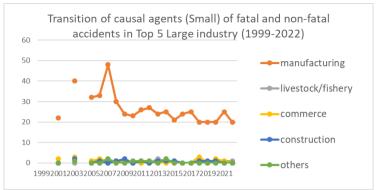
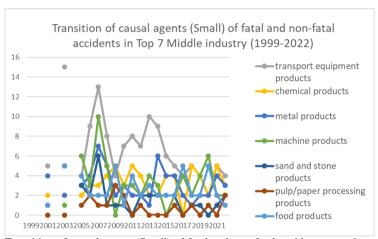
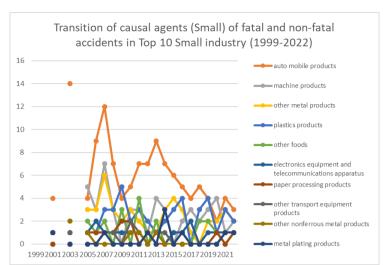
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Large industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Middle Industry (1999-2022)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Small Industry (1999-2022)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Large industry (1999-2022)

	tion of causal agents (Small) of fat																							_		_	1
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			22		40		32	33	48	30	24	23	26	27	24	25	21	24	25	20	20	20	25	20	529	manufacturing
07	livestock/fishery							1			1	1				2	1	1						1	1	9	livestock/fishery
08	commerce			2		3		1	2	1	1	1			1			1			3		2	1		19	commerce
03	construction					2			1		1	2		1		1	1	1			1	1	1			13	construction
17	others					1				2			1	1	1		2									8	others
06	agriculture			1				1					1		2						1	1				7	agriculture
05	cargo handling service			1		1		1						1						1			1			6	cargo handling service
15	commercial cleaning and livestock process										1	1				1		1								4	commercial cleaning and livestock process
04	transportation service													1				1						1		3	transportation service
13	health and hygiene service															1					1					2	health and hygiene service
14	hotel/restaurant/amusement service															1								1		2	hotel/restaurant/amusement service
02	mining												1													1	mining
09	financial business/advertisement																										financial business/advertisement
10	movie/play service																										movie/play service
11	telecommunication service																										telecommunication service
12	education/research service																										education/research service
16	public office																										public office
	total			26		47		36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	21	603	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Middle industry (1999-2022)

code	Middle industry	1999	2000	2001	2002	2003	2004	2005	2006	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Middle industry	

0115	transport equipment products		5	15	4	9	13	8	4	7	8	7	10	9	6	5	4	5	4	2	5	4	134	transport equipment products
0108	chemical products		2	2	2	3	3	4	5	3	5	4	2	2	4	4		5	4	2	5	3	64	chemical products
0112	metal products		4	2	3	4	7	5	2	3	2	2	1	6	4	4	2	1	2	2	4	3	63	metal products
0113	machine products			1	6	3	10	5		3	3	2	4	3		2	4	2	4	6	2	2	62	machine products
0109	sand and stone products		1	5	3	2	6	1	1	1		2	2	2	2	2		1	1		1	2	35	sand and stone products
0106	pulp/paper processing products				1	2	1	1	3	2		1				1		1		1		2	16	pulp/paper processing products
0101	food products		1	5	4	2	2	2	5	1	4	2	3	2	2	2	5	2	2	5	2	1	54	food products
0114	electrical equipment products		4	1	4	4	3	2	1	2	1	2	1		2	2	3		1	1	2	1	37	electrical equipment products
0111	nonferrous metal making		2	3	1	2	2			1	1	1	1		1	2	3				2	1	23	nonferrous metal making
0701	livestock				1			1	1				2	1	1						1	1	9	livestock
0102	textile products																				1	1	2	textile products
0117	other manufacturing		1	5	4	1		2	1			2					2	2	1	1			22	other manufacturing
0303	other construction works			1		1		1	1				1	1				1	1	1			9	other construction works
0801	wholesale				1	2	1	1				1						2			1		9	wholesale
1702	others			1			2			1	1	1		2									8	others
0501	land cargo handling service		1	1	1						1						1			1			6	land cargo handling service
0601	agriculture		1		1					1		2							1				6	agriculture
0802	retail		2	2											1					1			6	retail
0107	printing/bookbinding						1				2	1						1					5	printing/bookbinding
0104	wood products					1			1			1									1		4	wood products
0105	furniture								1								2		1				4	furniture
	other commerce			1					1									1		1			4	other commerce
1501	commercial cleaning and livestock process							1	1				1		1								4	commercial cleaning and livestock process
0110	steel making		1	1										1									3	steel making
0403	road cargo transportation service										1				1						1		3	road cargo transportation service
0301	civil engineering work			1							1												2	civil engineering work
0302	construction work								1						1								2	construction work
1301	medical treatment service												1					1					2	medical treatment service
1402	restaurant												1								1		2	restaurant
0103	fiber products		1																				1	fiber products
0202	quarrying									1													1	quarrying
0602	forestry																	1					1	forestry
0116	electric/gas/water service																							electric/gas/water service
0201	coal mining																							coal mining

