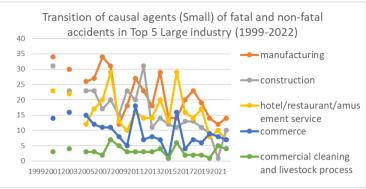
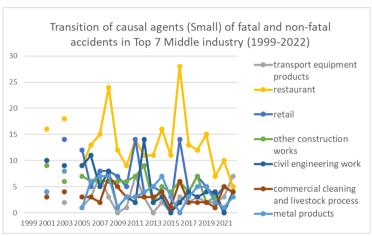
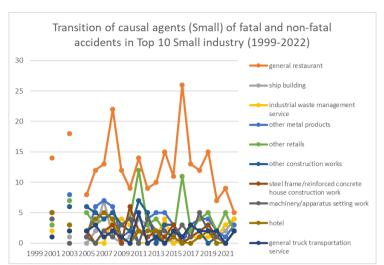
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Large industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Middle Industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Small Industry (1999-2022)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Large industry (1999-2022)

Tans	ition of causal agents (Small) of fat																										
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			34		30		26	27	34	31	12	18	27	23	18	29	14	14	20	23	19	14	12	14	439	manufacturing
03	construction			31		23		23	23	17	20	15	23	20	31	11	14	12	11	13	13	11	9	1	10	331	construction
14	hotel/restaurant/amusement service			23		22		12	17	20	29	13	10	16	14	14	20	13	29	16	14	17	8	10	7	324	hotel/restaurant/amusement service
08	commerce			14		16		15	12	11	11	8	5	18	7	8	7	1	16	4	7	6	9	8	7	190	commerce
15	commercial cleaning and livestock process			3		4		3	3	2	7	5	3	3	3	3	4	1	6	2	2	2	1	5	4	66	commercial cleaning and livestock process
04	transportation service			3		3		3	5	2	2	3	1	6	3	2	1	2	1	3	3	3	3		3	52	transportation service
13	health and hygiene service			2		2		2	4	7	4	1	2	1		2	2	1	2		1	1	4		2	40	health and hygiene service
17	others			5		3		2	1		1	1	1	3	2	1	2	1	1	1	4		4		1	34	others
05	cargo handling service					1		1						1										1	1	5	cargo handling service
12	education/research service			1		1			1									4			1					8	education/research service
09	financial business/advertisement											1				1					2		2			6	financial business/advertisement
07	livestock/fishery					3		1								1										5	livestock/fishery
02	mining														2											2	mining
06	agriculture										1												1			2	agriculture
16	public office									1																1	public office
10	movie/play service																										movie/play service
11	telecommunication service																										telecommunication service
	total			116		108		88	93	94	106	59	63	95	85	61	79	49	80	59	70	59	55	37	49	1,505	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Middle industry (1999-2022)

code Middle indu	stry 199	9 2000	2001	2002 2	2003 2004	2005	2006	2007	2008	2009	2010	2011 2	2012	2013 2	2014 20)15 20	016 2017	2018	2019	2020	2021	2022	total	Middle industry
																								transport equipment

