Fatal and non-fatal accidents in port cargo handling service in Japan in 1999-2022

port cargo handling service industry Code No.050202

Type of accidents in port cargo handling 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	82	102	104	90	83	74	98	83	86	73	70	57	59	65	45	65	64	50	53	56	75	77	67	51	1,729
falling to same level	43	35	39	41	35	34	41	40	32	20	22	34	36	29	27	33	20	25	28	30	34	22	35	44	779
crash	23	32	31	40	32	26	33	21	18	23	16	22	17	16	19	17	17	14	23	16	26	16	25	20	543
struck by flying or falling object	56	45	54	47	39	49	37	31	34	33	22	23	15	21	20	34	19	27	13	23	24	18	24	25	733
collapse	17	18	24	13	12	9	14	18	12	19	6	13	10	9	14	11	10	6	4	5	7	10	7	10	278
crashed by	40	44	37	43	35	36	30	40	33	28	23	23	24	26	24	22	20	21	17	24	14	23	22	17	666
caught in/between	83	91	98	89	99	95	73	60	65	60	40	54	57	42	38	50	37	41	48	46	45	39	35	33	1,418
cut	4	10	16	9	12	8	5	10	6	9	8	5	2	4	4	2	5	3	5	4	6	8	7	5	157
injury to the sole of the foot			2	1	2			1	1					1			3	2				1	2	2	18
drown				3	1	1				1			8					1	1				1		17
contact to high/low-	6	5	2	3	1	3		2	3	7		5	3	4	1	5	2	5	4	2	3	2	2	1	71

temperature																									
contact to harmful substance	3	2		3			2	1	3	2			1	2			2			1					22
electric shock												1						1	1						3
explosion												1											1		2
burst				1																					1
fire	1																	1							2
traffic accident (public road)	7	5	2	3	2	4	8	3	6	2		7	3	3		2	3	1	14	6	19	5	7	3	115
traffic accident (others)		1	1			1	1		1		1		1	1	1								1	1	11
reaction to motion/improper motion	33	32	33	30	42	28	23	23	25	25	19	12	20	23	12	24	12	10	17	19	26	19	28	39	574
others	3	2	3	1		2		1		1		1	3	2				1		2	3	5	14	1	45
unclassifiable					1		1			1	1	1									2				7
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Causal agents (large) of fatal and non-fatal accidents in port cargo handling 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	3	8	16	10	11	17	11	14	7	13	8	7	8	8	6	5	5	12	9	8	8	8	13	6	221

crane, conveying machine	117	159	137	131	130	134	113	106	114	106	78	82	82	80	70	77	76	62	87	80	89	74	98	75	2,357
other equipment	77	57	96	71	73	69	70	56	53	55	30	38	42	43	40	51	39	47	43	38	51	49	38	46	1,272
temporary buildings, establishments	32	55	53	58	50	43	47	48	53	43	37	52	48	44	31	46	29	29	34	37	52	40	51	46	1,058
substance, material	61	52	41	55	47	35	55	40	49	42	22	28	26	14	26	35	21	21	19	18	29	20	20	22	798
load	80	81	89	78	64	52	52	58	39	36	46	41	31	40	26	33	35	24	25	37	35	36	31	34	1,103
environment	6	3	4	6	4	7	7	2	4	5	2	5	14	7	2	4	4	8	6	4	5	4	6	4	123
others	25	9	10	8	17	13	11	10	6	4	5	6	8	12	4	14	5	6	5	12	15	14	21	19	259
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Causal agents (middle) of fatal and non-fatal accidents in port cargo handling service 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											2
power transmission mechanism						2	2						2	1					1	1	1			1	11
woodworking machine	2	6	8	4	4	5	5	5	2	8	3	1	4			1	2	1	2	1	3	1	2		70

