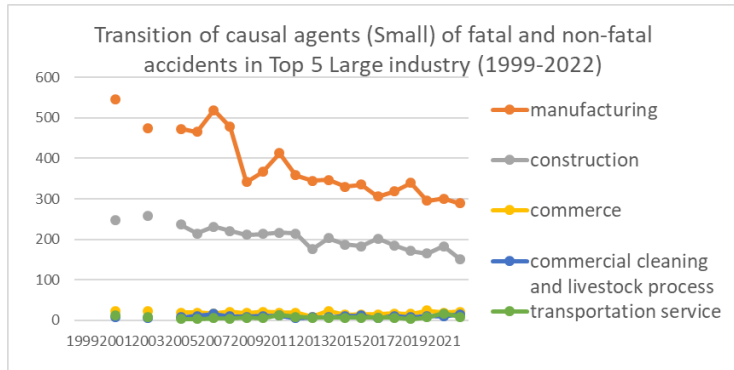
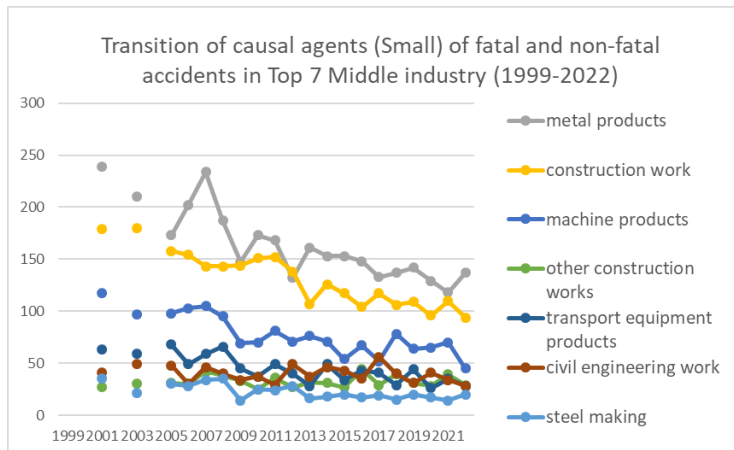


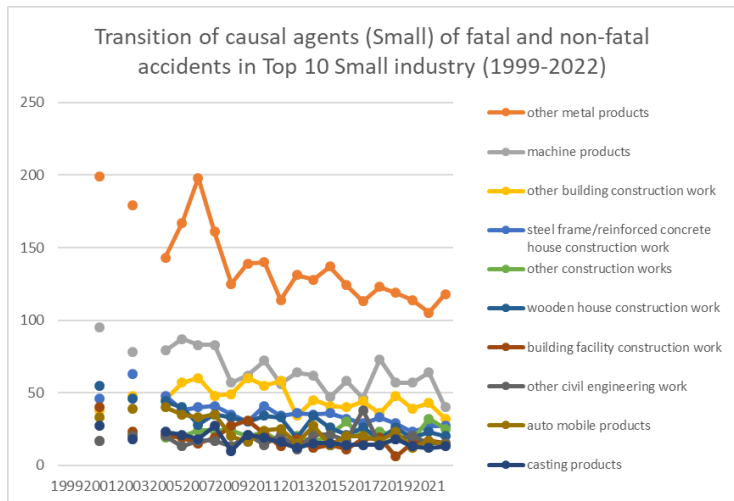
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Large industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Middle Industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Small Industry (1999-2022)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Large industry (1999-2022)

code	Large industry	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	Large industry	
01	manufacturing			546		475		473	465	519	478	341	367	413	358	345	347	330	335	306	318	339	295	301	289	7,640	manufacturing	
03	construction			247		259		237	214	231	221	211	213	217	214	176	203	187	183	202	185	171	165	183	151	4,070	construction	
08	commerce			22		22		19	19	17	21	18	21	19	19	9	23	14	15	15	17	16	24	19	21	370	commerce	
15	commercial cleaning and livestock process			8		7		8	11	16	10	9	11	12	5	8	8	11	12	5	11	8	11	10	15	196	commercial cleaning and livestock process	
04	transportation service			12		9		3	3	5	4	7	5	13	9	7	6	7	7	7	6	3	8	17	9	147	transportation service	
17	others			2		10		7	3	13	5	2	5	5	6	7	6	3	7	6	8	11	3	8	9	126	others	
07	livestock/fishery			4		2		3	2	3	4	3	2	2	1	1	2	5	2	4	6		4	4	9	63	livestock/fishery	
13	health and hygiene service					2		2		2	1	1			1			1	4	2	1		1	2	6	26	health and hygiene service	
05	cargo handling service			2		2			2	2		2	1			1					1	1			4	18	cargo handling service	
06	agriculture			1		1		2	1	1	1	3	2	5		2	4	3	2	1	7	3	5	4	2	50	agriculture	
14	hotel/restaurant/amusement service			2		5		1	3	1	2		4	2	2	1	3	4	2	1	1	8	2	4	2	50	hotel/restaurant/amusement service	
02	mining			2		1			1	1	1			1	2	3					1				1	14	mining	
12	education/research service			1					2	4	1	2	2		3	1									1	17	education/research service	
09	financial business/advertisement					2											1							1		4	financial business/advertisement	
16	public office									1														1	1	3	public office	
10	movie/play service																									1	1	movie/play service
11	telecommunication service																											telecommunication service
	total			849		797		755	726	816	749	599	633	689	620	561	603	565	569	549	562	560	521	554	518	12,795	total	