	transport equipment products	4	2	1	3	7	3		1	7	3		2		3	2	3	2	2	3	7	55	products
1402	restaurant	16	18	9	13	15	24	12	9	14	11	11	16	11	28	13	12	15	7	10	5	269	restaurant
0802	retail	10	14	12	5	8	8	7	5	14	4	5	4	1	14	4	7	5	3	5	4	139	retail
0303	other construction works	9	6	7	6	6	6	6	6	7	9	2	5	4	6	4	7	2	3		4	105	other construction works
0301	civil engineering work	10	9	9	11	5	8	1	3	2	14	2	3		2	4	3	4	4		4	98	civil engineering work
	commercial cleaning and livestock process	3	4	3	3	2	7	5	3	3	3	3	4	1	6	2	2	2	1	5	4	66	commercial cleaning and livestock process
0112	metal products	4	8	1	6	7	7	1	3	3	4	5	7	3		3	5	5	2	1	3	78	metal products
0403	road cargo transportation service	1	3	3	3	1	2	1	1	5	3	1		2	1	3	3	3	3		3	42	road cargo transportation service
0302	construction work	12	8	7	6	6	6	8	14	11	8	7	6	8	3	5	3	5	2	1	2	128	construction work
1401	hotel	5	3	2	4	5	4	1		2	2	2		1			1	2			2	36	hotel
0804	other commerce	2		1	3	1		1		4	2	2	3								2	21	other commerce
1301	medical treatment service		1		2	1	1					1	1		1				1		2	11	medical treatment service
0117	other manufacturing	10	3	6	3	2	4	3	8	3	6	1	5	2	2	5	5	2	1		1	72	other manufacturing
0108	chemical products	3	4	5	2		1	5	3	4	1	4	1	2	2	1	3	1		3	1	46	chemical products
0110	steel making	2	1	1		5	3	1		1		2	9	2		3	1	1	1		1	34	steel making
1702	others	5	3	2	1		1	1	1	3	2	1	2	1	1	1	4		4	İ	1	34	others
0801	wholesale	2	2	2	3	2	3				1	1			2			1	6	3	1	29	wholesale
0113	machine products		5	2	3	3	1			1	1	1	1	1	1	1	4	İ	1		1	27	machine products
0501	land cargo handling service		1	1																1	1	4	land cargo handling service
0101	food products	6	4	8	6	4	8	1	2	4	6	2	1	3	4	3		3	3	1		69	food products
0116	electric/gas/water service	4		1	2	5			1	3	1		2		1	1		1	2	1		25	electric/gas/water service
1302	social welfare facility	1	1	1	2	1	3	1	2	1		1	1	1	1		1	1	2			21	social welfare facility
1403	other amusement service	2	1	1			1		1		1	1	4	1	1	3	1		1			19	other amusement service
0111	nonferrous metal making	1	1		2						1			1			2	4		2		14	nonferrous metal making
0109	sand and stone products		1	1			3					3	1						1			10	sand and stone products
0402	road passenger transport service	2			1	1		2		1			1									8	road passenger transport service
1201	education/research service	1	1		1									4			1					8	education/research service
1303	other health and hygiene service	1		1		5													1			8	other health and hygiene service
0106	pulp/paper processing products									1					1				1	1		4	pulp/paper processing products
0702	fishery		3	1																		4	fishery
	financial business						1	1				1.		1				1	2			4	financial business

0114	electrical equipment products								1								1							electrical equipment products
0202	quarrying											2											2	quarrying
0401	railroad/water transportation/airline service					1							1										2	railroad/water transportation/airline service
0601	agriculture							1												1			2	agriculture
0902	advertisement and mediator																	2						advertisement and mediator
0104	wood products							1															1	wood products
0105	furniture			1																			1	furniture
0107	printing/bookbinding						1																1	printing/bookbinding
0502	harbor transportation service										1												1	harbor transportation service
0701	livestock												1										1	livestock
0803	haircut/beauty salon					1																	1	haircut/beauty salon
1601	public office						1																1	public office
0102	textile products																							textile products
0103	fiber products																							fiber products
0201	coal mining																							coal mining
0203	other mining																							other mining
0404	other transportation service																							other transportation service
0602	forestry																							forestry
1001	movie/play service																							movie/play service
1101	telecommunication service																							telecommunication service
1701	dispatch service																							dispatch service
	total		116	108	88	93	94	106	59	63	95	85	61	79	49	80	59	70	59	55	37	49	1,505	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 513 inflammable gas in Small industry (1999-2022)

