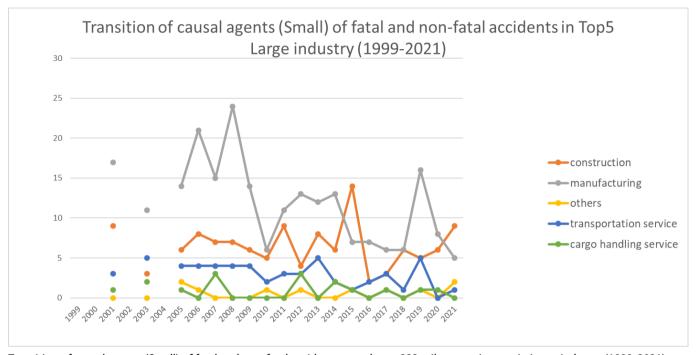
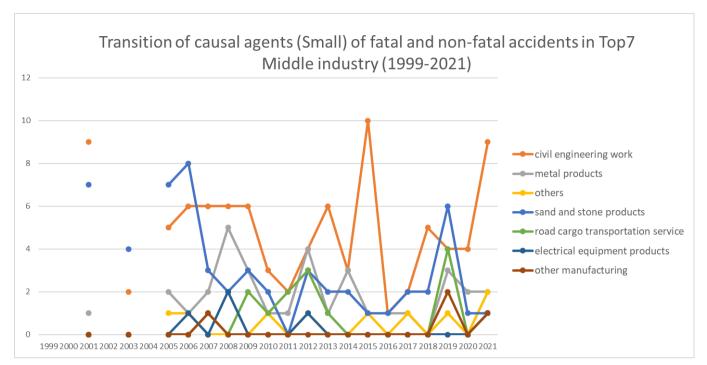
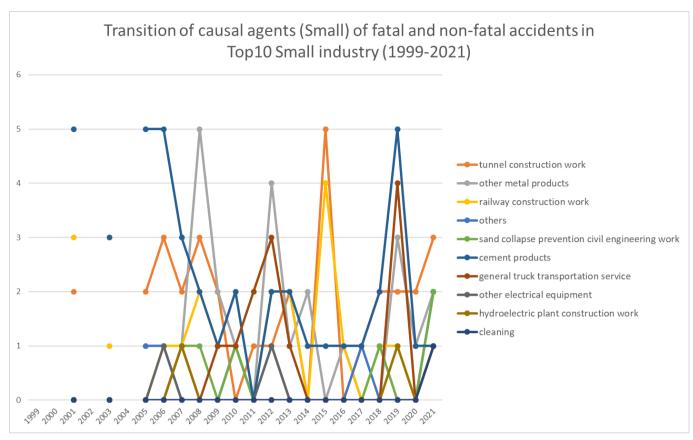
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment in Large industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment in Middle Industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment in Small Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment 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
03	construction			9		3		6	8	7	7	6	5	9	4	8	6	14	2	3	6	5	6	9	123	construction
01	manufacturing			17		11		14	21	15	24	14	6	11	13	12	13	7	7	6	6	16	8	5	226	manufacturing
17	others							2	1				1		1			1		1		1		2	10	others
04	transportation service			3		5		4	4	4	4	4	2	3	3	5	2	1	2	3	1	5		1	56	transportation service
05	cargo handling service			1		2		1		3					3		2	1		1		1	1		16	cargo handling service
06	agriculture					2								1	1	2	1				3	1	1		12	agriculture
14	hotel/restaurant/amusement			2		1			1		1		1					1		1		1			9	hotel/restaurant/amusement
14	service			2							'		'												פ	service

08	commerce				1			1					1			1		2		1		7	commerce
02	mining		1	2	1														1			5	mining
15	commercial cleaning and			2								1					1			1		5	commercial cleaning and
	livestock process																•						livestock process
09	financial													1				1				2	financial
09	business/advertisement													ı									business/advertisement
12	education/research service														1	1						2	education/research service
13	health and hygiene service					1																1	health and hygiene service
07	livestock/fishery																						livestock/fishery
10	movie/play service																						movie/play service
11	telecommunication service																						telecommunication service
16	public office																						public office
	total		33	28	29	36	29	37	24	15	24	26	28	25	26	13	16	19	31	18	17	474	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment 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
0301	civil engineering work			9		2		5	6	6	6	6	3	2	4	6	3	10	1	2	5	4	4	9	93	civil engineering work
0112	metal products			1				2	1	2	5	3	1	1	4	1	3	1	1	1		3	2	2	34	metal products
1702	others							1	1				1		1			1		1		1		2	9	others
0109	sand and stone products			7		4		7	8	3	2	3	2		3	2	2	1	1	2	2	6	1	1	57	sand and stone
0403	road cargo transportation service									1		2	1	2	3	1						4		1	15	road cargo transportation service
0114	electrical equipment products								1		2				1									1	5	electrical equipment products
0117	other manufacturing									1												2		1	4	other manufacturing

