



contact to harmful substance	158	146	160	175	136	160	189	177	160	157	148	140	167	150	136	137	145	143	165	167	181	182
electric shock	28	28	37	27	30	29	25	20	35	34	23	22	24	19	31	23	23	16	24	37	22	25
explosion	30	35	35	36	42	31	33	30	45	39	27	26	20	33	28	24	26	23	14	28	17	19
burst	22	23	24	25	21	24	23	22	23	29	22	20	22	18	18	18	18	25	16	18	14	22
fire	41	25	34	28	23	31	28	33	32	28	28	22	39	22	24	22	14	26	13	14	66	12
traffic accident (public road)	3,862	4,025	4,254	4,401	4,518	4,541	6,042	6,220	5,883	5,592	5,348	5,356	5,018	5,241	5,065	4,993	4,830	4,911	4,883	4,978	4,636	4,479
traffic accident (others)	76	64	42	40	48	30	58	77	75	54	38	41	61	54	58	49	52	65	51	48	61	66
reaction to motion/improper motion	4,995	4,961	5,527	5,589	6,059	6,145	6,715	7,138	7,765	7,999	7,537	7,836	8,158	8,326	8,150	8,420	8,652	9,144	9,765	10,208	10,817	12,005
others	550	623	584	607	655	670	787	840	848	851	812	790	1,082	820	811	815	926	846	843	964	1,032	6,409
unclassifiable	223	190	223	243	212	222	192	200	201	210	160	144	146	195	199	201	172	163	182	181	184	123
total	40,209	40,506	43,243	43,053	45,049	45,744	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959

Causal agents (middle) of industrial accidents in tertiary industry in 1999-2020

Causal (M) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
engine	12	12	13	8	8	12	10	6	11	4	7	9	9	15	6	6	8	14	10	4	9	7
power transmission	85	80	72	90	81	59	64	72	62	75	64	64	66	73	64	61	67	61	62	55	48	52

mechanism																						
woodworking machine	209	236	195	228	200	202	214	187	199	181	176	174	162	197	160	153	172	147	143	154	166	182
construction machine	298	267	313	281	288	326	303	278	258	294	264	232	266	235	284	242	263	264	229	234	241	258
metal manufacturing machine	207	144	149	163	182	162	141	157	159	149	119	137	117	128	105	116	98	122	120	131	131	128
general machine	1,490	1,497	1,542	1,533	1,575	1,528	1,500	1,468	1,410	1,485	1,366	1,396	1,388	1,306	1,345	1,211	1,336	1,256	1,270	1,270	1,299	1,232
mobile silviculture machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	6	9	7
crane	327	337	353	331	359	309	323	320	299	301	283	252	239	263	270	241	239	229	221	277	267	232
conveying machine	2,891	2,968	2,864	2,863	2,956	2,733	2,845	2,833	2,746	2,763	2,389	2,426	2,465	2,562	2,473	2,494	2,463	2,484	2,504	2,456	2,641	2,717
vehicle	4,627	4,740	4,984	5,137	5,259	5,515	7,419	7,525	7,277	6,946	6,563	6,453	6,162	6,308	6,131	5,954	5,780	5,726	5,764	5,943	5,614	5,316
pressure vessel	54	50	66	49	58	33	40	32	47	45	43	26	45	46	43	41	32	48	32	29	30	24
chemical facilities	3	3	2	4	4	6	13	2	3	3	2	2	2	4	2	3	2	2	5	3	5	3
welding equipment	14	11	16	20	16	16	17	12	10	18	16	15	12	6	12	10	12	15	11	14	24	11
kiln, caldron	53	56	68	67	72	64	76	94	68	83	81	74	77	87	73	72	75	58	87	99	118	78
electric	93	87	94	84	81	97	80	76	93	113	84	78	97	94	108	114	109	112	148	165	150	157