code	Small 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	Small industry
140201	general restaurant			14		18		8	12	13	22	12	9	14	9	10	15	11	26	13	12	15	7	9	5	254	general restaurant
011501	ship building			3		1			2	7	1		1	4	3		1		1	1	2	2	1	2	4	36	ship building
150102	industrial waste management service			2		3		1			4	4	3			1	4			1	1	1	1	3	4	33	industrial waste management service
011209	other metal products			4		8		1	6	7	6	1	2		4	5	5	3		3	4	4	2	1	3	69	other metal products
080209	other retails			3		7		5	3	4	5	3	4	12	3	4	2	1	11	2	4	5	2	5	2	87	other retails
030309	other construction works			5		6		6	5	4	5	3	2	7	5		3	3	1	3	2		1		2	63	other construction works
	steel frame/reinforced concrete house construction work			5		2		2		2	3		6	2	1	2	1	3		1	2	3	1		2	38	steel frame/reinforced concrete house construction work
030302	machinery/apparatus setting work			4				1		2	1	3	4		4	2	2	1	3	1	5	2	1		2	38	machinery/apparatus setting work

140101 hotel	5	3	2	4	5	4	1		2	2	2		1			1	2			2	36	hotel
040301 general truck transportation service	1	2	2	3	1	2	1		5		1		2	1	3	2	2	2		2	32	general truck transportation service
080204 fuel retail	2	4	5		2	1	1		1	1		2		1	1	3		1		2	27	fuel retail
080409 other commerce	2			2	1		1		4	1	2	3								2	18	other commerce
011502 auto mobile products	1			1		1			3			1		1		1				2	11	auto mobile products
other medical treatment service												1		1						2	4	other medical treatment service
030199 other civil engineering work	5	6	5	5	3	1		2	1	3	1	3		2	1	2	2	3		1	46	other civil engineering work
011701 auto mobile servicing	6	2	4	2	1	3	1	5	1	5		3	1	1	3	3	1			1	43	auto mobile servicing
170209 others	4	3	2	1			1	1	3	2	1	1	1	1	1	4		4		1	31	others
080109 other wholesale	2	2	2	2	2	3				1	1			2			1	6	3	1	28	other wholesale
011001 steel/iron/rolling products	2	1			5	3			1		1	7			2	1				1	24	steel/iron/rolling products
011301 machine products		2	2	3	3	1				1	1		1	1	1	3		1		1	21	machine products
030106 road construction work	3	3	4	2	1	1				4							1			1	20	road construction work
010805 plastics products		2					1				2	1	1		1	2	1			1	12	plastics products
011509 other transport equipment products		1	1			1								1	1			1	1	1	8	other transport equipment products
030102 tunnel construction work						2				5										1	8	tunnel construction work
050101 land cargo handling service		1	1																1	1	4	land cargo handling service
030107 river civil engineering work															1					1	2	river civil engineering work
040303 cargo/ light automobile transportation service																				1	1	cargo/ light automobile transportation service
030209 other building construction work	2	1	3	3	2	1	7	5	4	4	1	4	4		2	1	1	1			46	other building construction work
010109 other foods	4	2	3	3	4	6	1	2	2	5	2			2	3		2	3			44	other foods
030203 building facility construction work	5	3	1	2	2	2	1	3	3	3	4	1		3	1		1		1		36	building facility construction work
130201 social welfare facility	1	1	1	2	1	3	1	2	1		1	1	1	1		1	1	2			21	social welfare facility
010104 bread/cake products	1	2	5	2		2			1			1	2	2			1		1		20	bread/cake products
011702 machine repair	3		1	1			2	2		1	1	1		1		2	1	1			17	machine repair
011602 city gas service	4		1	1	1			1		1		1		1	1		1	2	1		16	city gas service
010801 non organic or organic chemical products	3		2	1			4			1	1			2					1		15	non organic or organic chemical products
030110 water supply/sewage construction work	1			4	1	3			1	2					2		1				15	water supply/sewage construction work
140209 other restaurants	2		1	1	2	2				2	1	1		2					1		15	other restaurants
080201 all kinds of retail	5	2	1		1	2	1		1		1										14	all kinds of retail
150103 other waste disposal service	1	1	1	1	1	1	1		1	2			1	2			1				14	other waste disposal service
140309 other amusement service	2	1				1		1		1		3			2	1		1			13	other amusement service
011709 other manufacturing	1	1	1			1		1	2			1	1		2						11	other manufacturing
080202 auto mobile retail		1	1	2	1		2	1						2	1						11	auto mobile retail
other cleaning and livestock process service			1	1		1				1	2			3		1					10	other cleaning and livestock process service