0401	railroad/water transportation/airline service		3	5	4	4	3	4	2	1	1		4	2	1	2	3	1	1		41	railroad/water transportation/airline service
0110	steel making		4	1	1	2	4	4	1	3		2	3	5	2	2	1			1	36	steel making
0115	transport equipment products		2	5	1	5		2	2		1		2	1	2	2	1	1		1	28	transport equipment
0113	machine products			1	1	2	1	4	1		3	1	1					1			16	machine products
0303	other construction works			1	1	2		1		2	2		1	2	2		1	1			16	other construction works
0302	construction work						1				5		1	1	2	1			1	2	14	construction work
0501	land cargo handling service		1	2			3					2		2	1		1		1	1	14	land cargo handling service
0104	wood products		1		2		3		2		2				1					1	12	wood products
0108	chemical products						1	2			2		1	1		1		1	1		10	chemical products
0101	food products		1									2	2				1		2		8	food products
0601	agriculture										1	1	2	1				1	1	1	8	agriculture
0106	pulp/paper processing products					1		2	1		1							1		1	7	pulp/paper procession
1403	other amusement service		1	1		1		1		1							1		1		7	other amusement service
1501	commercial cleaning and livestock process			2								1					1			1	5	commercial cleaning
0111	nonferrous metal making							1	1										1	1	4	nonferrous metal making
0602	forestry			2														2			4	forestry
0802	retail				1			1										1		1	4	retail
0107	printing/bookbinding					1					1			1							3	printing/bookbindin

0203	other mining			1	1										1		3	other mining
0102	textile products		1												1		2	textile products
0502	harbor transportation service				1				1								2	harbor transportation service
0804	other commerce									1				1			2	other commerce
0901	financial business										1			1			2	financial business
1201	education/research service											1	1				2	education/research
1401	hotel		1									1					2	hotel
0201	coal mining		1														1	coal mining
0202	quarrying			1													1	quarrying
0801	wholesale												1				1	wholesale
1302	social welfare facility					1											1	social welfare facility
1701	dispatch service				1												1	dispatch service
0103	fiber products																	fiber products
0105	furniture																	furniture
0116	electric/gas/water service																	electric/gas/water service
0402	road passenger transport service																	road passenger transport service
0404	other transportation service																	other transportation service
0701	livestock																	livestock
0702	fishery																	fishery
0803	haircut/beauty salon																	haircut/beauty salon
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
																								other health and
1303	other health and hygiene service																							hygiene service
1402	restaurant																							restaurant
1601	public office																							public office
	total		33	28		29	36	29	37	24	15	24	26	28	25	26	13	16	19	31	18	17	474	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 223 railway equipment in Small industry (1999-2021)

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	total	Small industry
030102	tunnel construction work			2				2	3	2	3	2		1	1	2		5		1	2	2	2	3	33	tunnel construction work
011209	other metal products							1	1	1	5	2	1		4	1	2		1			3	1	2	25	other metal products
030104	railway construction work			3		1			1	1	2	1	1		2	2		4	1		1	1		2	23	railway construction work
170209	others							1	1				1		1					1				2	7	others
030108	sand collapse prevention civil engineering work									1	1		1								1			2	6	sand collapse prevention civil engineering work
010901	cement products			5		3		5	5	3	2	1	2		2	2	1	1	1	1	2	5	1	1	43	cement products
040301	general truck transportation service									1		1	1	2	3	1						4		1	14	general truck transportation service
011409	other electrical equipment								1						1									1	3	other electrical equipment
030101	hydroelectric plant construction work									1												1		1	3	hydroelectric plant construction work
011703	cleaning																							1	1	cleaning

