



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
substance, material	4,378	4,185	3,938	3,584	3,237	3,291	3,048	3,151	2,922	2,615	2,188	2,095	2,081	2,214	2,098	2,056	1,837	1,865	1,841	1,781	1,635	1,507	1,544	1,629	60,720
other equipment	2,308	2,244	2,263	2,051	2,071	2,168	2,164	2,098	2,016	2,096	1,669	1,747	1,721	1,687	1,747	1,733	1,702	1,731	1,685	1,693	1,656	1,637	1,599	1,619	45,105
load	1,504	1,488	1,515	1,339	1,326	1,293	1,266	1,289	1,237	1,147	1,013	981	1,003	977	982	949	921	924	860	965	976	898	923	1,006	26,782
crane, conveying machine	1,047	1,091	1,077	958	1,039	983	1,048	962	828	897	672	687	724	733	732	705	646	724	651	661	622	630	683	637	19,437
machine	1,425	1,340	1,280	1,126	1,103	1,068	1,017	945	973	978	777	746	808	786	746	669	673	675	625	621	590	615	627	604	20,817
environment	586	578	550	469	497	511	456	433	384	380	464	415	424	415	341	396	324	331	335	325	254	288	258	257	9,671
temporary buildings, establishments	362	334	399	339	329	371	312	338	268	300	262	234	277	258	255	228	250	255	249	243	233	253	209	200	6,758
others	306	297	219	180	226	189	137	151	141	139	105	93	151	122	134	107	114	95	130	121	83	84	91	113	3,528
total	11,916	11,557	11,241	10,046	9,828	9,874	9,448	9,367	8,769	8,552	7,150	6,998	7,189	7,192	7,035	6,843	6,467	6,600	6,376	6,410	6,049	5,912	5,934	6,065	192,818

Transition of Causal agent (M) of fatal & non-fatal accident (struck by flying or falling object) 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
materials	4,311	4,130	3,881	3,538	3,197	3,249	3,006	3,107	2,881	2,573	2,158	2,066	2,050	2,176	2,055	2,025	1,808	1,831	1,816	1,752	1,606	1,481	1,520	1,606	59,823
load	1,504	1,488	1,515	1,339	1,326	1,293	1,266	1,289	1,237	1,147	1,013	981	1,003	977	982	949	921	924	860	965	976	898	923	1,006	26,782
tools	1,207	1,198	1,204	1,100	1,148	1,164	1,192	1,145	1,124	1,157	914	958	954	899	948	936	938	960	968	905	909	877	850	848	24,503



mobile silviculture machine																	11	13	8	4	8	9	10	10	73
no causal agent	23	15	22	19	18	12	7	15	11	8	11	7	4	12	15	8	10	9	19	17	11	16	15	9	313
kiln, caldron	11	10	8	10	10	15	5	6	7	10	7	10	1	2	8	7	19	3	10	6	8	7	7	9	196
welding equipment	23	27	23	32	19	25	25	17	19	11	14	17	12	11	12	9	13	13	12	8	11	14	8	7	382
pressure vessel	41	37	39	24	35	26	23	20	17	22	23	17	19	13	16	14	10	11	18	14	12	8	11	6	476
unclassifiable	23	12	12	17	16	10	8	6	9	12	4	2	7	6	3	6	4	4	3	5	4	2	2	6	183
power transmission mechanism	4	8	8	5	5	5	6	4	3	13	6	3	3	4	5	1	6	3	4	4	4	3	4	5	116
engine	4	14	10	7	9	4	6	3	3	4	1	2	2	7	3	1	6	2	8	8	5		5	3	117
chemical facilities	4	3	2	5	1	7	3	2	2	4		1	4	3	2	1	1	4	1	3	2	2	2	1	60

Transition of Causal agent (S) of fatal & non-fatal accident (struck by flying or falling object) in 1999-2022

Causal agent (S)	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
metal material		2,216	2,222		1,801		1,756	1,792	1,682	1,535	1,219	1,159	1,159	1,243	1,155	1,167	1,079	1,033	1,088	1,034	939	850	911	910	27,950
load		1,321	1,351		1,159		1,120	1,133	1,108	991	891	877	887	841	875	874	841	830	784	874	892	814	857	910	20,230
other tools		752	742		722		730	761	728	796	608	647	652	594	653	670	653	686	710	679	677	665	646	645	14,416
other equipments, facilities		345	300		279		333	350	335	323	268	303	302	289	312	313	287	305	269	316	269	320	297	331	6,446
lumber, bamboo		886	802		642		574	582	523	442	440	401	375	399	409	351	330	371	329	325	316	270	264	300	9,331
other materials		647	515		481		444	505	484	434	350	366	363	389	352	360	295	307	298	281	251	259	253	294	7,928
truck		259	280		283		255	247	224	230	188	181	197	212	219	211	183	204	180	163	173	180	195	187	4,451
slinging tool		424	435		389		424	364	378	339	289	286	283	283	281	248	263	260	246	212	221	190	193	186	6,194



