chain saw																									chain saw
other woodworking machines																									other woodworking machines

centrifugal machine																								centrifugal machine	
mixer, grinder						1		1																2	mixer, grinder
roll machine (except printingroll machine)	1	1	2			1						1												7	roll machine (except printingroll machine)
injection molding machine												1												1	injection molding machine
food manufacturing machine																									food manufacturing machine
printing machine																									printing machine
industrial robot																									industrial robot
other general power machines	1											1			1									3	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											2	crane
mobile crane																									mobile crane
derrick crane																									derrick crane
elevator, lift		1																						1	elevator, lift

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

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

no causal agent																									no causal agent
unclassifiable																									unclassifiable
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total

Workers age of fatal accidents in nonferrous metals/rolling products 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	1								1		1														3	19 years old or less
20-29		1	1			1									1	2			1					7	20-29	
30-39		1	1		1	1			1		1			1	2	2		1						12	30-39	
40-49	2	3	2	2		1					2		1		1				1	1	1			17	40-49	
50-59	4	2	1	3			3	1	1		1	1	2		1								1	21	50-59	
60 years old or more									1		1		1	1		1							1	6	60 years old or more	
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total	

Workers' number of workplace of fatal accidents in nonferrous metals/rolling products 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							1		1			1												3	9 workers or less
10-29	2		1												1					1			1	6	10-29
30-49				1		1	1		1				1	1										6	30-49
50-99	1	1						1			2		2			1								8	50-99

100-299	1	3		1	1	2			1		3		1	1	3	2		1	1					21	100-299	
300 workers or more	3	3	4	3				1		1		1			1	2				1	1			1	22	300 workers or more
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total	

Month of fatal accidents in nonferrous metals/rolling products 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						1										1					4	January
February	1	1													1									3	February
March		1		1					1				1		1						1			6	March
April		1	1	1				1					1	2	1									8	April
May		2				2						1	1	1		1								8	May
June							1				3					1			1					6	June
July	2				1				1														1	5	July
August	1	1		1			1				1		1					1					1	8	August
September		1				1	1						1											4	September
October	1														2						1			4	October
November	1		3	1					1						1									7	November
December				1							2													3	December
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total

Prefecture of fatal accidents in nonferrous metals/rolling products in 1999-2021

Miyazaki																										Miyazaki	
Kagoshima																											Kagoshima
Okinawa																											Okinawa
total	7	7	5	5	1	3	3	1	4		6	1	4	2	5	5		1	2	1	1		2	66	total		

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

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