equipment																							
human power machine, tools	2,768	2,851	3,188	3,315	3,236	3,352	3,494	3,648	3,627	3,511	3,458	3,476	3,442	3,813	3,735	3,674	3,812	3,878	3,978	4,224	4,323	4,548	
tools	2,866	2,920	3,163	3,091	3,516	3,604	3,609	3,848	3,843	4,119	3,711	3,872	4,000	4,067	4,233	4,176	4,264	4,571	4,906	5,111	5,479	5,340	
other equipments, facilities	1,119	1,147	1,227	1,198	1,140	1,413	1,441	1,501	1,613	1,693	1,595	1,844	1,697	1,793	1,883	1,941	1,931	2,060	1,870	2,026	2,139	2,200	
temporary buildings, establishments	11,715	11,829	12,721	12,576	13,669	13,801	14,423	15,107	14,899	15,516	14,869	15,418	16,101	16,114	16,000	16,726	16,890	18,341	18,734	20,527	20,224	20,868	
hazards, harmful substances	386	376	458	473	441	442	474	429	416	401	363	336	406	398	367	388	368	416	385	373	437	322	
materials	2,003	1,988	1,972	2,002	1,919	2,041	1,881	2,058	1,947	1,793	1,652	1,608	1,644	1,772	1,687	1,701	1,603	1,585	1,560	1,522	1,567	1,459	
load	2,551	2,638	2,913	2,693	2,816	2,695	2,895	3,087	3,245	3,094	2,717	2,687	2,639	2,760	2,603	2,740	2,763	2,860	2,851	2,948	3,124	3,362	
natural environment	1,869	1,846	2,297	1,839	1,999	2,028	2,267	2,225	1,982	2,048	2,035	2,223	3,112	2,695	2,832	3,160	2,473	2,647	2,831	3,456	2,737	2,904	
other causal agent	2,046	2,145	2,038	1,924	2,038	2,281	2,281	2,414	2,287	2,553	2,171	2,288	2,633	2,471	2,440	2,448	2,676	2,561	2,889	2,678	3,034	8,184	
no causal agent	2,105	1,979	2,187	2,731	2,807	2,691	3,041	2,989	3,233	3,523	3,854	3,968	3,991	4,350	4,292	4,447	4,649	4,649	5,185	6,114	6,226	7,235	
unclassifiable	418	299	348	353	329	334	296	320	342	388	290	262	261	293	272	266	221	171	206	234	166	133	
total	40,209	40,506	43,243	43,053	45,049	45,744	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959	

Causal agents (small) of industrial accidents in tertiary industry in 1999-2020

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
engine			13		8	0	10	6	11	4	7	9	9	15	6	6	8	14	10	4	9	7
power transmission mechanism			72		81	0	64	72	62	75	64	64	66	73	64	61	67	61	62	55	48	52
circular sawing machine			96		117	0	111	89	101	90	91	86	84	96	71	65	80	74	73	64	88	86
band sawing machine			7		3	0	10	2	6	6	2	5	4	3	3	3	6	2	3	2	3	6
wood planer machine			19		11	0	17	19	10	14	5	12	10	11	20	7	11	6	5	10	3	9
hollow chisel mortiser, wood borer			3		3	0	2	3	1	3	2	1	0	1	0	0	3	0	0	5	1	1
chamfering machine, router, woodworking milling machine			1		1	0	0	4	1	0	1	1	2	2	1	3	3	4	1	1	1	0
chain saw			31		33	0	35	35	48	34	44	37	40	51	39	44	40	36	37	42	41	43
other woodworking machines			38		32	0	39	35	32	34	31	32	22	33	26	31	29	25	24	30	29	37
leveling, transporting or loading machine			64		62	0	75	72	64	72	55	52	58	61	58	42	59	56	55	61	39	56
excavating machine			140		145	0	134	126	123	141	128	106	119	106	113	108	109	101	103	112	128	129
foundation work machine			5		2	0	2	5	3	4	5	5	4	0	7	7	1	5	3	4	1	0
hardening machine			8		13	0	11	13	9	12	9	10	10	5	10	10	11	15	9	4	7	6
demolition machine			14		15	0	6	6	7	7	4	6	9	10	20	23	33	33	22	22	33	29
vehicle for high lift			15		10	0	11	14	10	17	18	12	21	7	15	16	20	24	13	9	14	16



industrial robot			2		4	0	1	2	3	2	2	1	1	2	3	2	2	0	0	4	0	2
other general power machines			775		786	0	741	750	675	682	666	639	608	615	621	552	584	563	567	557	596	577
felling machine																	1	3	1	4	5	0
mobile logging machine																	0	0	0	1	1	0
skyline yarding machine																	0	0	0	0	0	0
other mobile silviculture machine																	1	0	0	1	3	7
crane			83		90	0	89	76	62	70	52	54	54	54	71	65	39	55	48	74	58	47
mobile crane			122		129	0	109	88	88	100	104	95	76	83	96	82	92	86	74	77	89	94
derrick crane			0		0	0	1	1	3	2	1	1	0	0	0	0	0	0	0	0	1	0
elevator, lift			114		106	0	93	112	119	95	100	73	79	90	83	79	84	67	82	90	92	72
cargo lifting appliance			1		0	0	1	1	0	0	1	2	1	0	2	0	0	0	1	2	1	0
gondola			6		3	0	9	9	4	11	5	5	6	2	2	1	2	2	3	4	2	2
lumberyard equipment, logging cableway			4		1	0	0	0	0	1	0	1	0	2	0	0	1	0	0	0	0	1
simple skyline yarding equipment																	0	0	0	0	0	0
other powered crane			23		30	0	21	33	23	22	20	21	23	32	16	14	21	19	13	30	24	16
truck			1,852		1,889	0	1,835	1,809	1,748	1,785	1,588	1,587	1,599	1,701	1,679	1,651	1,639	1,651	1,653	1,627	1,736	1,878
forklift			500		525	0	513	497	505	493	395	412	434	423	398	408	411	455	448	447	513	469

