

Fatal and non-fatal accidents in ship building in Japan in 1999-2022

ship building industry Code No.011501

Type of accidents in ship building 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	191	188	183	196	192	194	172	190	184	186	156	142	98	134	95	98	125	129	118	110	119	110	81	86	3,477	
falling to same level	74	72	76	81	83	69	76	62	68	76	80	66	42	42	44	46	55	56	54	66	53	40	41	37	1,459	
crash	45	34	39	33	43	46	33	40	37	31	36	33	28	27	20	18	28	13	17	15	25	22	25	15	703	
struck by flying or falling object	95	121	125	117	102	104	95	106	97	121	78	78	64	72	66	61	59	60	57	49	60	56	47	34	1,924	
collapse	31	33	30	27	29	24	24	26	41	31	26	26	17	22	16	18	15	20	23	14	15	16	11	11	546	
crashed by	54	55	61	59	39	46	42	47	56	60	44	46	37	26	23	42	25	33	22	35	26	26	18	21	943	
caught in/between	114	133	116	88	100	96	92	100	113	91	101	87	78	68	62	59	68	55	71	78	61	70	50	43	1,994	
cut	52	39	38	38	21	27	28	22	32	35	21	21	23	11	15	18	22	23	17	9	20	19	16	17	584	
injury to the sole of the foot	1	4	2	6			1	3	2	1	1	1				1	1	3	1	1	2	1	3		35	
drown		1			2	1	2		2				12	1		1										22
contact to high/low-	20	17	21	23	20	17	29	28	15	25	25	20	21	15	24	16	22	22	25	20	16	21	19	12	493	

temperature																									
contact to harmful substance	8	7	3	9	6	3	6	5	5	4	2	4	3		3	4	7	2	8	3		6	2	1	101
electric shock	5	4	2	2		2	2	4	7	7	1		4	2	1		5	1		1	1	4		1	56
explosion	8	3	3	3	5	7	3	1	9	2		1	4	6		8	2		3	1	2		2	3	76
burst	1			3	2	1	1	2	1	1			2				1		1	1	3		2		22
fire	5	4	1	2	1	4	5	7	4	6	10	1	5	7	5	6	3	2	1	3	1	4	3	3	93
traffic accident (public road)	3	11	4	1	3	17	2	8	3	5	2	8	1	3	3	2	6		2	2	4	3	3	2	98
traffic accident (others)		1		1	1			1					1	1	1		1								8
reaction to motion/improper motion	47	30	36	26	31	19	35	19	37	25	28	24	22	19	13	17	15	19	16	27	23	28	17	17	590
others	5	2	5	3	3	6	3	5	4	2	1	2	4	3		2	4	1		1	2	31	13	1	103
unclassifiable					1					2				2					1	1			2		9
total	759	759	745	718	684	683	651	676	717	711	612	560	466	461	391	417	464	439	437	437	433	457	355	304	13,336

Causal agents (large) of fatal and non-fatal accidents in ship building 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	87	74	76	83	54	64	52	47	66	60	45	50	51	39	35	34	35	40	37	31	35	33	34	26	1,188

construction machine	6	5	8	3	3	7	1	7	6	6	1	7	2	5	2	1	3	3	4	2	8	6	4	2	102
metal manufacturing machine	43	41	44	45	34	38	34	23	36	35	26	28	33	23	20	22	20	22	24	19	17	19	20	13	679
general machine	10	9	9	12	7	9	6	8	11	8	11	8	9	8	9	6	4	6	2	4	3	2	4	5	170
mobile silviculture machine																									
crane	53	48	68	52	56	44	51	60	76	68	53	49	43	46	30	35	26	26	34	27	36	38	18	20	1,057
conveying machine	19	24	28	25	25	20	34	27	29	21	23	21	14	17	10	15	20	12	11	16	15	16	9	15	466
vehicle	28	27	30	18	27	38	22	22	26	30	28	21	13	19	11	23	19	15	16	20	15	14	18	11	511
pressure vessel	2	2	2	3	1		1	1		1		1			1	1			4	1	2		1		24
chemical facilities										1														1	2
welding equipment	24	16	17	21	14	15	25	21	19	23	20	11	18	21	19	20	18	11	18	17	9	9	12	9	407
kiln, caldron	1		1			1	2			1															6
electric equipment	5	5	5	4	2	3	4	3	7	8	2	2	7	3	2	1	2	2	2		4			2	75
human power machine, tools	38	30	41	21	31	39	27	18	8	23	17	18	19	16	20	8	14	10	10	14	18	11	16	12	479
tools	98	103	100	88	79	84	83	85	87	109	89	74	49	56	49	48	49	59	45	57	55	62	44	48	1,700
other equipments,	22	26	18	30	16	24	11	20	17	20	16	10	10	10	20	16	11	14	14	15	15	20	17	14	406