0203	other mining						İ	i i	i i				İ	İ	İ		İ							other mining
0401	railroad/water transportation/airline service																							railroad/water transportation/airline service
0402	road passenger transport service																							road passenger transport service
0404	other transportation service																							other transportation service
0502	harbor transportation service																							harbor transportation service
0702	fishery																							fishery
0803	haircut/beauty salon																							haircut/beauty salon
0901	financial business																							financial business
0902	advertisement and mediator																							advertisement and mediator
1001	movie/play service																							movie/play service
1101	telecommunication service																							telecommunication service
1201	education/research service																							education/research service
1302	social welfare facility																							social welfare facility
1303	other health and hygiene service																							other health and hygiene service
1401	hotel																							hotel
1403	other amusement service																							other amusement service
1601	public office																							public office
1701	dispatch service																							dispatch service
	total		26	47	36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	21	603	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot 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
011502	auto mobile products			4		14		4	9	12	7	4	5	7	7	9	7	6	5	4	5	4	2	4	3	122	auto mobile products
011301	machine products					1		5	3	7	3		3	3	1	4	3		2	3	2	3	4	1	2	50	machine products
011209	other metal products			1		1		3	3	6	3	2	3	2	1	1	3	4	3	1		2	2	3	2	46	other metal products
010805	plastics products			1		1		1	1	3	3	5	2	3	2	1	2	3	4		3	4	1	3	2	45	plastics products
010109	other foods					1		2	1	2		3		4		2		1	1		2	2	1		1	23	other foods
011403	electronics equipment and telecommunications apparatus			1				1	2	1	1	1	1	1		1		1	1	2		1	1	1	1	18	electronics equipment and telecommunications apparatus
	paper processing products							1	1	1	1	2	2		1								1		1	11	paper processing products
	other transport equipment products			1		1				1	1		2	1		1	1							1	1	11	other transport equipment products
011109	other nonferrous metal products			1		2		1					1	1		1								1	1	9	other nonferrous metal products

