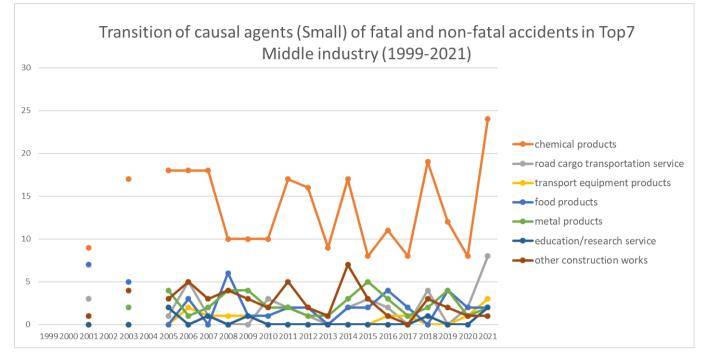
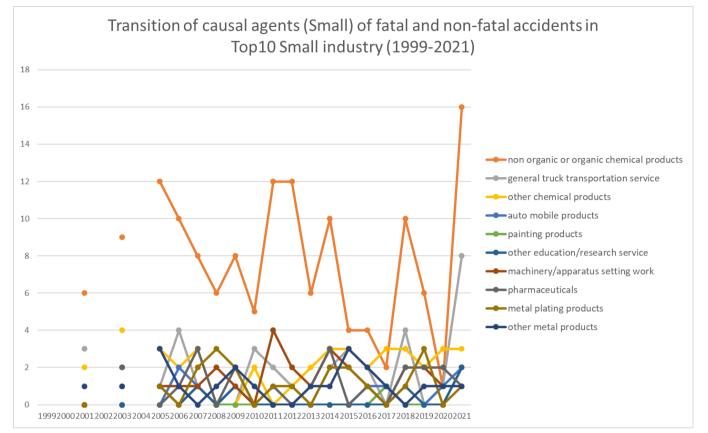


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Large industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Middle Industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Small Industry (1999-2021)

## Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Large industry (1999-2021)

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	total	Large industry
01	manufacturing			20		32		37	30	27	28	20	16	24	24	13	24	19	26	19	29	22	14	33	457	manufacturing
04	transportation service			3				1	5	1	1		4	2	1	1	3	3	2		4		2	8	41	transportation service
08	commerce			1				5	1	1					1	1	2	1	1	2		1	1	2	20	commerce
12	education/research service							2		1		1									1			2	7	education/research service
03	construction			2		5		4	8	9	7	4	3	5	4	1	8	5	1		7	3	2	1	79	construction
15	commercial cleaning and			1				2	1	1	1	1	1	1	1		1	1		1		1	2	1	18	commercial cleaning and
	livestock process							5							<b></b>								Ľ			livestock process
17	others					3		3			2			1	1	1				1	1	2			15	others

14	hotel/restaurant/amusement service											1				1	1	1	1			5	hotel/restaurant/amusement service
05	cargo handling service			2	1			1														4	cargo handling service
13	health and hygiene service			1						1												2	health and hygiene service
02	mining				1																	1	mining
06	agriculture															1						1	agriculture
07	livestock/fishery			1																		1	livestock/fishery
09	financial business/advertisement																						financial business/advertisement
10	movie/play service																						movie/play service
11	telecommunication service																						telecommunication service
16	public office																						public office
	total		27	44	57	45	40	40	26	25	33	33	17	38	29	32	24	43	30	21	47	651	total

## Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Middle industry (1999-2021)

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	total	Middle industry
0108	chemical products			9		17		18	18	18	10	10	10	17	16	9	17	8	11	8	19	12	8	24	259	chemical products
0403	road cargo transportation service			3				1	5	1			3	2	1		2	3	2		4		2	8	37	road cargo transportation service
0115	transport equipment products								2	1	1	1							1	1			1	3	11	transport equipment products
0101	food products			7		5			3		6	1	1	2	2		2	2	4	2		4	2	2	45	food products
0112	metal products			1		2		4	1	2	4	4	2	2	1	1	3	5	3	1	2	4	1	2	45	metal products
1201	education/research service							2		1		1									1			2	7	education/research service
																										other construction