facilities																									
temporary buildings, establishments	212	224	202	207	239	225	188	187	198	205	185	176	120	138	116	113	144	132	139	133	142	126	101	83	3,935
hazards, harmful substances	15	12	8	16	16	14	12	13	17	5	8	8	10	4	6	12	11	6	12	5	4	5	6	6	231
materials	108	122	103	123	89	84	97	126	130	108	87	84	63	64	55	57	87	80	69	57	47	43	45	40	1,968
load	21	24	23	14	14	16	23	28	19	10	18	18	16	13	4	18	14	10	14	19	17	18	7	9	387
natural environment	6	7	5	4	8	2	5	9	3	6	6	6	19	4	9	4	4	9	7	7	9	19	5	4	167
other causal agent	4	4	6	2	3	4	5	2	1	2	3	1	4	3	1	7	1	3	1	4	2	29	12	1	105
no causal agent	16	11	12	7	10	6	9	7	14	8	12	10	9	5	3	4	9	9	3	12	7	12	9	3	207
unclassifiable										2			1	3		1		1	1	2	1	2	1		15
total	759	759	745	718	684	683	651	676	717	711	612	560	466	461	391	417	464	439	437	437	433	457	355	304	13,336

Causal agents (small) of fatal and non-fatal accidents in ship building 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		4				1			1				2		1	1		14	
power transmission mechanism					1		3	2	4	2	3	3	4	2		1		3	3		2	3		2	38	
circular sawing			7		5		3	4	2	5	3	1				1	2	5	3	2	3	5	2	3	1	57

lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane			6		5		1	4	6	4	4	1	5	4	4	5	2	4	7	3	6	6	3	1	81
truck			10		8		14	8	14	5	12	10	4	6	6	4	9	5	2	5	4	2	3	5	136
forklift			13		9		10	13	13	11	7	8	8	10	1	9	7	4	6	4	7	7	6	7	160
railway equipment			1		2		1				1				1		1		1		1			9	
conveyor			1		1		2	4		1	1	1	1	1	1		1	1	3	2			1	23	
loader			1											1										2	
straddle carrier																									
rough terrain hauler																									
other powered conveying machines			2		5		7	2	2	4	2	2	1		1		4	1	2	3	2	6		2	48
cars, bus, motorcycle			7		6		3	8	8	6	1	8	2	7	4	3	6	2	3	2	5	4	5	4	94
railway vehicle																1								1	
other vehicles			23		21		19	14	18	24	27	13	11	12	7	19	13	13	13	18	10	10	13	7	305
boiler						1	1							1				1						4	
pressure vessel			1												1					1				3	

other pressure vessels			1		1					1		1							3	1	1		1		10
chemical facilities										1														1	2
gas welding equipment			4		8		14	11	6	10	10	4	11	11	8	7	11	2	12	8	3	5	3	3	151
arc welding equipment			12		5		10	9	11	11	10	7	7	9	11	11	6	9	6	8	5	3	7	4	161
other welding equipment			1		1		1	1	2	2				1		2	1			1	1	1	2	2	19
kiln, caldron							2			1															3
industrial dryer																									
other kiln, caldron			1																						1
transmission			1		1		2		2	4	2		2	2			1	1	1		2			1	22
electric power facilities					1			1	4	3		1	1		1		1				2			1	16
other electrical equipment			4				2	2	1	1		1	4	1	1	1		1	1						20
human power cranes			9		10		8	2		6	2	2	1	4	2	2	2	2	3	2	9	4	1	4	75
human power hauling equipment			5		4		4	4	2	3	1	4	1	3	4	2	2	2	1	1	2		3		48
human power			2		2		1	2	1	1	1	2	1			1	1	3	1	1					20