construction machine	1	1	6	5	3	8	2	5	3	5	2	5	1	2	4	4	3	5	3	4	2	5	8	3	90
metal manufacturing machine		1	1		1		1	2	1		1				1				2					1	12
general machine			1	1	3	2	1	2	1		1	1	1	4	1			5	1	2	2	2	3	1	35
mobile silviculture machine																		1							1
crane	34	52	41	32	34	41	25	29	32	26	14	20	20	13	15	22	17	21	17	6	16	15	12	18	572
conveying machine	64	89	77	78	76	69	67	63	61	64	48	43	48	54	43	41	48	36	49	59	39	41	70	45	1,372
vehicle	19	18	19	21	20	24	21	14	21	16	16	19	14	13	12	14	11	5	21	15	34	18	16	12	413
pressure vessel																					1				1
chemical facilities																									
welding equipment							1			1				1							1				4
kiln, caldron																				1					1
electric equipment				1								1	1						1				1		5
human power machine, tools	10	12	12	5	9	12	5	6	8	5	4	9	5	6	2	5	2	2	3	4	11	12	12	7	168
tools	65	39	74	58	60	55	57	46	40	43	26	25	32	29	35	39	29	36	30	27	33	29	24	35	966
other equipments,																									

facilities	2	6	10	7	4	2	7	4	5	6		3	4	7	3	7	8	9	9	6	5	8	1	4	127
temporary buildings, establishments	32	55	53	58	50	43	47	48	53	43	37	52	48	44	31	46	29	29	34	37	52	40	51	46	1,058
hazards, harmful substances	4	2	1	3			1	2	3	3			1	1		1	1	1		1					25
materials	57	50	40	52	47	35	54	38	46	39	22	28	25	13	26	34	20	20	19	17	29	20	20	22	773
load	80	81	89	78	64	52	52	58	39	36	46	41	31	40	26	33	35	24	25	37	35	36	31	34	1,103
natural environment	6	3	4	6	4	7	7	2	4	5	2	5	14	7	2	4	4	8	6	4	5	4	6	4	123
other causal agent	17	7	2	4	5	5	2	5	1	3	2	1	2	3		3	2	1	1	4	2	2	13	1	88
no causal agent	7	2	8	4	10	8	8	5	4	1	3	4	6	8	4	10	3	5	4	8	11	12	8	18	161
unclassifiable	1				2		1		1			1		1		1					2				10
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Causal agents (small) of fatal and non-fatal accidents in port cargo handling 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			1											2
power transmission mechanism							2						2	1					1	1	1			1	9

circular sawing machine			3		3		2	2		2	1		2			1		1	1		2		2		22
band sawing machine																									
wood planer machine																									
hollow chisel mortiser, wood borer								1																	1
chamfering machine, router, woodworking milling machine																									
chain saw			3		1		3	2	1	4	1	1	1				2			1	1				21
other woodworking machines			2						1	2	1		1						1			1			9
leveling, transporting or loading machine			2				2	2	2	4	2	3		2	2		3	2	2	2	1	4	3	1	39
excavating machine			3		1			2	1	1		2	1		1	4		2		2	1	1	4	1	27
foundation work machine																									
hardening machine																									

demolition machine																			1					1	2
vehicle for high lift work			1		1																				2
other construction machines					1			1							1			1					1		5
lathe																									
drill press, milling machine																			1						1
grinding machine, buffing machine			1		1			1			1				1									1	6
power press																									
forging pressure hammer																									
shearing machine																									
other metal manufacturing machines							1	1	1										1						4
centrifugal machine																									
mixer, grinder																				1					1
roll machine (except printingroll machine)																									

injection molding machine																									
food manufacturing machine																									
printing machine																									
industrial robot																									
other general power machines			1		3		1	2	1		1	1	1	4	1			5	1	1	2	2	3	1	31
felling machine																									
mobile logging machine																									
skyline yarding machine																		1							1
other mobile silviculture machine																									
crane			19		16		8	17	16	14	9	11	8	10	7	13	7	11	7	3	8	8	7	8	207
mobile crane			12		12		10	4	8	8	3	3	8	2	2	2	8	4	6	2	5	4	2	5	110
derrick crane			3					1	1			1	1												7
elevator, lift									1		1	1					1		1		1	1		1	8
cargo lifting appliance			5		5		5	6	6	3	1	3	2	1	4	4	1	6	3	1	2	2	2	4	66
gondola																									

lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane			2		1		2	1		1		1	1		2	3							1		15
truck			25		26		26	17	22	23	17	16	17	18	9	13	19	7	20	27	16	15	23	25	381
forklift			48		40		30	34	31	28	23	20	21	29	29	20	24	23	22	26	18	20	36	16	538
railway equipment							1																		1
conveyor			1		5		5	3	2	4	4	4	3	4	3	4	4	3	5	3	3		5	1	66
loader					1		2	2	1	2	1		1	1			1	1				4	2		19
straddle carrier					2					3		1	2		1	2		1		2	1		1	2	18
rough terrain hauler																									
other powered conveying machines			3		2		3	7	5	4	3	2	4	2	1	2		1	2	1	1	2	3	1	49
cars, bus, motorcycle			5		7		7	4	8	5		10	3	5	4	3	4	2	10	4	21	8	6	5	121
railway vehicle																									
other vehicles			14		13		14	10	13	11	16	9	11	8	8	11	7	3	11	11	13	10	10	7	210
boiler																									

pressure vessel																					1				1
other pressure vessels																									
chemical facilities																									
gas welding equipment							1			1				1							1				4
arc welding equipment																									
other welding equipment																									
kiln, caldron																									
industrial dryer																				1					1
other kiln, caldron																									
transmission													1						1						2
electric power facilities												1											1		2
other electrical equipment																									
human power cranes			1									1		1											3
human power hauling equipment			1		1		2	3	1	2	1	3	1	2		1				1	2	2		2	25

human power machine					1		2	1													1		1		6
hand tool			10		7		1	2	7	3	3	5	4	3	2	4	2	2	3	3	8	10	11	5	95
ladder			21		18		19	11	10	8	7	8	5	9	11	11	6	10	8	10	9	9	11	14	215
slinging tool			17		15		8	12	11	11	11	8	7	4	8	8	8	7	7	5	4	4	6	7	168
other tools			36		27		30	23	19	24	8	9	20	16	16	20	15	19	15	12	20	16	7	14	366
other equipment, facilities			10		4		7	4	5	6		3	4	7	3	7	8	9	9	6	5	8	1	4	110
scaffolding			2		1		1		1	1		1				1				1	1	1	1	1	13
timbering																									
stairs, landing stage			6		5		9	9	7	6	3	9	10	6	7	7	4	5	4	4	8	12	6	7	134
opening			2		5		3		1	5	5	3	2	3	2	2	2	2	1	7	2	4	1	4	56
roof, beam, haze, crossbeam, principal rafter												2		1	1	1	1								6
working platform, boot board			17		10		7	10	9	11	10	9	14	11	7	6	4	5	6	7	10	4	6	8	171
passage			16		14		16	18	21	8	10	12	13	9	8	11	11	9	15	13	16	9	21	17	267
building, establishment			6		10		5	8	8	8	5	11	5	7	4	9	4	3	5	4	11	6	8	4	131
other temporary buildings,			4		5		6	3	6	4	4	5	4	7	2	9	3	5	3	1	4	4	8	5	92

establishments																									
explosive substance			1					1																	2
inflammable substance								1								1									2
inflammable gas																									
harmful substance									3	2			1	1						1					8
radiation																									
other hazards, harmful substances							1			1							1	1							4
metal material			18		30		34	23	30	24	12	19	18	9	15	21	15	13	14	13	18	12	13	13	364
lumber, bamboo			16		13		16	9	9	8	8	7	5	3	9	6	4	7	5	3	6	5	5	8	152
stone, sand, substance			2					3		1	1					1				1	1		1		11
other materials			4		4		4	3	7	6	1	2	2	1	2	6	1				4	3	1	1	52
load			83		63		52	57	38	36	43	40	31	38	25	32	34	23	25	36	34	35	31	33	789
machine/equipment as load			6		1			1	1		3	1		2	1	1	1	1		1	1	1		1	23
natural ground, rock							1				1			1											3
standing tree			1						1																2
water													8					1	1				1		11
abnormal																									