railway equipment			2		3	0	3	3	0	2	0	2	0	2	1	1	3	2	3	3	2	2
conveyor			222		242	0	235	234	244	228	215	206	200	220	195	235	212	168	176	175	187	176
loader			16		25	0	13	18	10	15	9	9	20	14	9	12	11	16	13	12	13	14
straddle carrier			0		0	0	0	2	0	0	1	0	0	0	0	1	2	1	1	1	0	1
rough terrain hauler			6		4	0	4	3	1	7	4	5	3	0	5	1	6	4	5	1	3	4
other powered conveying machines			266		268	0	242	267	238	233	177	205	209	202	186	185	179	187	205	190	187	173
cars, bus, motorcycle			4,567		4,866	0	6,996	7,134	6,869	6,610	6,221	6,126	5,768	5,912	5,813	5,693	5,548	5,518	5,514	5,722	5,416	5,130
railway vehicle			23		14	0	26	16	14	25	20	13	23	12	16	23	16	17	25	23	23	17
other vehicles			394		379	0	397	375	394	311	322	314	371	384	302	238	216	191	225	198	175	169
boiler			8		5	0	8	4	8	6	8	3	6	6	6	9	2	3	4	4	5	3
pressure vessel			11		12	0	6	5	7	6	6	5	5	7	6	4	4	12	9	8	7	4
other pressure vessels			47		41	0	26	23	32	33	29	18	34	33	31	28	26	33	19	17	18	17
chemical facilities			2		4	0	13	2	3	3	2	2	2	4	2	3	2	2	5	3	5	3
gas welding equipment			6		12	0	12	5	6	12	10	11	7	4	6	7	4	9	6	9	14	6
arc welding equipment			8		2	0	3	3	2	1	5	2	2	0	5	2	7	4	5	5	6	3
other welding equipment			2		2	0	2	4	2	5	1	2	3	2	1	1	1	2	0	0	4	2
kiln, caldron			52		56	0	67	75	55	64	69	66	63	67	61	49	47	45	68	91	100	71
industrial dryer			3		1	0	4	6	4	3	3	2	4	7	3	2	3	4	7	2	7	3
other kiln, caldron			13		15	0	5	13	9	16	9	6	10	13	9	21	25	9	12	6	11	4
transmission			36		24	0	28	27	36	59	43	34	43	56	44	57	61	62	79	93	91	71
electric power facilities			9		17	0	14	10	11	13	7	15	15	13	14	13	10	10	15	21	14	13



other electrical equipment			49	40	0	38	39	46	41	34	29	39	25	50	44	38	40	54	51	45	73
human power cranes			24	19	0	24	20	16	13	11	14	10	9	9	12	12	6	8	26	143	237
human power hauling equipment			1,187	1,282	0	1,534	1,659	1,619	1,716	1,784	1,796	1,862	1,995	1,933	1,973	2,049	2,244	2,311	2,478	2,461	2,506
human power machine			37	20	0	24	32	30	30	22	28	29	24	37	28	21	23	29	24	33	30
hand tool			1,940	1,915	0	1,912	1,937	1,962	1,752	1,641	1,638	1,541	1,785	1,756	1,661	1,730	1,605	1,630	1,696	1,686	1,775
ladder			1,588	1,645	0	1,713	1,743	1,790	1,800	1,746	1,845	1,913	1,972	1,916	1,899	1,882	1,983	2,046	2,175	2,301	2,360
slinging tool			37	47	0	38	49	34	34	29	36	31	27	39	16	28	38	34	34	26	21
other tools			1,538	1,824	0	1,858	2,056	2,019	2,285	1,936	1,991	2,056	2,068	2,278	2,261	2,354	2,550	2,826	2,902	3,152	2,959
other equipment, facilities			1,227	1,140	0	1,441	1,501	1,613	1,693	1,595	1,844	1,697	1,793	1,883	1,941	1,931	2,060	1,870	2,026	2,139	2,200
scaffolding			79	99	0	86	76	93	71	77	48	60	64	67	59	66	62	58	75	55	41
timbering			4	3	0	5	4	5	4	1	2	3	1	2	1	2	0	1	3	0	4
stairs, landing stage			2,846	3,147	0	3,344	3,704	3,574	3,564	3,422	3,388	3,538	3,409	3,367	3,555	3,624	3,826	3,910	3,983	4,227	4,230
opening			141	115	0	111	118	124	105	133	137	98	125	135	131	129	138	159	166	175	163
roof, beam, haze, crossbeam, principal rafter			157	131	0	132	136	116	123	103	116	138	140	134	114	94	95	83	119	91	84
working platform, boot board			1,588	1,813	0	1,546	1,672	1,798	1,914	1,738	1,833	1,706	1,717	1,791	1,897	1,978	1,895	2,085	2,345	2,102	1,996
passage			4,858	5,172	0	5,916	5,997	5,994	6,416	6,050	6,472	7,044	7,183	7,074	7,521	7,303	8,622	8,721	10,032	9,653	10,122
building, establishment			1,782	1,754	0	1,846	1,923	1,888	1,980	1,982	1,995	2,173	2,083	2,064	1,810	1,986	1,897	2,102	2,182	1,961	2,161