150101 building maintenance service						1	1	1			2					1	1				2	9	building maintenance service
010803 pharmaceuticals			İ	2	2					1	2		1				İ					8	pharmaceuticals
030202 wooden house construction work				2	1	1					2				1		1					8	wooden house construction work
other education/research service		1		1		1									4			1				8	other education/research service
130301 bathhouse		1			1		5													1		8	bathhouse
011204 metal plating products								1			2			2				1	1			7	metal plating products
011002 casting products					1				1					1	1		1			1		6	casting products
011101 nonferrous metals/rolling products				1		1						1						1	2			6	nonferrous metals/rolling products
130101 hospital				1		2	1	1												1		6	hospital
010899 other chemical products										2	1				1			1				5	other chemical products
011102 nonferrous metals casting products						1									1			1	1		1	5	nonferrous metals casting products
040202 bus service						1	1		2		1											5	bus service
040302 specific truck transportation service					1					1		2							1			5	specific truck transportation service
010101 meat/dairy products		1				1					1				1							4	meat/dairy products
010602 paper processing products											1					1				1	1	4	paper processing products
010909 other sand and stone products								1					3									4	other sand and stone products
011009 other steel products													1	1	1				1			4	other steel products
011305 other precision machine products				2										1				1				4	other precision machine products
011601 electric utility service							1				3											4	electric utility service
011603 city water service						1	3															4	city water service
030301 electricity/telecommunication work						1										2				1		4	electricity/telecommunication work
040309 other land cargo transportation service				1								1						1		1		4	other land cargo transportation service
070201 fishery				3	1																	4	fishery
140301 golf course					1								1	1			1					4	golf course
010804 petroleum/coal products					1	1					1											3	petroleum/coal products
010903 pottery products				1				2														3	pottery products
011109 other nonferrous metal products		1																	1		1	3	other nonferrous metal products
030111 port/seaside construction work								1		1			1									3	port/seaside construction work
040201 taxi service		2												1								3	taxi service
080401 warehousing					1	1						1										3	warehousing
090101 banking/trust business													1							2		3	banking/trust business
170201 security service		1						1						1								3	security service
010901 cement products														1						1		2	cement products
011302 measuring instruments				1							1											2	measuring instruments

020202 gravel digging												2									2	gravel digging
030104 railway construction work									1										1		2	railway construction work
030109 land consolidation civil engineering work		1																1			2	land consolidation civil engineering work
060101 agriculture								1											1		2	agriculture
090209 other advertisement and mediator																		2			2	other advertisement and mediator
140302 park and amusement park															1	1					2	park and amusement park
010102 fishery products												1									1	fishery products
010401 lumbering								1													1	lumbering
010503 fittings				1																	1	fittings
010701 printing service							1														1	printing service
010802 chemical fiber																				1	1	chemical fiber
010808 painting products																				1	1	painting products
010809 chemical fertilizer products								1													1	chemical fertilizer products
010904 fire resisting products					1																1	fire resisting products
011201 western tableware/cutting tool products										1											1	western tableware/cutting tool products
011202 screw products											1										1	screw products
011402 electrical appliance									1												1	electrical appliance
011409 other electrical equipment																	1				1	other electrical equipment
011609 other electric/gas/water service														1							1	other electric/gas/water service
011703 cleaning			İ				1		İ		İ										1	cleaning
040101 railroad service			İ										1								1	railroad service
040102 water transportation service		İ	İ			1		İ	İ												1	water transportation service
050209 other harbor transportation service											1										1	other harbor transportation service
070101 livestock		İ	İ					İ	İ				1							i	1	livestock
080102 furniture/fittings wholesale		İ	i			1	İ														1	furniture/fittings wholesale
080301 haircut						1															1	haircut
090109 other financial business									1												1	other financial business
130102 general clinic			i				İ	İ					1								1	general clinic
160101 public office		İ					1														1	public office
010103 agricultural food products			i		i		i		i	İ											Î	agricultural food products
010105 alcoholic drinks			i				i				i											alcoholic drinks
010106 soft drinks			i	i			i				i			$\overline{}$								soft drinks
010201 silk-reeling		i	i				i	i	i		i										i	silk-reeling
010202 cotton-spinning			i				i		i		i											cotton-spinning
010203 weaving		i	i				i	İ	i	İ	İ											weaving
010204 dyeing	i	i	i	i			İ	İ	i	Ï	İ							mi			ĺ	dyeing
010209 other textile products			i	İ			i —		i												i T	other textile products
010301 over/under wear			i	İ	İ		i —		i		i	İ									i T	over/under wear
			i		i	İ	i		i	i	i										1	i