	metal plating products		1		<u> </u>			1	<u> </u>	<u> </u>			1		3	<u> </u>	1		<u> </u>	Щ		1	1	9	metal plating products
070101						1		<u> </u>	1	1				2	1	1						1	1	9	livestock
010903	pottery products		<u> </u>	1				2	<u> </u>	1												1	1	6	pottery products
010609	other pulp/paper processing products						1			1							1		1				1	5	other pulp/paper processing products
010806 г	rubber products						1				1	1							1				1	5	rubber products
010904 f	fire resisting products					1														1			1	3	fire resisting products
010209	other textile products																						1	1	other textile products
011709	other manufacturing		1	4		3	1		2	1			2					2	2	1				19	other manufacturing
011102	nonferrous metals casting products		1	1			2	2					1			1	2	2				1		13	nonferrous metals casting products
011409	other electrical equipment		1			3	1	2	1		1					1	1	1				1		13	other electrical equipment
010909	other sand and stone products			3			2		1					1	1	2			1					11	other sand and stone products
010104 t	bread/cake products					1				2	1		1				1	2			1	1		10	bread/cake products
	other wholesale					1	2	1	1				1						2			1		9	other wholesale
170209	others			1				2			1	1	1		2									8	others
010905	other ceramic products			1		1		1			1		2				1							7	other ceramic products
	other precision machine products							1	1				1							1	2	1		7	other precision machine products
030302	machinery/apparatus setting work			1			1			1				1	1				1	1				7	machinery/apparatus settin work
010101	meat/dairy products			2										1	1			1			1			6	meat/dairy products
	soft drinks					1	1		1							1		1			1			6	soft drinks
011402	electrical appliance		2	1			1						2											6	electrical appliance
	and cargo handling service		1	1		1						1						1			1			6	land cargo handling service
	agriculture		1			1					1		2							1				6	agriculture
010701 ј	printing service							1				2	1						1					5	printing service
010901	cement products					1		3									1							5	cement products
010103	agricultural food products		1												1			1			1			4	agricultural food products
010105 ใ	alcoholic drinks			1					1				1									1		4	alcoholic drinks
010803	pharmaceuticals			1									1	1					1					4	pharmaceuticals
011203	metal press products		1						2										1					4	metal press products
010809	chemical fertilizer products		1			1							1											3	chemical fertilizer products
010899	other chemical products											1									1	1		3	other chemical products
	glass products		1											1	1									3	glass products
011202	screw products		1	1														1						3	screw products
011303	optical instruments					1		1	1															3	optical instruments
011703	cleaning			1		1															1			3	cleaning
040301	general truck transportation service											1				1						1		3	general truck transportation service
	all kinds of retail		2	1																				3	all kinds of retail
000000	other retails			1												1					1			3	other retails

080401 warehousing			1													1		1		3	warehousing
010401 lumbering					1			1												2	lumbering
010409 other lumber and wood products											1								1	2	other lumber and wood products
010501 wood furniture								1									1			2	wood furniture
010801 non organic or organic chemical products							1							1						2	non organic or organic chemical products
011002 casting products		1											1							2	casting products
011302 measuring instruments						1									1					2	measuring instruments
030199 other civil engineering work			1							1										2	other civil engineering work
030209 other building construction work								1						1						2	other building construction work
130101 hospital												1				1				2	hospital
140201 general restaurant												1							1	2	general restaurant
010102 fishery products			1																	1	fishery products
010202 cotton-spinning																			1	1	cotton-spinning
010301 over/under wear		1																		1	over/under wear
010502 metal furniture															1					1	metal furniture
010503 fittings															1					1	fittings
010802 chemical fiber																			1	1	chemical fiber
010804 petroleum/coal products					1															1	petroleum/coal products
011001 steel/iron/rolling products			1																	1	steel/iron/rolling products
011101 nonferrous metals/rolling products															1					1	nonferrous metals/rolling products
011201 western tableware/cutting tool products					1															1	western tableware/cutting tool products
011503 railway vehicle products													1							1	railway vehicle products
020209 other quarrying									1											1	other quarrying
030301 electricity/telecommunication work							1													1	electricity/telecommunication work
030309 other construction works																		1		1	other construction works
060209 other forestry																1				1	other forestry
080409 other commerce								1												1	other commerce
150101 building maintenance service							1													1	building maintenance service
150102 industrial waste management service												1								1	industrial waste management service
150103 other waste disposal service														1						1	other waste disposal service
other cleaning and livestock process service								1												1	other cleaning and livestock process service
010201 silk-reeling																					silk-reeling
010203 weaving																					weaving
010204 dyeing														\Box							dyeing
010309 other fiber products																					other fiber products
010402 plywood																					plywood