machine																									
hand tool			25		15		14	10	5	13	13	10	16	9	14	3	9	3	5	10	7	7	12	8	208
ladder			49		47		44	43	36	49	35	31	23	29	24	26	27	32	32	31	26	35	28	26	673
slinging tool			26		17		17	26	24	28	27	16	12	15	11	11	7	13	6	11	10	13	6	9	305
other tools			25		15		22	16	27	32	27	27	14	12	14	11	15	14	7	15	19	14	10	13	349
other equipment, facilities			18		16		11	20	17	20	16	10	10	10	20	16	11	14	14	15	15	20	17	14	304
scaffolding			41		31		39	39	34	38	25	26	13	23	15	20	25	31	27	26	25	19	11	12	520
timbering					1		1															1			3
stairs, landing stage			18		25		19	17	21	22	37	17	14	14	11	18	24	24	16	13	28	12	10	10	370
opening			10		13		9	9	4	10	8	9	7	11	6	5	6	3	5	7	3	10	7	6	148
roof, beam, haze, crossbeam, principal rafter					3			5	1	1		2	2	1		1	1	1		1		1		1	21
working platform, boot board			15		27		17	21	18	20	17	21	7	21	9	18	12	10	15	18	15	12	14	7	314
passage			25		33		21	11	18	19	27	22	17	18	23	15	25	24	23	22	31	25	18	19	436
building, establishment			76		91		62	58	76	73	58	61	47	30	37	29	38	21	41	34	29	36	24	24	945
other temporary buildings, establishments			17		15		20	27	26	22	13	18	13	20	15	7	13	18	12	12	11	10	17	4	310

explosive substance																									
inflammable substance			2		10		5	2	4	1	4	3	4		3	10	4	3	3	1	1	1	2	1	64
inflammable gas			3		1			2	7	1		1	4	3		1		1	1	2	2	1	2	4	36
harmful substance			2		3		6	4	4	3	1	2	1	1	1		5	2	3	1			1	1	41
radiation																									
other hazards, harmful substances			1		2		1	5	2		3	2	1		2	1	2		5	1	1	3	1		33
metal material			85		79		86	113	119	99	79	78	58	61	51	52	76	74	67	53	44	39	40	39	1,392
lumber, bamboo			14		7		9	8	7	5	6	5	3	2	3	4	8	4	1	4	2	3	3	1	99
stone, sand, substance			1		1					1	1					1						1			6
other materials			3		2		2	5	4	3	1	1	2	1	1	1	2	2	1		1		2		34
load			18		8		18	14	10	6	11	11	10	9	2	17	10	8	11	15	17	13	6	8	222
machine/equipment as load			5		6		5	14	9	4	7	7	6	4	2	1	4	2	3	4		5	1	1	90
natural ground, rock								1																	1
standing tree																									
water			1		2				1				12	1	1			1	1		1				21
abnormal environment								1		1	1		1		1	2			1	1		3			12

high/cold temperature environment			2		3		3	6	1	4	4	4	3	3	3	1	3	5	5	3	5	11	3	3	75
other environments			2		3		2	1	1	1	1	2	3		4	1	1	3		3	3	5	2	1	39
other causal agent			6		3		5	2	1	2	3	1	4	3	1	7	1	3	1	4	2	29	12	1	91
no causal agent			12		10		9	7	14	8	12	10	9	5	3	4	9	9	3	12	7	12	9	3	167
unclassifiable										2			1	3		1		1	1	2	1	2	1	15	
total	759	759	745	718	684	683	651	676	717	711	612	560	466	461	391	417	464	439	437	437	433	457	355	304	13,336

Workers age of fatal and non-fatal accidents in ship building 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	19	23	11	20	13	14	20	15	15	23	20	18	9	14	5	9	14	6	7	5	10	11	6	5	312
20-29	101	113	90	94	101	102	104	127	124	131	104	102	112	84	87	76	88	91	95	80	75	83	47	40	2,251
30-39	84	99	109	84	97	80	97	109	119	132	119	120	91	113	71	75	113	94	90	107	103	115	90	69	2,380
40-49	151	161	141	158	102	127	92	87	89	78	76	63	62	64	67	80	77	86	79	93	100	89	81	61	2,264
50-59	281	250	262	236	242	237	216	219	227	212	155	138	99	86	62	70	79	66	69	58	63	82	58	59	3,526
60 years old or more	123	113	132	126	129	123	122	119	143	135	138	119	93	100	99	107	93	96	97	94	82	77	73	70	2,603
total	759	759	745	718	684	683	651	676	717	711	612	560	466	461	391	417	464	439	437	437	433	457	355	304	13,336

Workers' number of workplace of fatal and non-fatal accidents in ship building in 1999-2022