environment							1	1									1								3
high/cold temperature environment					1				1	2		4	2	3		2	2	4	2	2	2	2	2	1	32
other environments			3		3		5	1	2	3	1	1	4	3	2	2	1	3	3	2	3	2	3	3	50
other causal agent			2		5		2	5	1	3	2	1	2	3		3	2	1	1	4	2	2	13	1	55
no causal agent			8		10		8	5	4	1	3	4	6	8	4	10	3	5	4	8	11	12	8	18	140
unclassifiable					2		1		1			1		1		1					2				9
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Workers age of fatal and non-fatal accidents in port cargo handling 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	2	5	8	2	9	5	5	8	5	5	4	3		4	2	5	4	12	7	7	8	5	4	10	129
20-29	70	68	77	72	73	70	43	63	51	46	25	38	34	50	32	38	38	30	31	42	45	29	49	40	1,154
30-39	70	77	79	95	101	84	81	63	84	86	51	60	69	48	50	58	46	43	32	46	65	65	62	49	1,564
40-49	71	71	84	78	61	67	84	58	59	55	59	67	59	61	54	70	65	55	61	58	70	51	67	56	1,541
50-59	162	163	154	133	113	102	104	98	81	67	45	59	57	50	44	59	34	38	61	55	53	55	68	65	1,920
60 years old or more	26	40	44	37	39	42	49	44	45	45	44	32	40	35	23	35	27	31	36	26	43	40	28	32	883
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Workers' number of workplace of fatal and non-fatal accidents in port cargo handling 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	39	56	53	48	43	38	34	43	35	28	18	21	24	20	18	30	20	21	22	20	23	15	22	22	713
10-29	92	100	105	115	110	83	77	94	88	76	61	58	51	75	51	66	47	64	51	54	68	62	52	66	1,766
30-49	41	50	77	62	75	72	60	49	52	62	47	73	51	50	36	41	43	37	58	57	62	57	65	45	1,322
50-99	108	112	114	103	107	93	94	74	69	58	57	49	51	42	36	50	45	40	46	37	60	52	67	50	1,614
100-299	96	85	84	71	46	70	93	68	72	70	38	47	70	54	56	73	50	43	44	61	66	54	69	65	1,545
300 workers or more	25	21	13	18	15	14	8	6	9	10	7	11	12	7	8	5	9	4	7	5	5	5	3	4	231
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Month of fatal and non-fatal accidents in port cargo handling 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	27	34	36	30	28	30	30	23	19	20	23	17	19	21	7	25	22	18	14	16	30	24	20	27	560
February	34	29	33	26	21	37	28	25	24	25	15	24	23	16	17	18	13	19	28	19	33	26	18	14	565
March	37	51	40	33	34	32	36	27	39	21	19	24	36	29	25	24	27	17	16	15	22	16	20	27	667
April	24	48	42	43	35	37	24	25	24	25	22	20	18	19	21	22	17	11	15	15	25	21	23	14	590
May	32	43	35	35	43	28	39	31	29	28	18	26	24	22	23	15	27	13	21	23	24	21	27	19	646
June	28	30	47	30	33	34	41	31	22	26	8	23	18	24	12	25	15	14	12	19	22	20	19	22	575

July	42	28	39	44	41	34	25	25	32	34	21	16	22	25	11	24	14	19	27	23	20	17	28	26	637
August	31	32	37	38	29	27	29	33	25	22	20	17	7	18	26	22	16	20	18	27	21	24	29	23	591
September	35	30	34	32	30	25	20	32	32	23	17	23	27	19	15	20	14	18	16	19	33	21	26	19	580
October	40	36	41	45	32	28	24	33	38	23	26	19	24	25	16	23	17	27	27	21	13	21	24	26	649
November	36	26	31	31	25	31	31	25	20	31	20	24	17	10	10	25	16	19	16	15	25	18	22	16	540
December	35	37	31	30	45	27	39	24	21	26	19	26	24	20	22	22	16	14	18	22	16	16	22	19	591
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

Prefecture of fatal and non-fatal accidents in port cargo handling 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	17	16	24		23		12	17	23	21	16	10	10	18	9	15	7	9	3	7	10	8	8	9	292
Aomori	5	1	1		1		5	3	2	4	2			4	1		3	2	1	1	3	4	2	2	47
Iwate		1	2		2		2		1		1	1	1		1		1						1		14
Miyagi	5	5	9		8		8	7	4	8	3	12	16	11		5	1		1	6	4	4	8	7	132
Akita	1	2	2		1		2			2	1	2	1			1	3	1	1		1		1	1	23
Yamagata																									
Fukushima	2		1		1		4	2	2	2	1	4	1	5			1	1	1	3	3	2	2	6	44
Ibaraki	2	2	5		7		2	6	2	1	2	3	2	4	1	3	2	2	2	4	1	2	4	5	64
Tochigi																									
Gunma																									