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Middle industry (1999-2022)

code	Middle industry	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	Middle industry
0112	metal products			239		210		173	202	234	187	147	173	168	132	161	153	148	133	137	142	129	118	137	3,276	metal products	
0302	construction work			179		180		158	154	143	143	144	151	152	138	107	126	117	104	117	106	109	96	110	94	2,628	construction work
0113	machine products			117		97		98	103	105	95	69	70	81	71	76	71	54	67	52	78	64	65	70	45	1,548	machine products
0303	other construction works			27		30		31	30	42	38	33	25	36	27	32	31	27	44	29	39	31	28	39	29	648	other construction works
0115	transport equipment products			63		59		68	49	59	66	45	37	49	40	28	49	34	43	41	29	44	26	35	28	892	transport equipment products
0301	civil engineering work			41		49		48	30	46	40	34	37	29	49	37	46	43	35	56	40	31	41	34	28	794	civil engineering work
0110	steel making			35		21		30	28	34	35	14	25	24	28	16	18	20	17	19	15	20	17	14	20	450	steel making
0117	other manufacturing			30		23		28	23	27	30	20	18	23	31	19	15	26	16	15	16	22	20	24	18	444	other manufacturing
0114	electrical equipment products			18		16		18	10	15	19	14	7	18	12	7	10	7	10	6	6	10	9	8	15	235	electrical equipment products
1501	commercial cleaning and livestock process			8		7		8	11	16	10	9	11	12	5	8	8	11	12	5	11	8	11	10	15	196	commercial cleaning and livestock process
0802	retail			15		13		14	10	8	13	10	12	11	9	5	16	8	6	8	6	8	13	6	10	201	retail

