

Fatal and non-fatal accidents in railroad/water transportation/airline service in Japan in 1999-2022

railroad/water transportation/airline service industry Code No.0401

Type of accidents in railroad/water transportation/airline service 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	78	68	69	83	81	94	76	94	83	67	72	80	76	76	61	69	67	73	75	95	78	77	85	91	1,868
falling to same level	103	101	87	77	104	113	108	94	96	94	97	107	105	134	116	119	117	119	119	133	109	99	138	122	2,611
crash	36	42	57	36	31	41	41	55	51	36	36	42	20	27	49	46	26	60	53	44	48	37	51	55	1,020
struck by flying or falling object	15	16	22	23	16	23	23	15	18	13	13	12	18	23	6	16	16	17	14	22	17	17	12	15	402
collapse	4	1	4	3	2	2	5	5	5	4	2	1	2	5	2	3	7	3	2	2	4			1	69
crashed by	36	36	30	24	22	30	28	21	24	23	17	31	19	27	23	62	58	23	21	19	34	16	21	26	671
caught in/between	56	50	51	36	44	61	51	64	64	46	41	49	39	47	78	44	42	40	62	40	64	41	42	58	1,210
cut	9	8	8	4	12	14	10	7	9	11	10	7	5	7	10	11	9	3	11	9	7	7	7	3	198
injury to the sole of the foot			1			3	1	2		1		1	3				1		2			2		1	18
drown	1	1					1						4	1	1	1	2		2	2			1		17
contact to high/low-	7	7	6	6	5	11	4	6	8	8	4	4	4	8	8	9	10	10	23	15	11	7	4	12	197

temperature																									
contact to harmful substance		1		1	3	4	3	1	1		2	2	8	3	16	10	14	10	16	13	2	5	2	10	127
electric shock	3	5	2	4	2	1	4	2	5	3	1	2	1	1	3	2	2	3		3		2	1	5	57
explosion										1					1				1						3
burst				1			2				1		1												5
fire													1												1
traffic accident (public road)	17	11	22	15	20	24	25	20	28	17	28	11	18	13	17	14	24	27	9	38	10	9	9	9	435
traffic accident (others)	4	10	12	55	42	64	66	50	82	42	18	20	3	2	3	10	5	1	10	3	6	7	3	6	524
reaction to motion/improper motion	90	107	86	113	116	101	96	123	122	101	92	95	116	170	135	117	97	153	187	156	153	132	110	166	2,934
others	14	26	17	19	17	12	43	34	61	66	53	45	29	35	11	13	23	20	12	19	33	24	166	16	808
unclassifiable	6	2	12	28	27	39	16	8	9	8	7	5		10	2	2	5	4	3	2	2	1	4	1	203
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	597	13,378

Causal agents (large) of fatal and non-fatal accidents in railroad/water transportation/airline service 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	13	11	11	6	7	13	10	9	6	7	12	8	12	8	9	9	10	4	12	12	10	4	6	9	218

construction machine	1	4			1	2	2	3	2		2		3		2	1	1	1	2	2	1	2	4	3	39
metal manufacturing machine	4	2	5	1	2	2	1	1	1	2	2	1	3	2			1	1	3	1	2	1	1	2	41
general machine	5	4	4	3	1	7	6	4	3	2	8	5		4	5	5	5	2	4	6	4	1	1	2	91
mobile silviculture machine																									
crane	5	3	4	3	2	3	1	2	1	4	4	1	4	3	5	3	1	5	4	4	6	10	1	3	82
conveying machine	24	19	22	28	20	21	16	18	18	8	15	15	9	16	12	9	11	13	23	11	18	13	15	17	391
vehicle	86	125	131	142	149	208	195	192	240	165	159	153	126	157	148	137	153	159	139	177	165	97	109	125	3,637
pressure vessel						1										2									3
chemical facilities																									
welding equipment		1		1			1						1			1			1					1	7
kiln, caldron			1												1	1	2		1						6
electric equipment	3	3	2	6	2	1	7	2	5	4	1	3		2	3	4	2	3	2	5	1	2	2	6	71
human power machine, tools	15	14	11	16	17	25	28	16	16	24	10	7	12	17	16	18	11	13	12	20	13	15	13	13	372
tools	30	29	33	34	20	30	35	23	31	30	21	25	24	27	27	41	22	29	31	38	23	32	26	33	694
other equipments,	16	30	16	16	15	12	8	15	16	21	25	17	14	27	10	14	20	21	27	24	18	13	19	27	441