Saitama																									
Chiba	11	13	23		10		11	12	17	5	7	9	7	6	5	12	3	7	10	6	9	7	9	10	209
Tokyo	19	21	16		12		13	15	6	18	16	18	19	13	15	18	12	10	18	13	25	16	25	29	367
Kanagawa	54	43	70		48		51	43	46	50	33	34	41	27	19	36	28	22	27	24	32	31	25	12	796
Niigata	3	6	2		1		3	4	5	2	1	3	1	2	4	8	4	1	2	6	7	4	4	4	77
Toyama		2	2		3		2		1	1		1	2	3		1	1	1	2	2			1	1	26
Ishikawa		2	4		1			2	1	2		2		1	2	4			1	1	2	2	1	1	29
Fukui	2	1	4		2		2	2	1		2		1	1	1	1		3	4	2	1	1	3	2	36
Yamanashi																									
Nagano																									
Gifu																									
Shizuoka	11	12	12		9		13	17	13	9	4	11	9	10	5	6	5	5	9	6	7	9	4	6	192
Aichi	52	62	44		45		27	32	35	27	12	30	25	25	27	36	20	20	17	27	34	29	34	29	689
Mie	3	6	3		3		2		3		3			3			4		4	2	2	4	1	1	44
Shiga																									
Kyoto	1	3	2				2	2			1		1		2	1	1	1	1		2	1			21
Osaka	84	94	81		92		71	55	45	54	42	37	38	40	40	35	30	31	31	21	21	24	37	29	1,032
Hyogo	30	29	38		32		38	23	36	33	24	12	19	23	21	19	14	22	17	18	19	15	16	24	522
Nara																									
Wakayama	2	3	3				1	1	3		2		2	1	1		2		1		2	3	1	2	30
Tottori	2				1			4	1		1	2	3	1		2			1	1	2		2		23

Shimane					1		1		1	1	1	1			1			1							8
Okayama	7	3	4		4		6	7	3	1	2	4	4	2	1	3	1	2	1	4	2	1	3	1	66
Hiroshima	22	17	19		11		15	14	20	10	12	9	8	7	8	11	10	16	6	13	12	18	7	7	272
Yamaguchi	7	5	8		4		7	9	3	6	1	2	4	1		2	2	2	4	2	4	4	4	1	82
Tokushima	2	2			4		2	5	3	1	4	1	2	1	1	2	1		1	1		2	5	3	43
Kagawa	6	7	5		6		7	9	5	9	3	5	5	2	2	5	10	7	3	7	7	2	6	2	120
Ehime	4	7	10		6		4	4	4	2	4	1	5	4	3	4	9	3	7	3	8	4	7	3	106
Kochi	6	2	2		2		1			2		2				1	2			1	1	1		1	24
Fukuoka	17	28	22		31		25	15	17	18	13	18	11	17	17	15	19	21	17	24	25	23	21	13	427
Saga								1										1	2	4	1	2	1	6	18
Nagasaki	2	2	3		2		7	4	1	4	3	5	2	3	4	4	3	4	5	9	11	7	8	5	98
Kumamoto	3	1	3		2			1	1	2			2		1		1	3	3	2		3	3	1	32
Oita	1	4	1		3		3	1	1				1			2		2	2		2	1	2	3	29
Miyazaki	1	3	4					1	1										1	1			2	1	15
Kagoshima	12	13	11		11		10	10	7	8	9	10	12	10	7	9	8	8	15	9	17	8	11	15	230
Okinawa	5	6	6		7		7	6	11	1	2	10	4	3	6	4	6	1	7	4	7	3	9	10	125
total	401	424	446	417	396	370	366	334	325	304	228	259	259	248	205	265	214	209	228	234	284	245	278	252	7,191

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)

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Fatal accidents in port cargo handling service in Japan in 1999-2022

port cargo handling service industry Code No.050202

Type of fatal accidents in port cargo handling 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	2	1	4	3		2	1	1	3	2	5		3			1		1	1			1			31
falling to same level			1																	1	1				3
crash																									
struck by flying or falling object	3	2		1	2	2	1	4	2	1						1		1	1					1	22
collapse	1	1	3	1	3			1	1			1	1		1							1	1		16
crashed by	1		4	2	2	1	1	5	1	1		1		1		1		2	1		2		1		27
caught in/between		2	3	2	2	2	1	2	2	1	4	2	2	3	2		5	2	3	1	2	1	1		45
cut																									
injury to the sole of the foot																									