Chiba	14	15	13		13		13	10	9	12	11	7	4	12	4	3	5	3	6	2	5	3	2	1	167
Tokyo	9	4	6		1		1	2	1		2		2	1		2	1	1	1	2	1	3	2	1	43
Kanagawa	31	32	37		30		24	26	32	33	20	33	24	21	25	12	18	19	20	20	16	17	8	10	508
Niigata	4	2	4		4		6	4	5	6	4	5		1	2	2	1	1		1	2	2	3	1	60
Toyama	1	1	2				1				1	1							1	1					9
Ishikawa	6	2	7		2			1		1	2	1			2	1	1	2	3	1	1	1	2	2	38
Fukui	1								1		1			1			3				1			1	9
Yamanashi																									
Nagano									1	1			1												3
Gifu																									
Shizuoka	21	9	7		8		10	11	20	18	11	6	8	9	11	9	8	10	3	12	9	7	7	10	224
Aichi	10	9	10		7		7	15	21	22	10	7	10	6	6	3	11	6	5	2	9	8	6	3	193
Mie	27	16	20		18		16	19	15	20	13	9	7	8	10	4	12	5	9	7	9	4	9	7	264
Shiga	1	1																		1					3
Kyoto	2	4	6		3			1	3	5	5	2	4				5		3	5	2	3	1		54
Osaka	8	7	5		13		8	7	7	2	3	4	5	4		4	5	3	4	4	1	6	1	1	102
Hyogo	41	47	41		32		32	30	38	32	19	25	14	25	13	15	18	19	12	14	11	17	16	7	518
Nara												1					1								2
Wakayama	6	10	8		5		7	4	6	6	5	2	3	3	4	3	5	4	4	2	3	5	4	4	103
Tottori	1		3		1			1	1	3		1							2	1		2	1		17
Shimane	8	3	5					2		1				1		1	4	1		2				1	29

Okayama	11	6	19		8		7	5	8	9	12	10	5	8	5	10	8	1	14	4	5	4	3	1	163
Hiroshima	128	136	137		142		131	129	127	142	96	108	88	92	67	76	76	83	77	78	100	85	51	48	2,197
Yamaguchi	31	32	28		30		24	25	27	31	31	14	11	14	14	13	16	10	16	12	14	11	20	11	435
Tokushima	22	13	10		9		11	19	16	15	19	11	8	7	7	3	8	9	6	8	5	4	5	4	219
Kagawa	45	45	35		32		39	42	55	39	45	29	20	24	18	23	20	23	17	18	24	29	20	23	665
Ehime	63	83	91		100		97	69	94	94	63	65	60	52	41	53	61	49	52	47	52	54	48	46	1,434
Kochi	20	24	20		22		15	22	19	23	19	23	13	11	7	17	13	10	11	14	14	15	8	7	347
Fukuoka	11	17	15		7		17	8	16	15	12	12	10	4	11	10	8	8	10	11	8	8	5	3	226
Saga	5	4	7		4		7	11	9	14	8	7	10	10	9	13	13	13	11	21	16	9	14	9	224
Nagasaki	88	83	65		78		56	71	61	49	67	74	54	57	42	55	62	57	63	55	51	60	58	36	1,342
Kumamoto	29	20	22		9		10	21	9	13	4	10	7	11	9	11	6	12	13	16	11	37	13	9	302
Oita	46	47	39		45		48	55	51	49	70	40	34	30	31	24	30	34	32	37	25	15	19	28	829
Miyazaki	3	1	2						1		1	2	2	3			1	1	1	1	1	1		1	22
Kagoshima	10	11	12		9		8	11	9	9	13	6	8	6	4	4	4	7	8	4	5	11	3	4	166
Okinawa		2	2				5	2	2	1	1	2	1	3		3	1			1			3	2	31
total	759	759	745	718	684	683	651	676	717	711	612	560	466	461	391	417	464	439	437	437	433	457	355	304	13,336

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)

machine	2		1	1	2			1		1	1	1	1	1				1		1					14
crane, conveying machine	3	2	3	4	4	2	2	4	8	3	1	4	2	2	2	2		3	2	6	1	2		2	64
other equipment	1	2	3	1	1	2	3	5	4	5	5	1	2	6	2		3	2	3	4	1	2		2	60
temporary buildings, establishments	4	5	9	5	4	5	6	8	5	4	5	6	4	5	5	3	2	2		3	2	5	2	2	101
substance, material	3	2	5	2	6	4	2	3	6	5	1		4	1		1	3			1		2		51	
load				1						1		1					2				1	1		7	
environment		2			1	1				2			12	1	2				1		1	2	1	26	
others								1								1						2		4	
total	13	13	21	14	18	14	13	22	23	21	13	13	25	16	11	7	10	7	7	14	7	16	3	6	327