0303 other construction works		1	4	3	5	3	4	3	2	5	2	1	7	3	1		3	2	1	1	51	works
0114 electrical equipment products		1	1	2	4		4	1	1	1	1	2	1	2	2		1			1	25	electrical equipment products
0111 nonferrous metal making			1	3	2	2	1					1			4	2	3			1	20	nonferrous metal making
1501 commercial cleaning and livestock process		1		3	1	1	1	1	1	1	1		1	1		1		1	2	1	18	commercial cleaning and livestock process
0802 retail		1		4	1	1					1	1	2	1		2		1		1	16	retail
0801 wholesale				1											1				1	1	4	wholesale
0302 construction work			1	1	3	6	3	1	1		2		1	2			4	1	1		27	construction work
0113 machine products		2	1	1		2	1		1	2			1	2			1				14	machine products
1702 others			2	3			2			1	1	1				1	1	2			14	others
0117 other manufacturing			2	2		1					1				1	2	2	1			12	other manufacturing
0106 pulp/paper processing products				1							1					3	1		1		7	pulp/paper processing products
0109 sand and stone products				5		1	1														7	sand and stone products
0110 steel making			2	1							2								1		6	steel making
1402 restaurant															1	1	1	1			4	restaurant
0102 textile products			1					2													3	textile products
0402 road passenger transport service									1			1	1								3	road passenger transport service
0501 land cargo handling service			1	1			1														3	land cargo handling service
0104 wood products								1	1												2	wood products
1302 social welfare facility			1						1												2	social welfare facility
0105 furniture																		1			1	furniture

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0202	quarrying			1											1	quarrying
0301	civil engineering work	1													1	civil engineering work
0404	other transportation service					1									1	other transportation service
0502	harbor transportation service		1												1	harbor transportation service
0601	agriculture											1			1	agriculture
0701	livestock		1												1	livestock
1401	hotel								1						1	hotel
1701	dispatch service		1												1	dispatch service
0103	fiber products															fiber products
0107	printing/bookbinding															printing/bookbinding
0116	electric/gas/water service															electric/gas/water service
0201	coal mining															coal mining
0203	other mining															other mining
0401	railroad/water transportation/airline service															railroad/water transportation/airline service
0602	forestry															forestry
0702	fishery															fishery
0803	haircut/beauty salon															haircut/beauty salon
0804	other commerce															other commerce
0901	financial business															financial business
0902	advertisement and mediator															advertisement and mediator
1001	movie/play service															movie/play service

1101	telecommunication service																						telecommunication service
1301	medical treatment service																						medical treatment service
1303	other health and hygiene service																						other health and hygiene service
1403	other amusement service																						other amusement service
1601	public office																						public office
	total		27	44	57	45	40	40	26	25	33	33	17	38	29	32	24	43	30	21	47	651	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 321 chemical facilities in Small industry (1999-2021)

code	Small industry	1999	2000	2001	2002	2003 2	004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Small industry
010801	non organic or organic chemical products			6		9		12	10	8	6	8	5	12	12	6	10	4	4	2	10	6	1	16	147	non organic or organic chemical products
040301	general truck transportation service			3				1	4	1			3	2	1		2	3	2		4		1	8	35	general truck transportation service
010899	other chemical products			2		4		3	2	3			2		1	2	3	3	2	3	3	2	3	3	41	other chemical products
011502	auto mobile products								2	1		1							1	1			1	2	9	auto mobile products
010808	painting products							1	1	1										1				2	6	painting products
120109	other education/research service							1		1		1									1			2	6	other education/research service
030302	machinery/apparatus setting work					2		1	1	1	2	1		4	2	1	3	2	1		2	2	1	1	27	machinery/apparatus setting work
010803	pharmaceuticals					2			1	3		2		1		1	3		1		2	2	2	1	21	pharmaceuticals
011204	metal plating products					1		1		2	3	2		1	1		2	2	1		1	3		1	21	metal plating products