010509 other furniture 010601 pulp/paper						\Box	\Box								other furniture pulp/paper
010702 bookbinding															bookbinding
other printing and bookbinding															other printing and bookbinding
010807 leather products															leather products
010808 painting products															painting products
011009 other steel products															other steel products
011304 watch products															watch products
011401 heavy electrical equipment															heavy electrical equipme
011501 ship building															ship building
011601 electric utility service				Ī						i		ĺ			electric utility service
011602 city gas service				i								i			city gas service
011603 city water service															city water service
other electric/gas/water service															other electric/gas/water service
011701 auto mobile servicing															auto mobile servicing
011702 machine repair															machine repair
011704 tobacco products															tobacco products
20101 general coal mining				Ĭ											general coal mining
020109 other coal mining				T											other coal mining
020201 quarrying				i								i			quarrying
020202 gravel digging										i		ĺ			gravel digging
020301 metal mining															metal mining
020302 petroleum mining												Ì			petroleum mining
020309 other mining				ĺ						T i		i			other mining
hydroelectric plant construction work															hydroelectric plant construction work
030102 tunnel construction work															tunnel construction work
030103 subway construction work				ĺ						i		i			subway construction wor
030104 railway construction work				Ĭ											railway construction wor
030105 bridge construction work				Ī						i		ĺ			bridge construction work
030106 road construction work				ĺ						T i		ĺ			road construction work
030107 river civil engineering work												Ì			river civil engineering w
330108 sand collapse prevention civil engineering work															sand collapse prevention civil engineering work
030109 land consolidation civil engineering work															land consolidation civil engineering work
water supply/sewage construction work															water supply/sewage construction work
port/seaside construction work															port/seaside construction work
steel frame/reinforced concrete house construction															steel frame/reinforced concrete house construct

	work												w	vork
030202	wooden house construction work												ll ll	vooden house construction vork
030203	building facility construction work													uilding facility construction work
040101	railroad service												ra	ailroad service
040102	water transportation service												W	vater transportation service
040103	airline service												ai	irline service
040201	taxi service												ta	axi service
040202	bus service												bı	ous service
040207	service													ther passenger transport ervice
	specific truck transportation service												st	pecific truck transportation ervice
040303	cargo/ light automobile transportation service												tr	argo/ light automobile ransportation service
040309	transportation service												ot tr	ther land cargo ransportation service
040409	other transportation service													ther transportation service
050201	general harbor transportation service													eneral harbor transportation ervice
050202	port cargo handling service												pe	ort cargo handling service
050209	other harbor transportation service													ther harbor transportation ervice
060201	lumbering												lu	umbering
070201	fishery												fi	ishery
070209	other fishery												01	ther fishery
080101	all kinds of wholesale												al	ll kinds of wholesale
080102	furniture/fittings wholesale												fı	urniture/fittings wholesale
080202	auto mobile retail												aı	uto mobile retail
080203	furniture/fittings retail												fı	urniture/fittings retail
080204	fuel retail												fı	uel retail
080205	newspaper retail												ne	ewspaper retail
080301	haircut												h	aircut
080302	beauty salon												b	eauty salon
090101	banking/trust business												ba	anking/trust business
090102	stock/commodity trade business													tock/commodity trade ousiness
090103	insurance business												in	nsurance business
090109	other financial business												01	ther financial business
090201	traveling service												tr	raveling service
090209	other advertisement and mediator													ther advertisement and nediator
100101	movie production and delivery service												m de	novie production and elivery service

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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 education/research service																									other education/research service
[130102] general clinic																									general clinic
other medical treatment service																									other medical treatment service
130201 social welfare facility																									social welfare facility
130301 bathhouse																									bathhouse
other health and hygiene service																									other health and hygiene service
[140101] hotel																									hotel
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
150104 cremation service																									cremation service
150105 livestock process service																									livestock process service
160101 public office																									public office
170101 dispatch service																									dispatch service
170201 security service																									security service
170202 information processing service																									information processing service
total			26		47	36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	21	603	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