Causal agents (middle) of fatal accidents in ship building 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
power transmission mechanism											1														1
woodworking machine										1															1
construction machine	2		1	1	1			1											1		1				8

metal manufacturing machine												1	1	1										3	
general machine																									
mobile silviculture machine																									
crane	2		3		3	1		3	5	1	1	2	1		1			2	1	2		1		2	31
conveying machine	1			2		1		1	1	2		1		2	1	1			1	3		1			18
vehicle		2		2	1		2		2			1	1			1		1		1	1				15
pressure vessel																			1						1
chemical facilities																									
welding equipment			1				1	1	4	2		1		3			3	1	2	1		1		1	22
kiln, caldron																									
electric equipment		1					1	1						1							1				5
human power machine, tools			1			1																			2
tools	1	1	1	1			1	3		3	5		1	1	2					3				1	24
other equipments, facilities					1	1							1	1				1				1			6
temporary buildings, establishments	4	5	9	5	4	5	6	8	5	4	5	6	4	5	5	3	2	2		3	2	5	2	2	101
hazards, harmful substances	3	2	2	1	5	3	1	1	6	2	1		2			1				1		2			33

machine																									
skyline yarding machine																									
other mobile silviculture machine																									
crane	1		3		3			2	4	1	1	2	1		1			2	1	2			1	25	
mobile crane						1			1													1		1	4
derrick crane																									
elevator, lift																									
cargo lifting appliance																									
gondola	1																							1	
lumberyard equipment, logging cableway																									
simple skyline yarding equipment																									
other powered crane								1																1	
truck				1						1				1	1	1						1			6
forklift	1					1		1	1	1		1		1						2				9	
railway equipment				1																				1	
conveyor																				1				1	

other materials																									
load			1							1					2				1	1				6	
machine/equipment as load									1															1	
natural ground, rock																									
standing tree																									
water		1			1	1						11	1											15	
abnormal environment		1								1		1		1				1			2			7	
high/cold temperature environment										1				1						1		1		4	
other environments																									
other causal agent																1								1	
no causal agent																									
unclassifiable								1													2			3	
total	13	13	21	14	18	14	13	22	23	21	13	13	25	16	11	7	10	7	7	14	7	16	3	6	327

Workers age of fatal accidents in ship building 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			1	1										1			7

20-29		1	3	2	1	1	3	5	4	2	1	1	4		2	1	2		1	1	1	1			37
30-39	1		5		2		2	2	2	2	2	2	1	3		1	3	1	2	5	1	3		1	41
40-49	1	3	1	4		4	1	3	3	1	2	2	5	2	3	1		1		2	1	4	1	1	46
50-59	6	2	7	5	11	4	3	7	9	7	6	3	10	5	1	1	1	2		2		3	1	3	99
60 years old or more	5	7	4	3	4	4	3	4	5	9	1	4	5	6	5	3	4	3	4	4	4	4	1	1	97
total	13	13	21	14	18	14	13	22	23	21	13	13	25	16	11	7	10	7	7	14	7	16	3	6	327

Workers' number of workplace of fatal accidents in ship building 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	4	4	6	3	6	5	6	6	5	4	2	2	5	5	3	4	6	3	2	4	3	6	3	3	100
10-29	4	5	8	4	6	4	5	10	9	8	7	5	12	7	4	3	2	2	2	5	3	4		1	120
30-49	1	2	2	2	3	1		2	2	2		3	2	2	2			2		3		2			33
50-99	1	2	1	2	2	1	1	1	3		1	1	1				2		1			1			21
100-299	2		1	2		1		1	1	2		1	1							2		1		2	17
300 workers or more	1		3	1	1	2	1	2	3	5	3	1	4	2	2				2		1	2			36
total	13	13	21	14	18	14	13	22	23	21	13	13	25	16	11	7	10	7	7	14	7	16	3	6	327

Month of fatal accidents in ship building 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			5	1	1		2		2	2	4	2	1	1	1	1	2		1	1		1		2	30

Yamagata																							
Fukushima									1														1
Ibaraki																							
Tochigi																							
Gunma																							
Saitama																							
Chiba		1	1	1			2						3			2							10
Tokyo		1													1				1				3
Kanagawa		1		1					2	1		1	1	1					1			1	10
Niigata					1				1														2
Toyama																							
Ishikawa																							
Fukui																							
Yamanashi																							
Nagano																							
Gifu																							
Shizuoka	1	1						1	1	1									1				6
Aichi				1				1	2	1												1	6
Mie		1	1		1	1	1		1							1							7
Shiga																							
Kyoto				1						1									1				3

total	13	13	21	14	18	14	13	22	23	21	13	13	25	16	11	7	10	7	7	14	7	16	3	6	327
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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