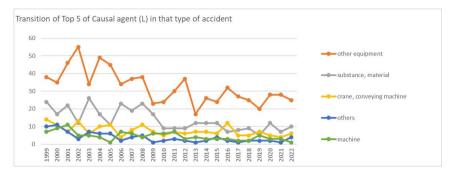
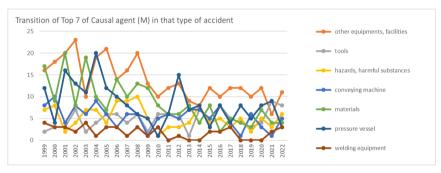
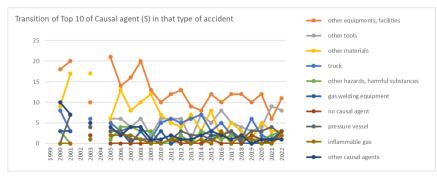
## Transition of Causal agent (L, M, S) of fatal & non-fatal accident (burst) in 1999-2022



Transition of Causal agent (L) of fatal & non-fatal accident (burst) in 1999-2022



Transition of Causal agent (M) of fatal & non-fatal accident (burst) in 1999-2022



Transition of Causal agent (S) of fatal & non-fatal accident (burst) in 1999-2022

Causal agent (L)	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
other equipment	38	35	46	55	34	49	45	34	37	38	23	24	30	37	17	26	24	32	27	25	20	28	28	25	777
substance, material	24	17	22	12	26	17	11	23	19	23	17	9	9	9	12	12	12	7	8	9	5	12	7	10	332
crane, conveying machine	14	11	7	13	6	10	11	4	8	11	7	5	7	6	7	7	6	12	5	5	7	5	4	6	184
others	10	11	7	3	7	6	6	2	4	5	1	2	3	2	1	2	4	2	1	2	2	2	1	4	90
machine	7	9	11	5	5	4	1	7	6	4	6	6	7	3	4	3	3	3	2	2	5	3	3	1	110
load	1	1	1	1	7	3	2	5	1	2	1	2		2	2	1	3	4	1	1	1		1		43
environment	2						1						2	1		1	1					1			9
temporary buildings, establishments	1	1							1										1		2				6
total	97	85	94	89	85	89	77	75	76	83	55	48	58	60	43	52	53	60	45	44	42	51	44	46	1,551

Transition of Causal agent (M) of fatal & non-fatal accident (burst) in 1999-2022

Causal agent (M)	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
other equipments,	16	18	20	23	10	19	21	14	16	20	13	10	12	13	9	8	12	10	12	12	10	12	6	11	327
facilities																									

tools	2	3	3	7	2	4	6	6	4	6	2	6	6	6	1	7	5	8	5	4	3	4	9	8	117
hazards, harmful substances	7	8	2	4	7	7	4	9	9	10	5	1	3	3	4	8	4	5	3	5	2	5	3	6	124
conveying machine	8	10	4	8	6	9	6	3	6	6	1	5	6	5	7	7	5	8	4	1	6	3	1	5	130
materials	17	9	20	8	19	10	7	14	10	13	12	8	6	6	8	4	8	2	5	4	3	7	4	4	208
pressure vessel	12	4	16	13	11	20	12	10	8	6	5	1	6	15	7	8	3	8	4	8	5	8	9	3	202
welding equipment	4	3	3	2	4	1	3	3	1	3	1	3		1			2	2	3				2	3	44
no causal agent					2								1				1				2	1		3	10
other causal agents	10	10	7	3	5	5	4	2	4	4	1	1	2	1	1	2	3	2	1	2		1	1	1	73
vehicle	4	1	3	5		1	4	1	2	3	5		1				1	4	1	4	1		2	1	44
metal manufacturing machine	1	1	1	1	3		1		1	1	1	1	2			2	1		1			2		1	21
general machine	5	7	6	3		2		4	5	3	2	3	3	3	3		2	3	1	2	3	1	3		64
load	1	1	1	1	7	3	2	5	1	2	1	2		2	2	1	3	4	1	1	1		1		43
chemical facilities	1	3	2	2	2	1	1		3	3	1	1	1	2		1	1	3	1			1	1		31
electric equipment	1	4	2	1	1	2	2	1	2			2	4			1						1			24
construction machine	1	1	3		1	2		3			3	2	1		1	1					2				21

kiln, caldron	2			7	2	1		3			1				1	1		1			1	20
human power					2	1				1		1		1			2		2	2		12
crane	2						1		2	1			1							2	1	10
natural environment	2						1					2	1	1	1					1		9
unclassifiable		1				1	2		1		1		1									7
temporary buildings, establishments	1	1						1									1		2			6
engine			1	1																		2
power transmission mechanism												1										1
woodworking machine					1																	1
mobile silviculture machine																						

Transition of Causal agent (S) of fatal & non-fatal accident (burst) in 1999-2022