drown	1	1		3	1	1				1	1		8					1	1				1		20
contact to high/low-temperature															1	1									2
contact to harmful substance		1					1										1								3
electric shock																									
explosion																									
burst																									
fire																									
traffic accident (public road)	1						1			1			1								1				5
traffic accident (others)															1										1
reaction to motion/improper motion																									
others													1												1
unclassifiable							1							1											2
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Causal agents (large) of fatal accidents in port cargo handling 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							1		1			1					2		1		1				7
crane, conveying machine	7	3	6	6	3	4	3	9	3	4	5	2	4	4	3	2	3	4	4	2	5	1	1		88
other equipment	1		2	1	3	1		1		1					1								1	1	13
temporary buildings, establishments		1	2		2		1		2		2		2					2	1			1	1		17
substance, material			1			1		1	1																4
load	1	3	4	4	1	2		2	2	2	2	1	1		1	1						1			28
environment		1		1	1		1				1		8			1	1	1	1				1		18
others							1						1	1											3
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Causal agents (middle) of fatal accidents in port cargo handling service 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																									
power transmission mechanism																									

woodworking machine																									
construction machine							1		1			1					2		1		1				7
metal manufacturing machine																									
general machine																									
mobile silviculture machine																									
crane	4	1	2	1	1	1	2	4	1	1	1	1		2	2	1	1	2	1		2	1			32
conveying machine	2	1	3	2	2	2		5	1	2	3	1	2	2			2	2	3	2	3		1		41
vehicle	1	1	1	3		1	1		1	1	1		2		1	1									15
pressure vessel																									
chemical facilities																									
welding equipment																									
kiln, caldron																									
electric equipment																									
human power machine, tools																									
tools	1		2	1	3	1		1							1								1	1	12
other equipments,																									

facilities										1															1
temporary buildings, establishments		1	2		2		1		2		2		2					2	1			1	1		17
hazards, harmful substances																									
materials			1			1		1	1																4
load	1	3	4	4	1	2		2	2	2	2	1	1		1	1						1			28
natural environment		1		1	1		1				1		8			1	1	1	1				1		18
other causal agent																									
no causal agent													1												1
unclassifiable							1							1											2
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Causal agents (small) of fatal accidents in port cargo handling 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																									
power transmission mechanism																									

circular sawing machine																									
band sawing machine																									
wood planer machine																									
hollow chisel mortiser, wood borer																									
chamfering machine, router, woodworking milling machine																									
chain saw																									
other woodworking machines																									
leveling, transporting or loading machine							1					1					2		1		1				6
excavating machine									1																1
foundation work machine																									
hardening machine																									

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

injection molding machine																									
food manufacturing machine																									
printing machine																									
industrial robot																									
other general power machines																									
felling machine																									
mobile logging machine																									
skyline yarding machine																									
other mobile silviculture machine																									
crane	2		1					2	1		1			1					1		1				10
mobile crane	2	1		1	1		2										1				1				9
derrick crane																									
elevator, lift																									
cargo lifting appliance			1			1		2		1		1		1	2	1		2				1			13
gondola																									

lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane																									
truck	1	1			1					1	1		1								2				8
forklift	1		3	2	1	2		4	1	1	1			1			2		2				1		22
railway equipment																									
conveyor											1		1	1				1	1	1					6
loader																									
straddle carrier												1						1		1	1				4
rough terrain hauler																									
other powered conveying machines								1																	1
cars, bus, motorcycle				1			1																		2
railway vehicle																									
other vehicles	1	1	1	2		1			1	1	1		2		1	1									13
boiler																									

pressure vessel																									
other pressure vessels																									
chemical facilities																									
gas welding equipment																									
arc welding equipment																									
other welding equipment																									
kiln, caldron																									
industrial dryer																									
other kiln, caldron																									
transmission																									
electric power facilities																									
other electrical equipment																									
human power cranes																									
human power hauling equipment																									

human power machine																									
hand tool																									
ladder				1																					1
slinging tool			1					1																1	3
other tools	1		1		3	1									1								1		8
other equipment, facilities										1															1
scaffolding																									
timbering																									
stairs, landing stage																		1	1						2
opening			1								1														2
roof, beam, haze, crossbeam, principal rafter																									
working platform, boot board		1	1				1						1												4
passage									2																2
building, establishment					1						1		1												3
other temporary buildings,					1													1				1	1		4