030106	road construction work																				1	1	road construction work
040101	railroad service		3	5	4	4	3	4	2	1	1		4	2	1	2	3	1	1			41	railroad service
011001	steel/iron/rolling products		2			1	2	3		2		2	3	2		2	1			1		21	steel/iron/rolling products
011002	casting products		2	1	1	1	2	1	1					3	2							14	casting products
011301	machine products			1	1	2	1	2	1		3	1	1					1				14	machine products
050101	land cargo handling service		1	2			3					2		2	1		1		1	1		14	land cargo handling service
030199	other civil engineering work		2		2				1			1	1	3	1			1				12	other civil engineering work
011502	auto mobile products			1		3		1	1				1		1	1	1					10	auto mobile products
011501	ship building		1	2	1				1					1		1		1		1		9	ship building
030309	other construction works				1	1		1		2	1		1	1				1				9	other construction works
011204	metal plating products		1		1		1		1		1			1	1		1					8	metal plating products
	steel frame/reinforced																						steel frame/reinforced
030201	concrete house construction						1				5		1						1			8	concrete house construction
	work																						work
060101	agriculture										1	1	2	1				1	1	1		8	agriculture
010401	lumbering				2		2		1						1					1		7	lumbering
030110	water supply/sewage		1	1	1	1			1											2		7	water supply/sewage
030110	construction work				_	Ľ			<u> </u>														construction work
010909	other sand and stone			1	1	1			1			1							1			6	other sand and stone
	products																				<u> </u>		products
011503	railway vehicle products		1			2					1		1		1							6	railway vehicle products
010109	other foods											2	2						1			5	other foods
010602	paper processing products							2			1							1		1		5	paper processing products
010903	pottery products		1		1	2								1								5	pottery products
030209	other building construction													1	2	1				1		5	other building construction
	work													<u> </u>									work
	other lumber and wood																						other lumber and wood

010409	products		1				1		1	1									4	products
010801	non organic or organic						1			2							1		4	non organic or organic
030109	land consolidation civil engineering work					1			1		1				1				4	land consolidation civil
030301	electricity/telecommunication work					1							2		1				4	electricity/telecommunication work
060201	lumbering			2												2			4	lumbering
080209	other retails				1			1								1		1	4	other retails
140301	golf course		1			1		1							1				4	golf course
010701	printing service					1				1		1							3	printing service
010905	other ceramic products		1						1						1				3	other ceramic products
011509	other transport equipment products			2				1											3	other transport equipment products
011709	other manufacturing						1										2		3	other manufacturing
020309	other mining			1	1												1		3	other mining
030107	river civil engineering work		1				1			1									3	river civil engineering work
030302	machinery/apparatus setting work			1						1		1							3	machinery/apparatus setting work
010101	meat/dairy products		1														1		2	meat/dairy products
010804	petroleum/coal products										1	1							2	petroleum/coal products
010805	plastics products							1						1					2	plastics products
011109	other nonferrous metal products																1	1	2	other nonferrous metal products
011403	electronics equipment and telecommunications apparatus							2											2	electronics equipment and telecommunications apparatus

080401	warehousing											1					1			2	warehousing
090103	insurance business												1				1			2	insurance business
120109	other education/research service													1	1					2	other education/research service
140101	hotel		1											1						2	hotel
140309	other amusement service								1									1		2	other amusement service
150101	building maintenance service			1												1				2	building maintenance service
150109	other cleaning and livestock process service			1							1									2	other cleaning and livestock process service
170201	security service													1				1		2	security service
010102	fishery products															1				1	fishery products
010203	weaving																	1		1	weaving
010209	other textile products		1																	1	other textile products
010402	plywood									1										1	plywood
010601	pulp/paper							1												1	pulp/paper
010609	other pulp/paper processing products					1														1	other pulp/paper processing products
010806	rubber products																1			1	rubber products
010899	other chemical products						1													1	other chemical products
011009	other steel products								1											1	other steel products
011101	nonferrous metals/rolling products							1												1	nonferrous metals/rolling products
011102	nonferrous metals casting products						1													1	nonferrous metals casting products
011203	metal press products																		1	1	metal press products
011302	measuring instruments						1													1	measuring instruments
	other precision machine																				other precision machine