Causal agent (S)	1999 2000		2002 20		2005 200	6 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	total	
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other equipments,	18	20	10	21	14	16	20	13	10	12	13	9	8	12	10	12	12	10	12	6	11	269
facilities	10	20		21	14	10	20	13	10	12	13		0	12		12	12		12			209
other tools	3	3	2	6	6	4	6	2	6	6	6	1	7	5	8	5	4	3	4	9	8	104
other materials	9	17	17	6	13	8	10	12	7	5	4	7	3	8	1	5	3	1	5	3	3	147
truck	8	3	6	5	3	4	4	1	5	6	5	6	7	3	5	2	1	6	2	1	3	86
other hazards, harmful substances	3		2	1	4	4	3	3			2		3	2	1	2	1	1	1	2	3	38
gas welding equipment	3	3	4	3	3		3		3		1			2	2	3				1	3	34
no causal agent			2							1				1				2	1		3	10
pressure vessel		7	4	3	3	1	1	1		1	3	2	2	1	2	3	1	3	3	4	2	47
inflammable gas			1	2	2	2	1			1	1		1		3		2	1			2	19
other causal agents	10	7	5	4	2	4	4	1	1	2	1	1	2	3	2	1	2		1	1	1	55
inflammable substance	3	1	2	1	2	2	2	2		2		3	2	2		1	1		2	1	1	30
cars, bus, motorcycle		2		4	1	2	3	5		1				1	3	1	4	1			1	29
grinding machine, buffing machine			2	1				1	1	2			1	1					1		1	11
forklift	2	1				2	1					1			1	1					1	10
other powered conveying machines				1			1							2	2	1			1		1	9

boiler	1	1									1										1	4
stone, sand, substance												1	1								1	3
other pressure vessels	3	8	7	9	7	7	5	4	1	5	11	5	6	2	6	1	7	2	5	5		106
other general power machines	6	5			4	4	2	1	2	2	3	3		1	2	1	2	2	1	3		44
chemical facilities	3	2	2	1		3	3	1	1	1	2		1	1	3	1			1	1		27
load	1	1	3	2	3	1	2		2		1	2		2	2	1	1	1				25
metal material		3	1	1	1	2	3		1	1	2				1		1	2	2	1		22
other electrical equipment	4	2	1		1	1			2	2									1			14
machine/equipment as load			4		2			1			1		1	1	2					1		13
other construction machines		1	1		1			3	1	1		1	1					1				11
explosive substance	2		2			1	3					1			1							10
harmful substance		1			1		1		1				2				1		2			9
mobile crane				1			2	1			1								2	1		8
kiln, caldron			1			1			1					1	1		1			1		7
human power								1					1			2		1	2			7

hauling equipment																		
unclassifiable	1			2			1		1		1							6
food manufacturing							1	1		1			1	1				5
machine																		
other vehicles	1	1												1			2	5
electric power				2						2		1						5
facilities																		
leveling,																		
transporting or		1			1				1							1		4
loading machine																		
other metal																		
manufacturing		1				1	1					1						4
machines																		
arc welding						1		1									1	3
equipment						•											•	
excavating machine		1			1													2
power press	1		1															2
printing machine	1					1												2
industrial dryer						2												2
human power			1							1								2
machine																		
other temporary																		

buildings,					1							1				2
establishments																
natural ground,										1				1		2
rock										1				I		
other environments									1		1					2
engine		1														1
power transmission								1								1
mechanism																
other woodworking			1													1
machines																
hardening machine	1															1
lathe												1				1
forging pressure														1		1
hammer																
mixer, grinder		1														1
roll machine (except																
printingroll							1									1
machine)																
injection molding													1			1
machine																
other kiln, caldron			1													1
transmission					1											1

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human power				1																	1
cranes																					•
hand tool																		1			1
stairs, landing stage																		1			1
passage																		1			1
building,																					
establishment		1																			1
lumber, bamboo				1																	1
standing tree						1															1
water												1									1
high/cold																					
temperature												1									1
environment																					
circular sawing																					
machine																					
band sawing																					
machine																					
wood planer																					
machine																					
hollow chisel																					
mortisers, wood																					
borer																					
	1	11	 				- 11	- 11						 		 		1			

chamfering													
machine, router,													
woodworking													
milling machine													
chain saw													
foundation work													
machine													
demolition machine													
vehicle for high lift													
work													
drill press, milling													
machine													
shearing machine													
centrifugal machine													
industrial robot													
felling machine													
mobile logging													
machine													
skyline yarding													
machine													
other mobile													
silviculture machine													

crane												
derrick crane												
elevator, lift												
cargo lifting												
appliance												
gondola												
lumberyard												
equipment, logging												
cableway												
simple skyline												
yarding equipment												
other powered												
crane												
railway equipment												
conveyor												
loader												
straddle carrier												
rough terrain hauler												
railway vehicle												
other welding												
equipment												
ladder												

		$\vdash$				$\square$							
slinging tool													
scaffolding													
timbering													
opening													
roof, beam, haze,													
crossbeam,													
principal rafter													
working platform,													
boot board													
radiation													
abnormal													
environment													

Data Source: <a href="https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html">https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.html</a>

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