010402 plywood	plywood other lumber and wood products wood furniture metal furniture other furniture pulp/paper other pulp/paper processing products bookbinding other printing and
010501 wood furniture	products wood furniture metal furniture other furniture pulp/paper other pulp/paper processing products bookbinding other printing and
010502 metal furniture	metal furniture other furniture pulp/paper other pulp/paper processing products bookbinding other printing and
010509 other furniture	other furniture pulp/paper other pulp/paper processing products bookbinding other printing and
010601 pulp/paper 010609 other pulp/paper processing products 010609 other pulp/paper processing products 010702 bookbinding	pulp/paper other pulp/paper processing products bookbinding other printing and
010609 other pulp/paper processing products	other pulp/paper processing products bookbinding other printing and
010702 bookbinding	products bookbinding other printing and
	other printing and
010709 other printing and bookbinding	
	bookbinding
010806 rubber products	rubber products
010807 leather products	leather products
010902 glass products	glass products
010905 other ceramic products	other ceramic products
011203 metal press products	metal press products
011303 optical instruments	optical instruments
011304 watch products	watch products
011401 heavy electrical equipment	heavy electrical equipment
electronics equipment and telecommunications apparatus	electronics equipment and telecommunications apparatus
011503 railway vehicle products	railway vehicle products
011704 tobacco products	tobacco products
020101 general coal mining	general coal mining
020109 other coal mining	other coal mining
020201 quarrying	quarrying
020209 other quarrying	other quarrying
020301 metal mining	metal mining
020302 petroleum mining	petroleum mining
020309 other mining	other mining
030101 hydroelectric plant construction work	hydroelectric plant construction work
030103 subway construction work	subway construction work
030105 bridge construction work	bridge construction work
030108 sand collapse prevention civil engineering work	sand collapse prevention civil engineering work
040103 airline service	airline service
040209 other passenger transport service	other passenger transport service
040409 other transportation service	other transportation service
050201 general harbor transportation	general harbor transportation

service																							service
050202 port cargo handling service																							port cargo handling service
060201 lumbering																							lumbering
060209 other forestry																							other forestry
070209 other fishery																							other fishery
080101 all kinds of wholesale																							all kinds of wholesale
080203 furniture/fittings retail																							furniture/fittings retail
080205 newspaper retail																							newspaper retail
080302 beauty salon																							beauty salon
090102 stock/commodity trade business																							stock/commodity trade business
090103 insurance business																							insurance business
090201 traveling service																							traveling service
movie production and delivery service																							movie production and delivery service
100102 movie theatre																							movie theatre
100109 other movie/play service																							other movie/play service
110101 telecommunication service																							telecommunication service
120101 auto mobile practical training																							auto mobile practical training
120102 software service																							software service
other health and hygiene service																							other health and hygiene service
150104 cremation service																							cremation service
150105 livestock process service																							livestock process service
170101 dispatch service																							dispatch service
170202 information processing service																							information processing service
total		116	108	88	93	94	106	59	63	95	85	61	79	49	80	59	70	59	55	37	49	1,505	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