facilities																									
temporary buildings, establishments	141	125	111	106	149	159	143	173	170	139	130	162	123	158	153	154	147	155	175	161	180	146	193	184	3,637
hazards, harmful substances	1	1		1	1	1	4	3	5	2	3		4	1	2	1	4	1	5	1	2		1	1	45
materials	9	12	7	12	8	11	10	13	9	9	7	14	12	13	5	9	14	7	6	9	10	12	9	3	230
load	19	26	22	33	20	18	22	27	37	18	10	18	22	26	26	26	20	28	54	28	33	22	17	39	611
natural environment	30	34	33	33	35	30	26	40	48	24	18	17	40	45	47	37	34	57	59	56	34	26	29	48	880
other causal agent	39	27	33	23	27	44	36	33	22	33	42	33	33	22	22	31	22	25	20	26	16	20	159	8	796
no causal agent	40	25	38	53	55	50	51	29	34	39	32	35	34	52	51	51	48	44	47	43	46	70	56	78	1,101
unclassifiable	8	7	11	15	17	10	10	6	8	14	5	6	2	15	5		4	2	4		3	1	1	2	156
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	597	13,378

Causal agents (small) of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2022

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	2022	total	
engine										1						2			1					1	5	
power transmission mechanism			1				1	1		1		1	4	1	1	1			2	2	2				1	19
circular sawing			1		2							1				1	1		1		1					8

other pressure vessels															2								2		
chemical facilities																									
gas welding equipment						1					1						1					1	4		
arc welding equipment														1									1		
other welding equipment																									
kiln, caldron			1										1	1	2								5		
industrial dryer																									
other kiln, caldron																	1						1		
transmission			1		1		2	2	5	2		2		1	1	1		1	1	1			21		
electric power facilities			1		1		4			1	1		1	1	2	2	2	1	2		1	1	4	25	
other electrical equipment							1			1		1		1	1				2	1	1	1	2	12	
human power cranes								1		3			2						1		1		1	9	
human power hauling equipment			3		10		18	12	12	9	7	5	7	9	9	14	9	9	8	14	6	10	7	7	185
human power			1		1		1													1	1		1	6	

machine																									
hand tool			7		6		9	3	4	12	3	2	3	8	7	4	2	4	4	5	6	3	6	4	102
ladder			18		10		15	8	11	16	7	9	9	15	11	18	8	12	10	19	9	16	14	16	251
slinging tool			2				1		2	2				1					1	1		1		11	
other tools			13		10		19	15	18	12	14	16	15	11	16	23	14	17	21	18	13	16	11	17	309
other equipment, facilities			16		15		8	15	16	21	25	17	14	27	10	14	20	21	27	24	18	13	19	27	367
scaffolding			2		3			1	2	2		1	2		1	2	1	1	1			1	2		22
timbering																									
stairs, landing stage			23		43		34	49	44	41	34	45	29	47	35	27	38	36	54	43	43	37	44	55	801
opening			3		3		4	4	1	3	5	2	3	2	4	4	2	2	3	2	3	5	2	3	60
roof, beam, haze, crossbeam, principal rafter					2		3	4			1	1	1	1	2	1	2		1	1	1		1	1	23
working platform, boot board			14		12		11	11	10	13	11	15	11	18	14	13	9	12	19	13	14	9	12	16	257
passage			26		42		48	53	54	45	39	54	35	55	55	63	52	57	55	66	51	39	86	69	1,044
building, establishment			26		25		28	31	40	19	26	27	24	16	25	27	24	22	23	19	21	23	27	22	495
other temporary buildings, establishments			17		19		15	20	19	16	14	17	18	19	17	17	19	25	19	17	47	32	19	18	404

explosive substance										1													1		
inflammable substance												1								2			3		
inflammable gas							1							1									2		
harmful substance				1		2		1								2							6		
radiation																									
other hazards, harmful substances						2	2	4	2	2		3	1	1	1	2	1	5	1			1	1	29	
metal material			4		5		6	4	4	3	1	5	7	4	1	2	6	5	3	3	2	7	4	1	77
lumber, bamboo				1		1	4		1	1	4	2	3	2	1	3		1		2	2	3		31	
stone, sand, substance			1			2	2	4	3	4	4	2	1	1	1	1	1	2	3	4	1	1	1	39	
other materials			2		2		1	3	1	2	1	1	1	5	1	5	4	1		3	2	2	1	1	39
load			17		18		22	24	37	17	10	18	21	25	25	26	19	27	51	26	33	20	15	38	489
machine/equipment as load			5		2			3		1			1	1	1		1	1	3	2		2	2	1	26
natural ground, rock			4		3		4	6	6	4	2	2	9	4	11	3	2	5	5	1	5	1	6		83
standing tree			4		4		3	1	2	1	1	2	2	1	1	2	1	1		1		2	1	2	32
water			1					1					4	1	2				2	1	1				13
abnormal environment			1		1		1	9	11	1	1	1	6	14	16	6	10	21	22	21	2		1	8	153