011509	products			8		3		11	4	6	9	6	6	5	5	2	5	8	8	6	3	9	7	3	6	120	products
040301	general truck transportation service			9		7		2	2	4	4	3	5	6	7	5	3	6	7	5	5	1	3	10	6	100	general truck transportation service
011305	other precision machine products			16		15		15	13	19	12	10	6	6	13	9	7	7	5	3	3	3	7	4	5	178	other precision machine products
010901	cement products			6		6		4	6	4	6	6	4	6	6	12	3	3	6	5		7	5	3	5	103	cement products
080109	other wholesale			3		5		4	4	4	3	3	7	3	7	2	3	4	4	4	7	5	5	6	5	88	other wholesale
030110	water supply/sewage construction work			8		11		13	7	10	6	6	7	6	10	15	7	4	7	5	4	3	4	6	4	143	water supply/sewage construction work
030106	road construction work			6		6		7	5	7	5	4	2	4	9	5	6	7	4	5	9	5	6	7	4	113	road construction work
010805	plastics products			4		3		7	9	6	3	2	2	3	3	3	5	3	3	5	4	4	5	3	4	81	plastics products
011001	steel/iron/rolling products			3		2		2	4	7	1	2	2	3	7	3	1	1	1	2			1	2	4	48	steel/iron/rolling products
010109	other foods			3				2	1	3	2	1	6	4	2	4	2	2	2	1	3	1	4		4	47	other foods
010806	rubber products			1		1		3	4	5			1	4	3	2	2	1		2	1	2		1	4	37	rubber products
150103	other waste disposal service			1				1	5	3		2	4	2	1		1	1	1	2	2		1		4	31	other waste disposal service
010909	other sand and stone products			4		10		8	2	6	8	7	6	5	2	1	2	6	2	4	3	3	4	3	3	89	other sand and stone products
011403	electronics equipment and telecommunications apparatus			5		3		8	2	5	6	6	2	7	2	1		2	3	4		3	4	1	3	67	electronics equipment and telecommunications apparatus
011009	other steel products			5		1		5	3	9	7	2	2	2	5	1	2	4	2	3	1	2	3		3	62	other steel products
080409	other commerce			2		2		1	3	5	3	5	1	5	3	2	3	2	3	3	2	3	6	3	60	other commerce	
030105	bridge construction work			2		5				2	2	1	1	1	2	4	1	2	1	2	2	1	2	1	3	35	bridge construction work
011401	heavy electrical equipment			3		1		2	1					1			3	4	2			1	3	2	3	26	heavy electrical equipment
130201	social welfare facility					1				2	1				1				3	2	1		1	2	3	17	social welfare facility
030302	machinery/apparatus setting work			7		5		9	6	13	12	5	3	11	6	9	11	6	12	9	10	9	7	5	2	157	machinery/apparatus setting work
011204	metal plating products			8		7		8	8	5	7	8	8	7	8	6	6	3	8	10	3	4	5	1	2	122	metal plating products
011102	nonferrous metals casting products			8		2		8	10	4	5	5	5	6	3	3	6	4	4	7	4	6	2	5	2	99	nonferrous metals casting products
011702	machine repair			7		4		7	3	5	9	7	5	3	7	5	4	7	2	5	2	4	5	5	2	98	machine repair
030301	electricity/telecommunication work			3		4		3	4	5	2	4	2	2	5	3	4		2	2	6	1	4	2	2	60	electricity/telecommunication work
011109	other nonferrous metal products					3		5	5	2	5	3	2	2	4	3	2	3	3	5	3	1	1	5	2	59	other nonferrous metal products
060101	agriculture			1		1		1	1	1	1	3	2	4		2	3	3	2	1	5	3	4	4	2	44	agriculture
080202	auto mobile retail			3				2	3	1	2	3	2	4	3	1	5	2		1	1		5	3	2	43	auto mobile retail
011202	screw products			3		1		2	4	3	2	3	4	2	2	3	1	2			1		1	2	2	38	screw products
150101	building maintenance service			2		2		3	2		1	4	1	3		4	2	2	3		1	1	1	2	2	36	building maintenance service
150109	other cleaning and livestock process service			2				1	1	5	1		3	2	1	2		1	1	1	1	1			2	25	other cleaning and livestock process service
050101	land cargo handling service					1			1			1	1								1	1			2	8	land cargo handling service
080401	warehousing										1						1				1		2		2	7	warehousing
030109	land consolidation civil engineering work			5		2		5	2	5	5	7	4	1	6	2	2	6	3	2	6	2	6	4	1	76	land consolidation civil engineering work

010409	other lumber and wood products			3		2		3		2	3	1	2	1	3			1	2	1	2	5			1	32	other lumber and wood products
011402	electrical appliance			1		2		1	2	4	4	1		5	2				1		1	1	1		1	27	electrical appliance
140301	golf course			1		1			2	1	2		1	1		1	1	3			1	5		1	1	22	golf course
030107	river civil engineering work			2		1		1	2	1	2		1	1			3	1		1			1	1	1	19	river civil engineering work
080204	fuel retail			1		1		2	2		2	2		2		1	1		1	1		1			1	18	fuel retail
140309	other amusement service					1							2		1		1	1	1			1		2	1	11	other amusement service
010899	other chemical products			1		1		1		1	1			1		1		1	1						1	10	other chemical products
170101	dispatch service					1		1								1		2		1				1	1	8	dispatch service
040201	taxi service			1					1			1		1		2									1	7	taxi service
040309	other land cargo transportation service					1						1		2		1								1	1	7	other land cargo transportation service
080201	all kinds of retail					2			1			1				1	1								1	7	all kinds of retail
040102	water transportation service			1															1	1	1	1		1	6	water transportation service	
050202	port cargo handling service			1		1			1					1											1	6	port cargo handling service
080101	all kinds of wholesale								2		1							1				1		1	6	all kinds of wholesale	
020202	gravel digging							1						1						1					1	4	gravel digging
050201	general harbor transportation service			1					2																1	4	general harbor transportation service
070201	fishery			1					1								1								1	4	fishery
130109	other medical treatment service											1													1	2	other medical treatment service
130102	general clinic																								1	1	general clinic
130301	bathroom																								1	1	bathroom
010102	fishery products					1		1					2	4	3	1	1	1		1	4	2		4		25	fishery products
011503	railway vehicle products			3		2			1	1	2	1	1		1	2		3	4		1	1	2			25	railway vehicle products
011302	measuring instruments			2		4		2	1	2		1		2	1	2			2	1	2					24	measuring instruments
011303	optical instruments			3				2	2			1	2	1		1			4	1	1	2	1	2		23	optical instruments
010401	lumbering			2		1		1	1		1	1		4	1	1		1	1	1	1	2	1			20	lumbering
120109	other education/research service			1					2	4	1	2	1		3	1								1		16	other education/research service
030104	railway construction work					1		1		1	1	1				5	1			2	1					15	railway construction work
010903	pottery products							2	2	3	1				1				2	1		1	1			14	pottery products
140101	hotel			1		3		1					1		1				1		2	2	1			13	hotel
010509	other furniture							3	1	2	1			2			1					1	1			12	other furniture
010902	glass products			1		4		2	1				1				1					1				12	glass products
010905	other ceramic products										2			1	2	1	1	1	1	2						11	other ceramic products
011101	nonferrous metals/rolling products			1		1		1	1	1				1	1		1	1	1					1		11	nonferrous metals/rolling products
040302	specific truck transportation service					1								2		1							3	4		11	specific truck transportation service
010501	wood furniture							2	1	1	1	1				1	1			1	1					10	wood furniture
030108	sand collapse prevention civil engineering work					1				1	1	1				1	1			2		1				10	sand collapse prevention civil engineering work