excavating machine		104	85		90		82	56	73	72	56	38	62	46	68	53	38	44	38	37	38	46	50	51	1,227
other environments		68	69		54		71	63	37	38	33	35	58	73	39	58	40	42	44	63	27	38	36	45	1,031
natural ground, rock		154	131		115		84	79	50	76	61	66	62	72	60	62	50	54	48	45	36	35	35	38	1,413
demolition machine		45	42		33		33	25	32	34	37	31	32	26	47	49	53	46	50	39	52	36	53	37	832
power press		50	51		48		38	39	55	44	23	23	23	31	32	34	25	31	31	24	25	26	26	26	705
conveyor		41	39		41		30	35	28	24	16	29	29	27	21	17	12	23	24	13	21	22	25	24	541
circular sawing machine		103	103		73		70	66	72	50	49	38	50	36	43	31	26	33	33	22	23	18	20	23	982
food manufacturing machine		27	30		26		24	22	31	25	28	28	32	19	34	18	36	21	24	19	23	30	27	23	547
other construction machines		66	81		53		63	45	46	64	46	33	54	38	42	27	26	27	22	24	20	22	21	21	841
other woodworking machines		89	77		63		49	48	46	54	27	27	34	35	37	33	26	23	28	24	26	24	24	18	812
scaffolding		42	56		37		37	41	28	34	36	32	28	44	33	26	19	31	26	29	34	29	17	17	676
other powered crane		43	49		43		51	35	29	40	28	27	27	22	26	27	28	34	25	25	21	17	14	17	628
cars, bus, motorcycle		25	38		20		31	25	24	23	23	20	26	23	23	17	17	21	23	16	18	13	18	17	461
ladder		22	27		37		38	20	18	22	17	25	19	22	14	18	22	14	12	14	11	22	11	17	422
roof, beam, haze, crossbeam, principal rafter		18	35		18		22	21	20	16	14	11	11	23	17	14	18	19	10	13	15	6	8	17	346
chain saw		21	23		36		34	30	31	24	29	24	22	29	9	21	24	18	17	20	18	19	11	16	476
other hazards, harmful substances		35	31		18		24	27	24	29	24	13	16	25	25	19	20	22	21	20	22	17	17	16	465



kiln, caldron		6	6		7		5	4	3	8	5	9		1	5	4	12	3	7	5	6	5	7	5	113
power transmission mechanism		8	8		5		6	4	3	13	6	3	3	4	5	1	6	3	4	4	4	3	4	5	102
felling machine																	9	11	5	2	5	8	3	5	48
human power machine		17	27		16		15	17	13	22	7	9	14	12	11	13	11	14	13	7	12	9	10	4	273
drill press, milling machine		16	18		19		20	23	11	16	17	8	8	6	9	11	7	10	6	11	2	6	7	4	235
roll machine (except printingroll machine)		11	7		9		7	6	10	8	7	4	5	6	4	5	2	1	5	4	7	5	2	4	119
stairs, landing stage		4	7		7		6	5	7	5	1	5	3	8	3	4	3	4	4	5	3	3	3	4	94
gas welding equipment		13	7		6		10	6	9	4	3	7	6	3	5	4	3	9	8	3	7	1	1	3	118
engine		14	10		9		6	3	3	4	1	2	2	7	3	1	6	2	8	8	5		5	3	102
band sawing machine		14	10		6		5	5	8	6	4	4	1	5	1	1	2	4	3	1	2	6	3	3	94
other welding equipment		7	8		8		6	5	2	4	4	4		4	1	2	3	1	1	2	2	4	3	3	74
water		2	4		6		2	2	11	2	2	1	2	6	2	1	1	1	1	4	1	1	3	3	58
cargo lifting appliance		3	3		3			2	3	2			3	2	2	1	1	3		1	3	2	2	3	39
lumberyard equipment, logging cableway		12	4		9		10	5	5	6	9	8	4	7	3	5	3	6		1		2	1	2	102
shearing machine		8	5		4		4	3	7	4	6	5	4	3	1	3	3	5	3	1	2	3	3	2	79
injection molding machine		5	3		9		6	5	5	2	3	6	2	4	5	4	1	2	2	3	3	2	3	2	77
wood planer machine		8	4		7		5	5	4	4	5	4	4	1		1	1	1	1	1	1	1	3	2	63
industrial dryer		2	1					1	1	1	2		1	1	2	2	5		1		1	1		2	24





electric power facilities		1	2		1			2	3		3	4	3	4	1	2		1	1	2	2	3	2		37
centrifugal machine		1	4		2		1	5		3	1			2	1		1			2	3		2		28
railway vehicle		2	3		2		1	1		1		2	3	1	1				1			1			19
boiler		1			4		1	2	1		2	4		1		1					1	1			19
industrial robot		1					1	1	1			1		1	1	3			1	1	1	1	1		15
railway equipment		1	1		1		1	1	1								1			1	3				11
gondola			1					2	1	1	2					1									8
rough terrain hauler		1	1				1	1						2	1			1							8
hollow chisel mortisers, wood borer		1	1				1		1		2	1													7
abnormal environment					1		1	1						2											5
derrick crane					1				1					2											4
inflammable gas			1							1				1		1									4
straddle carrier		1						1					1												3
simple skyline yarding equipment																							2		2
radiation																1									1

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