011209	other metal products		1	1	3	1		1	2	1			1	1	3	2	1		1	1	1	21	other metal products
010109	other foods		1	2		2		2	1		1	2		1	1	2	1		2	1	1	20	other foods
010804	petroleum/coal products		1			1		3		3	3	2		1	1	1		1	1		1	19	petroleum/coal products
011109	other nonferrous metal products				3	2		1								4	1	2			1	14	other nonferrous metal products
011403	electronics equipment and telecommunications apparatus			1	1			2	1		1	1	1	1	1	2		1			1	14	electronics equipment and telecommunications apparatus
010805	plastics products				2	3	2										1	1	1	1	1	12	plastics products
010105	alcoholic drinks		2	1		1		2											1		1	8	alcoholic drinks
150109	other cleaning and livestock process service					1													1	2	1	5	other cleaning and livestock process service
080109	other wholesale				1											1				1	1	4	other wholesale
080209	other retails				1		1												1		1	4	other retails
011509	other transport equipment products																				1	1	other transport equipment products
030309	other construction works		1	2	2	4	2	2	1	2	1			4	1			1				23	other construction works
030201	steel frame/reinforced concrete house construction work				1	1	3		1			2		1	1			1				11	steel frame/reinforced concrete house construction work
170209	others			2	2			1			1	1	1				1	1	1			11	others
011301	machine products		2	1			2			1				1	2			1				10	machine products
150102	industrial waste management service				2		1	1	1	1	1			1	1		1					10	industrial waste management service
080204	fuel retail		1		2	1							1	2	1		1					9	fuel retail
011409	other electrical equipment		1			3		2		1					1							8	other electrical equipment
011709	other manufacturing			1	2		1					1				1	1	1				8	other manufacturing

030203	building facility construction work					1	2	2		1								2			8	building facility construction work
010106	soft drinks		1	1				1						1			1		1	1	7	soft drinks
010809	chemical fertilizer products			1			1	1								3		1			7	chemical fertilizer products
030209	other building construction work			1		1		1							1			1	1	1	7	other building construction work
010901	cement products				5			1													6	cement products
011101	nonferrous metals/rolling products			1			2						1				1	1			6	nonferrous metals/rolling products
010101	meat/dairy products		2					1		1					1						5	meat/dairy products
010806	rubber products			1							1	1					1	1			5	rubber products
011001	steel/iron/rolling products			2								2								1	5	steel/iron/rolling products
010601	pulp/paper				1							1					1			1	4	pulp/paper
140201	general restaurant															1	1	1	1		4	general restaurant
010102	fishery products		1	1												1					3	fishery products
011401	heavy electrical equipment				1	1							1								3	heavy electrical equipment
040202	bus service									1			1	1							3	bus service
050101	land cargo handling service			1	1			1													3	land cargo handling service
080201	all kinds of retail				1							1					1				3	all kinds of retail
150103	other waste disposal service		1		1							1									3	other waste disposal service
170201	security service				1			1											1		3	security service
010104	bread/cake products										1					1					2	bread/cake products
010204	dyeing								2												2	dyeing
010402	plywood								1	1											2	plywood
010602	paper processing products																2				2	paper processing products
011202	screw products										1							1			2	screw products
	other precision machine																					other precision machine

011305	products										2							2	products
011702	machine repair			1										1				2	machine repair
011703	cleaning														1	1		2	cleaning
130201	social welfare facility			1						1								2	social welfare facility
010209	other textile products			1														1	other textile products
010502	metal furniture															1		1	metal furniture
010609	other pulp/paper processing products														1			1	other pulp/paper processing products
010802	chemical fiber																1	1	chemical fiber
010909	other sand and stone products						1											1	other sand and stone products
011009	other steel products				1													1	other steel products
011203	metal press products									1								1	metal press products
011302	measuring instruments				1													1	measuring instruments
011303	optical instruments							1										1	optical instruments
011501	ship building							1										1	ship building
020201	quarrying				1													1	quarrying
030110	water supply/sewage construction work		1															1	water supply/sewage construction work
030202	wooden house construction work						1											1	wooden house construction work
030301	electricity/telecommunication work								1									1	electricity/telecommunication work
040302	specific truck transportation service					1												1	specific truck transportation service
040309	other land cargo transportation service																1	1	other land cargo transportation service

			 	1	1					 				 		
040409	other transportation service							1							1	other transportation service
050201	general harbor transportation			1											1	general harbor transportation
	service			Ľ											Ľ	service
060101	agriculture											1			1	agriculture
070101	livestock			1											1	livestock
120102	software service					1									1	software service
140101	hotel									1					1	hotel
170101	dispatch service			1											1	dispatch service
010103	agricultural food products															agricultural food products
010201	silk-reeling															silk-reeling
010202	cotton-spinning															cotton-spinning
010203	weaving															weaving
010301	over/under wear															over/under wear
010309	other fiber products															other fiber products
010401	lumbering															lumbering
	other lumber and wood															other lumber and wood
010409	products															products
010501	wood furniture															wood furniture
010503	fittings															fittings
010509	other furniture															other furniture
010701	printing service															printing service
010702	bookbinding															bookbinding
010709	other printing and															other printing and
010/09	bookbinding															bookbinding
010807	leather products															leather products
010003	glass products															glass products