030111	port/seaside construction work			1	1				1	1	1			1	1	1					10	port/seaside construction work	
010602	paper processing products			1	2			1	1	1				2					1			9	paper processing products
040101	railroad service			1				1	1	1		1	2			1	1		1			9	railroad service
010104	bread/cake products			1	1			1	1		1					1	1			1		8	bread/cake products
010701	printing service			2	2			1							2			1				8	printing service
020201	quarrying			2				1	1				2	2								8	quarrying
080102	furniture/fittings wholesale			2	2					1						1			1		1	8	furniture/fittings wholesale
010101	meat/dairy products					1	1			1				1				2		1		7	meat/dairy products
010209	other textile products				1				1		1		1		2					1		7	other textile products
010309	other fiber products				1		1	1				2	1								1	7	other fiber products
010502	metal furniture				1	1					1	1		2						1		7	metal furniture
010801	non organic or organic chemical products				1				1		1	2			1		1					7	non organic or organic chemical products
010807	leather products			1	1			1				1			1	1		1				7	leather products
010809	chemical fertilizer products								2	1							2				1	6	chemical fertilizer products
010103	agricultural food products				1			1					2	1								5	agricultural food products
010601	pulp/paper			1		1				1		1							1			5	pulp/paper
010904	fire resisting products			1			1	1				1							1			5	fire resisting products
070209	other fishery								1					1	1	1		1				5	other fishery
010709	other printing and bookbinding				1						1								1	1		4	other printing and bookbinding
010803	pharmaceuticals								1	1				1					1			4	pharmaceuticals
011609	other electric/gas/water service			1			1			1						1						4	other electric/gas/water service
030101	hydroelectric plant construction work				1	1		1								1						4	hydroelectric plant construction work
040202	bus service								1		1			1							1	4	bus service
060201	lumbering				1									1				1		1		4	lumbering
080203	furniture/fittings retail			1			1		1		1											4	furniture/fittings retail
090209	other advertisement and mediator				2										1					1		4	other advertisement and mediator
130101	hospital				1	2										1						4	hospital
010105	alcoholic drinks			1															2			3	alcoholic drinks
010106	soft drinks									1		1							1			3	soft drinks
010503	fittings					1		1													1	3	fittings
011304	watch products			1									1									3	watch products
011703	cleaning					1		1		1												3	cleaning
030102	tunnel construction work										1								1		1	3	tunnel construction work
030103	subway construction work						1												1		1	3	subway construction work
140302	park and amusement park						1				1			1								3	park and amusement park
160101	public office							1												1	1	3	public office
010204	dyeing			1	1																	2	dyeing
010301	over/under wear						1														1	2	over/under wear

090103	insurance business																									insurance business	
090109	other financial business																									other financial business	
090201	traveling service																									traveling service	
100101	movie production and delivery service																									movie production and delivery service	
100102	movie theatre																									movie theatre	
110101	telecommunication service																									telecommunication service	
120102	software service																									software service	
140209	other restaurants																									other restaurants	
150104	cremation service																									cremation service	
	total			849		797		755	726	816	749	599	633	689	620	561	603	565	569	549	562	560	521	554	518	12,795	total

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

https://www.jisha.or.jp/english/statistics/202311_12.html