high/cold temperature environment			2					2	2			1	1	1	2	1	3	3	6	7	4	6	1	9	51
other environments			21		27		18	21	27	18	14	11	18	24	15	25	18	27	24	25	22	17	20	29	421
other causal agent			33		27		36	33	22	33	42	33	33	22	22	31	22	25	20	26	16	20	159	8	663
no causal agent			38		55		51	29	34	39	32	35	34	52	51	51	48	44	47	43	46	70	56	78	933
unclassifiable			11		17		10	6	8	14	5	6	2	15	5		4	2	4		3	1	1	2	116
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	597	13,378

Workers age of fatal and non-fatal accidents in railroad/water transportation/airline service 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	7	6	6	8	2	3	3	7	4	6	8	4	7	7	2	5	3	5	9	5	7	4	12	11	141
20-29	133	147	138	147	167	172	169	148	149	115	108	113	90	128	140	131	126	163	167	186	170	124	173	150	3,454
30-39	101	100	94	137	121	169	169	173	214	157	136	137	141	172	150	124	120	118	132	108	119	93	138	108	3,231
40-49	124	104	114	121	129	144	119	123	156	126	106	113	78	125	91	118	101	112	113	127	120	90	115	117	2,786
50-59	93	111	115	88	109	120	110	112	115	106	101	104	114	122	114	127	121	126	134	118	97	100	144	117	2,718
60 years old or more	21	24	19	27	16	29	33	38	28	31	35	43	42	35	45	43	54	42	67	71	65	72	74	94	1,048
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	597	13,378

Workers' number of workplace of fatal and non-fatal accidents in railroad/water transportation/airline service in 1999-2022

Chiba	72	99	98		106		136	105	131	77	67	59	38	59	50	69	56	82	63	62	49	26	26	48	1,578
Tokyo	88	59	89		106		128	122	142	132	105	136	105	174	129	167	158	174	174	195	172	94	112	144	2,905
Kanagawa	23	27	24		24		19	41	33	31	22	21	24	33	31	24	21	20	30	29	27	33	32	23	592
Niigata	25	10	11		6		10	13	14	14	12	9	9	13	8	11	7	11	9	8	7	13	16	10	246
Toyama	1	5	2		6		2	3	2		1	3	4	1	1	1	7	2	3	4	5	4	5	2	64
Ishikawa	1		1		2		2	3	4	2		1	1	1	2	1	3	4	2	8	5	2	21	3	69
Fukui	1	8	2		1		1	1	1	4	3	2	1	2		2		1	1			3	3	3	40
Yamanashi	1		3		4		2	3	1	1	2		2	1	2		2	2	2	1		2	2	1	34
Nagano	30	18	15		27		29	22	25	25	26	17	24	24	30	33	25	21	25	29	32	37	31	20	565
Gifu		4	3		4		7	4	4	3	2	5	4	2	3	2	2	2	6	7	5	1	2	1	73
Shizuoka	5	4	6		12		4	4	8	8	5	3	11	9	5	6	10	7	7	7	5	6	4	13	149
Aichi	15	12	17		11		26	27	18	13	24	16	16	18	21	13	21	11	24	19	19	9	16	23	389
Mie	5		8		4		5	5	5	6	6	3	4	3	4	1	4	5	2	4	4	4	3	5	90
Shiga	2	7	5		3		1	5	2	1	1	4	7	7	6	3	2	7	4	1	2	6	10	2	88
Kyoto	8	1	4		2		11	14	14	5	10	7	15	9	20	19	8	18	19	18	15	13	14	20	264
Osaka	43	61	49		51		43	60	90	62	56	46	40	44	41	34	38	45	51	54	58	37	134	78	1,215
Hyogo	15	17	14		6		12	14	15	11	5	19	12	17	12	13	19	13	17	12	14	25	16	17	315
Nara	2	1	2		2		4	3	4	3	1	2	2	2	3	3	4	4	4	1	2	4	4	6	63
Wakayama	2		2		1		3	3		2		1	3	2	1	3	1	4	3		6	3	4	2	46
Tottori	2		1		2		2	6			2			2			2				2	5		2	28
Shimane	1	2	1		1			2	1	3	1		2	1		1			4			2	3		25