establishments																									
explosive substance																									
inflammable substance																									
inflammable gas																									
harmful substance																									
radiation																									
other hazards, harmful substances																									
metal material						1		1	1																3
lumber, bamboo																									
stone, sand, substance																									
other materials			1																						1
load	1	3	4	4	1	2		2	2	2	2	1	1		1	1						1			28
machine/equipment as load																									
natural ground, rock																									
standing tree																									
water				1							1		7					1	1				1		12
abnormal																									

environment		1					1										1								3
high/cold temperature environment																1									1
other environments					1								1												2
other causal agent																									
no causal agent													1												1
unclassifiable							1							1											2
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Workers age of fatal accidents in port cargo handling 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								1	1		1							1							4
20-29			3	2	1	1		2		1			1	1			1	1			2	3			19
30-39	3		2		3	1	1	3	3		3		4	1			4	1	1						30
40-49		1	1	2	1	1	1		1		2	1	2	1	3	2		1	4	1	3				28
50-59	3	6	4	7	4		3	3	2	4	1	2	6	2	2	1	1	1	2	1	1		2	1	59
60 years old or more	3	1	5	1	1	5	2	4	2	2	3	1	3			1		2					2		38
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Workers' number of workplace of fatal accidents in port cargo handling 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	2	1	5	1	2	1				1	1	1	1			1	1	2	2				2		24
10-29	2	2	2	4	4	3	1	4	4	1	3	1	1	1		2	1	2	2	1	1		2	1	45
30-49		3	3	3	2		2	4	1	2	2		4	1	3		1	1	3		1	1			37
50-99	3	1	1	2	1	3	2	1		1	2	2	5	1	1		1	2		1	1	1			32
100-299		1	3	2		1	2	4	4	2	1		5		1	1	2				3	1			33
300 workers or more	2		1		1						1			2											7
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Month of fatal accidents in port cargo handling 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	2	3	1	1	1	1	1		3				1				2	1	1		3				21
February		1			1			1						1						1		1			6
March			3		2	2	1	2	2			1	9	2	2										26
April	1	1		1	2			1		1	1				1	1		1							11
May			1	2		1	1	1			1	2	2	1			1	1	1				1		16
June		1	1	1	1	1	2	1						1			1		1	1	1	1			14

July			2	2		1		2	1	2	2		1			2		1	1					1	18
August	2	1	2	1	1				1	1	1				2			1	1		1	1			16
September	1		3	2				2		2		1				1			1						13
October			1	1	1		1	1			3		3				1	2					1		15
November	1	1	1	1		1	1	2	1												1		2		12
December	2				1	1			1	1	2						1		1						10
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

Prefecture of fatal accidents in port cargo handling 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		2	3	1	1	1				1	1		1			1								13
Aomori																					1				1
Iwate																									
Miyagi					1								8												9
Akita																									
Yamagata																									
Fukushima									1										1						2
Ibaraki					1			1								1	1								4
Tochigi																									
Gunma																									

Saitama																									
Chiba		1	2					2	2					1		2		1					2		13
Tokyo	2	3		1	3	1					1		2		1				1						15
Kanagawa	3	1	5	1		2	2	3		3	3	1	2				2	1		1	1				31
Niigata									1																1
Toyama																									
Ishikawa																									
Fukui																									
Yamanashi																									
Nagano																									
Gifu																									
Shizuoka						1																			1
Aichi		1		3	2	1		3	1						1			1			1	2		1	17
Mie			2																						2
Shiga																									
Kyoto																									
Osaka			2	1		1		1	2	2	2	1			1		1		1						15
Hyogo				1		1		1			2	1	1		1		1	2				1			12
Nara																									
Wakayama											1														1
Tottori													1	1											2

Shimane															1										1
Okayama													2												2
Hiroshima	1								2					1											4
Yamaguchi	1						1														1				3
Tokushima																							1		1
Kagawa																		1							1
Ehime								1													1				2
Kochi																									
Fukuoka		2			1		1			1										1	1				7
Saga																			1						1
Nagasaki							1												1						2
Kumamoto				1															1						2
Oita							1											1							2
Miyazaki																									
Kagoshima	1							1		1				1		1			1						6
Okinawa			2	1	1																		1		5
total	9	8	15	12	10	8	7	13	9	7	10	4	16	5	5	4	6	7	7	2	6	3	4	1	178

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

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