other temporary buildings, establishments			1,266		1,435	0	1,437	1,477	1,307	1,339	1,363	1,427	1,341	1,392	1,366	1,638	1,708	1,806	1,615	1,622	1,960	2,067
explosive substance			10		6	0	5	5	9	8	5	9	3	7	11	2	4	9	3	4	7	4
inflammable substance			83		50	0	54	60	66	61	47	57	41	66	49	68	36	28	41	51	87	32
inflammable gas			48		48	0	34	38	41	52	29	21	41	26	29	35	21	54	23	31	26	28
harmful substance			78		66	0	81	86	75	82	64	71	76	66	65	42	75	72	66	65	63	51
radiation			0		1	0	0	1	0	1	1	0	0	1	0	1	1	0	5	0	0	0
other hazards, harmful substances			239		270	0	300	239	225	197	217	178	245	232	213	240	231	253	247	222	254	207
metal material			708		634	0	632	687	620	598	494	518	493	556	485	531	474	540	541	511	518	463
lumber, bamboo			271		260	0	262	259	209	197	192	179	219	197	189	196	181	197	199	209	180	169
stone, sand, substance			130		101	0	106	100	115	104	74	73	96	87	100	81	83	74	94	75	84	96
other materials			863		924	0	881	1,012	1,003	894	892	838	836	932	913	893	865	774	726	727	785	731
load			2,713		2,645	0	2,697	2,901	3,064	2,903	2,555	2,511	2,488	2,566	2,458	2,602	2,619	2,718	2,726	2,813	2,957	3,216
machine/equipment as load			200		171	0	198	186	181	191	162	176	151	194	145	138	144	142	125	135	167	146
natural ground, rock			431		415	0	363	353	352	356	340	318	346	334	293	281	280	248	297	212	279	259
standing tree			144		142	0	126	137	146	116	147	128	135	146	144	130	137	135	148	158	139	174
water			90		96	0	109	117	116	101	112	84	673	86	118	115	78	89	79	139	100	129
abnormal environment			20		10	0	17	12	5	16	4	23	20	32	18	8	6	12	13	24	11	10
high/cold temperature environment			291		163	0	158	206	190	186	147	281	280	296	344	293	280	256	273	635	488	494
other environments			1,321		1,173	0	1,494	1,400	1,173	1,273	1,285	1,389	1,658	1,801	1,915	2,333	1,692	1,907	2,021	2,288	1,720	1,838

other causal agent			2,038		2,038	0	2,281	2,414	2,287	2,553	2,171	2,288	2,633	2,471	2,440	2,448	2,676	2,561	2,889	2,678	3,034	8,184
no causal agent			2,187		2,807	0	3,041	2,989	3,233	3,523	3,854	3,968	3,991	4,350	4,292	4,447	4,649	4,649	5,185	6,114	6,226	7,235
unclassifiable			348		329	0	296	320	342	388	290	262	261	293	272	266	221	171	206	234	166	133
total			43,243		45,049	0	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959