011305	products						1								1	products
020101	general coal mining		1												1	general coal mining
020201	quarrying			1											1	quarrying
030103	subway construction work								1						1	subway construction work
030202	wooden house construction work													1	1	wooden house construction work
040302	specific truck transportation service							1							1	specific truck transportation service
050201	general harbor transportation service									1					1	general harbor transportation service
050202	port cargo handling service				1										1	port cargo handling service
080109	other wholesale											1			1	other wholesale
130201	social welfare facility					1									1	social welfare facility
140302	park and amusement park			1											1	park and amusement park
150103	other waste disposal service													1	1	other waste disposal service
170101	dispatch service				1										1	dispatch service
010103	agricultural food products															agricultural food products
010104	bread/cake products															bread/cake products
010105	alcoholic drinks															alcoholic drinks
010106	soft drinks															soft drinks
010201	silk-reeling															silk-reeling
010202	cotton-spinning															cotton-spinning
010204	dyeing															dyeing
010301	over/under wear															over/under wear
010309	other fiber products															other fiber products
010501	wood furniture															wood furniture
							1	1								

010502	metal furniture													metal furniture
010503	fittings													fittings
010509	other furniture													other furniture
010702	bookbinding													bookbinding
010709	other printing and bookbinding													other printing and bookbinding
010802	chemical fiber													chemical fiber
010803	pharmaceuticals													pharmaceuticals
010807	leather products													leather products
010808	painting products													painting products
010809	chemical fertilizer products													chemical fertilizer products
010902	glass products													glass products
010904	fire resisting products													fire resisting products
011201	western tableware/cutting tool products													western tableware/cutting tool products
011202	screw products													screw products
011303	optical instruments													optical instruments
011304	watch products											Ĭ		watch products
011401	heavy electrical equipment											Ĭ		heavy electrical equipment
011402	electrical appliance													electrical appliance
011601	electric utility service													electric utility service
011602	city gas service													city gas service
011603	city water service													city water service
011609	other electric/gas/water service													other electric/gas/water service
011701	auto mobile servicing													auto mobile servicing
011702	machine repair													machine repair

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011704	tobacco products													tobacco products
020109	other coal mining													other coal mining
020202	gravel digging													gravel digging
020209	other quarrying													other quarrying
020301	metal mining													metal mining
020302	petroleum mining													petroleum mining
030105	bridge construction work													bridge construction work
030111	port/seaside construction work													port/seaside construction work
030203	building facility construction work													building facility construction work
040102	water transportation service													water transportation service
040103	airline service													airline service
040201	taxi service													taxi service
040202	bus service													bus service
040209	other passenger transport service													other passenger transport service
040303	cargo/ light automobile transportation service													cargo/ light automobile transportation service
040309	other land cargo transportation service													other land cargo transportation service
040409	other transportation service													other transportation service
050209	other harbor transportation service													other harbor transportation service
060209	other forestry													other forestry
070101	livestock													livestock

070201	fishery													fishery
070209	other fishery													other fishery
080101	all kinds of wholesale													all kinds of wholesale
080102	furniture/fittings wholesale													furniture/fittings wholesale
080201	all kinds of retail													all kinds of retail
080202	auto mobile retail													auto mobile retail
080203	furniture/fittings retail													furniture/fittings retail
080204	fuel retail													fuel retail
080205	newspaper retail													newspaper retail
080301	haircut													haircut
080302	beauty salon													beauty salon
080409	other commerce													other commerce
090101	banking/trust business													banking/trust business
090102	stock/commodity trade													stock/commodity trade
090102	business													business
090109	other financial business													other financial business
090201	traveling service													traveling service
090209	other advertisement and													other advertisement and
050205	mediator													mediator
100101	movie production and													movie production and
	delivery service													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
130101	hospital													hospital

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130102	general clinic																								general clinic
	other medical treatment																								other medical treatment
130109	service																								service
130301	bathhouse																								bathhouse
120200	other health and hygiene																								other health and hygiene
130309	service																								service
140201	general restaurant																								general restaurant
140209	other restaurants																								other restaurants
150102	industrial waste management																								industrial waste management
II I	service																								service
150104	cremation service																								cremation service
150105	livestock process service																								livestock process service
160101	public office																								public office
170202	information processing																								information processing
170202	service																								service
	total		33		28		29	36	29	37	24	15	24	26	28	25	26	13	16	19	31	18	17	474	total

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

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