010903	03 pottery products	pottery products
010904	04 fire resisting products	fire resisting products
010905	05 other ceramic products	other ceramic products
011002	02 casting products	casting products
011102	02 nonferrous metals casting products	nonferrous metals casting     products
011201	01 western tableware/cutting tool products	western tableware/cutting   tool products
011304	04 watch products	watch products
011402	02 electrical appliance	electrical appliance
011503	03 railway vehicle products	railway vehicle products
011601	01 electric utility service	electric utility service
011602	02 city gas service	city gas service
011603	03 city water service	city water service
011609	09 other electric/gas/water service	other electric/gas/water   service
011701	01 auto mobile servicing	auto mobile servicing
011704	04 tobacco products	tobacco products
020101	01 general coal mining	general coal mining
020109	09 other coal mining	other coal mining
020202	02 gravel digging	gravel digging
020209	09 other quarrying	other quarrying
020301	01 metal mining	metal mining
020302	02 petroleum mining	petroleum mining
020309	09 other mining	other mining
030101	01 hydroelectric plant construction work	hydroelectric plant construction work

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030102	tunnel construction work											tunnel construction work
030103	subway construction work											subway construction work
030104	railway construction work											railway construction work
030105	bridge construction work											bridge construction work
030106	road construction work											road construction work
030107	river civil engineering work											river civil engineering work
030108	sand collapse prevention civil engineering work											sand collapse prevention civil engineering work
030109	land consolidation civil engineering work											land consolidation civil engineering work
030111	port/seaside construction work											port/seaside construction work
030199	other civil engineering work											other civil engineering work
040101	railroad service											railroad service
040102	water transportation service											water transportation service
040103	airline service											airline service
040201	taxi service											taxi service
040209	other passenger transport service											other passenger transport service
040303	cargo/ light automobile transportation service											cargo/ light automobile transportation service
050202	port cargo handling service											port cargo handling service
050209	other harbor transportation service											other harbor transportation service
060201	lumbering											lumbering
060209	other forestry											other forestry
070201	fishery											fishery

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70209 o	ther fishery														other fishery
80101 a	ll kinds of wholesale														all kinds of wholesale
80102 fi	urniture/fittings wholesale														furniture/fittings wholesale
80202 a	uto mobile retail														auto mobile retail
80203 fi	urniture/fittings retail														furniture/fittings retail
80205 n	ewspaper retail														newspaper retail
80301 h	aircut														haircut
80302 b	eauty salon														beauty salon
80401 v	varehousing														warehousing
80409 o	ther commerce														other commerce
90101 b	anking/trust business														banking/trust business
90102	tock/commodity trade usiness														stock/commodity trade business
90103 iı	nsurance business														insurance business
90109 o	ther financial business														other financial business
90201 t	raveling service														traveling service
90209	ther advertisement and nediator														other advertisement and mediator
00101	novie production and elivery service														movie production and delivery service
00102 n	novie theatre														movie theatre
00109 o	ther movie/play service														other movie/play service
10101 t	elecommunication service														telecommunication service
20101 a	uto mobile practical training														auto mobile practical training
30101 h	ospital														hospital
30102 g	eneral clinic														general clinic

130109	other medical treatment																						other medical treatment
	service																						service
130301	bathhouse																						bathhouse
130309	other health and hygiene																						other health and hygiene
	service																						service
140209	other restaurants																						other restaurants
140301	golf course																						golf course
140302	park and amusement park																						park and amusement park
140309	other amusement service																						other amusement service
150101	building maintenance service																						building maintenance service
150104	cremation service																						cremation service
150105	livestock process service																						livestock process service
160101	public office																						public office
170202	information processing																						information processing
	service																						service
	total		27	44	57	45	40	40	26	25	33	33	17	38	29	32	24	43	30	21	47	651	total

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

https://www.jisha.or.jp/english/statistics/202212\_03.html