Okayama	1	12	4		3		7	12	6	8	2	3	1	4	4	6	5	4	7	2	3	8	4	4	110
Hiroshima	10	9	8		21		6	9	11	7	11	9	12	10	9	7	8	8	11	9	17	13	11	10	226
Yamaguchi		2			3		1	2		4	4	2	4	4	5	2	3	5	4	3	5	2	2	6	63
Tokushima	1		1		2		6		2	3	5	1			2	1	5	5	3	3	1	1	1	4	47
Kagawa	8	4	6		8		8	8	10	2	7	9	5	6	5	2	2	4	4	6	6	5	17	9	141
Ehime	6	6	4		5		3	3	5	6	5	3	5	4	6	7	4	2	2	3	3	7	2	5	96
Kochi	1	4	1		1		6	2	1	2	1	2	1	1	2	2		3	2	3	1	1	1		38
Fukuoka	14	15	8		20		15	13	17	15	12	19	18	17	17	18	19	16	20	24	26	11	28	26	388
Saga	1	1	1				1	1	1	2		2		4	1		4		2	2	1			1	25
Nagasaki	5		6		5		2	6	6	8	10	4	7	4	6	6	6	2	5	5	4	11	5	2	115
Kumamoto	3	8	4		1		3	1	1	3	4	10	2	5	4	3	1	2	3	2	2	4	6	3	75
Oita	4		3		2		3	1	3	1			2	2	1	4	2	1	1	4			1	1	36
Miyazaki	1	1			3		3	1		1		2	3	2	1	1			1	3	2	1	1	1	28
Kagoshima	8	6	5		4		5	5	4	1	3	3	2	2	7	5	8	8	11	10	7	7	10	5	126
Okinawa	2	3	2				2	3	15	13	16	10	10	4	6	10	8	8	5	6	1	4	4	14	146
total	479	492	486	528	544	637	603	601	666	541	494	514	472	589	542	548	525	566	622	615	578	483	656	597	13,378

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.

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

metal manufacturing machine																									
general machine											1										1			2	
mobile silviculture machine																									
crane			1							1														2	
conveying machine	1	2		1	1			1					1			1					2		1	11	
vehicle	2	2	7	2	5	9	3	7	8	3		7	1	1	2	2	4	1	8	4		2	1	2	83
pressure vessel																									
chemical facilities																									
welding equipment																									
kiln, caldron																									
electric equipment			1	1			1																	3	
human power machine, tools																									
tools		1																1						2	
other equipments, facilities																									
temporary buildings, establishments							2		1	1			2				1		1	1				9	
hazards, harmful substances																1								1	

20-29	1		2	1	1	1	3	1				1					1	2			2		1	17	
30-39			3	1		4	1		1	1		2	1	1					1	1				17	
40-49	1	2		1	3	2	1	6	3	1		2	2		1		2			1		2		30	
50-59	2	2	3		2	3	1	1	2	3		1			1	1	3	1	4	2		1	1	1	35
60 years old or more		1	2	1				1	3			2	4	1	1	1	2		4	3	1	1	1	2	31
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	4	130

Workers' number of workplace of fatal accidents in railroad/water transportation/airline service 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	2		2	2	1	2	3	2		1	1		1	1	1		1	3					24
10-29	1		1		1	5		2	3				4	1	2				3	2	1	1	1	3	31
30-49			1	2	2	3	1	5	3	3		1				1	2		2	1		2			29
50-99		1	1									3	1	1			1		4			3		1	16
100-299		3	1	2	1		3					1	1				2	1		1			1		17
300 workers or more	3		4				1					2					1	1	1						13
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	4	130

Month of fatal accidents in railroad/water transportation/airline service 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			1			2	1	3						1	1	1	1		1						12

February			2							1			2				2		1		1					9
March	1	2	1		3	3	1					2	3				2			1					1	20
April					1		2		1						1					1					1	7
May	1		3						1	1		1				1								1		9
June				1	1	1			1								1		1				1			7
July	1			2					1	2		3						1		1						11
August			2					1									1		1	2		3				10
September		2						1				2											1	1		7
October	1		1	1	1			1	2				1	1											1	10
November						1			3	1									5	1						11
December		1				3	2	3					1		1			1	2	1		1		1		17
total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	4	130	

Prefecture of fatal accidents in railroad/water transportation/airline service 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		1	1							1	1	1	1	1			2				11
Aomori									1																	1
Iwate																										
Miyagi												1	3													4
Akita										2												1				3

total	4	5	10	4	6	10	6	9	9	5		8	7	2	3	2	7	2	11	7	1	6	2	4	130
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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