#### Workers age of industrial accidents in tertiary industry in 1999-2020

Age	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
19 years old or less	1,567	1,499	1,609	1,557	1,646	1,450	1,572	1,482	1,379	1,336	1,112	1,115	1,135	1,296	1,328	1,332	1,400	1,329	1,292	1,538	1,481	1,389
20-29	8,572	8,402	8,914	8,559	8,607	8,641	8,843	8,622	8,210	7,948	7,305	7,285	7,194	7,106	6,945	6,698	6,669	6,532	6,454	6,793	6,594	7,893
30-39	6,131	6,602	6,958	7,268	7,916	8,084	8,725	9,201	9,065	9,050	8,594	8,650	8,423	8,544	8,171	7,731	7,488	7,294	7,473	7,474	7,282	8,381
40-49	7,560	7,359	7,750	7,705	7,982	8,148	8,858	9,051	9,093	9,064	8,967	9,256	9,881	10,189	10,065	10,471	10,453	10,835	10,992	11,381	11,158	12,482
50-59	10,403	10,823	11,703	11,784	12,292	12,530	13,717	14,429	14,065	14,013	12,473	12,521	12,929	12,715	12,554	12,903	12,770	13,485	13,758	14,752	14,976	16,598
60 years old or more	5,976	5,821	6,309	6,180	6,606	6,891	7,432	7,903	8,264	9,688	9,721	10,493	11,471	12,000	12,357	13,250	13,528	14,805	16,033	18,115	18,717	20,216
total	40,209	40,506	43,243	43,053	45,049	45,744	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959

#### Workers' number of workplace of industrial accidents in tertiary industry in 1999-2020

Workers scale	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
9 workers or less	8,069	8,212	8,499	8,211	8,601	8,380	8,381	8,277	8,030	8,155	7,527	7,686	8,043	8,040	7,602	7,641	7,634	7,755	7,975	8,347	8,320	8,513
10-29	10,310	10,424	11,096	11,072	11,428	11,525	11,943	12,067	11,891	12,034	11,549	12,126	12,654	12,782	12,966	13,258	13,340	13,902	14,430	15,333	15,548	16,612

30-49	5,640	5,874	6,431	6,515	6,732	6,937	6,983	7,262	7,322	7,723	7,223	7,278	7,514	7,924	7,775	8,074	8,021	8,409	8,826	9,467	9,665	10,419
50-99	6,006	5,876	6,471	6,455	6,671	6,888	7,509	7,742	7,582	7,813	7,696	7,798	7,994	8,173	8,199	8,229	8,345	8,551	8,761	9,409	9,825	10,943
100-299	6,598	6,431	6,759	6,802	7,302	7,535	8,579	9,160	9,093	9,296	8,731	8,916	9,075	9,173	9,406	9,439	9,431	9,787	9,913	10,849	10,634	12,097
300 workers or more	3,586	3,689	3,987	3,998	4,315	4,479	5,752	6,180	6,158	6,078	5,446	5,516	5,753	5,758	5,472	5,744	5,537	5,876	6,097	6,648	6,216	8,375
total	40,209	40,506	43,243	43,053	45,049	45,744	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959

Month of industrial accidents in tertiary industry in 1999-2020

Month	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
January	3,316	3,185	4,217	3,581	4,118	4,038	4,328	4,689	4,112	4,667	4,381	4,321	4,866	4,811	5,068	4,531	4,653	5,244	5,216	6,230	5,136	5,104
February	3,419	3,397	3,370	3,337	3,470	3,686	4,110	4,210	3,890	4,906	3,903	4,270	4,134	4,806	4,160	5,302	4,155	4,441	4,608	4,901	4,886	4,811
March	3,342	3,549	3,521	3,512	3,758	3,890	4,202	4,203	4,300	4,197	4,133	4,265	4,736	4,352	4,129	4,298	4,487	4,374	4,651	4,816	4,839	4,962
April	3,344	3,225	3,414	3,543	3,650	3,767	3,862	3,836	4,005	4,074	3,959	3,997	3,776	4,075	4,124	4,026	4,279	4,293	4,386	4,609	4,719	5,241
May	3,387	3,404	3,729	3,727	3,777	3,745	3,994	4,228	4,347	4,325	3,924	3,995	3,973	4,221	4,114	4,200	4,239	4,552	4,445	4,915	4,871	4,842
June	3,585	3,482	3,684	3,612	3,891	3,999	4,233	4,218	4,374	4,422	4,227	4,293	4,308	4,270	4,287	4,282	4,419	4,592	4,625	4,949	5,191	5,823
July	3,583	3,621	3,767	3,976	4,004	4,121	4,300	4,547	4,568	4,513	4,442	4,415	4,383	4,586	4,535	4,595	4,868	4,700	4,863	5,469	5,745	6,086
August	3,458	3,460	3,684	3,778	3,877	3,823	4,128	4,384	4,614	4,174	4,070	4,310	4,495	4,431	4,359	4,302	4,454	4,664	4,741	5,020	5,485	5,879
September	3,402	3,425	3,479	3,460	3,571	3,823	3,933	4,134	4,007	4,010	3,710	3,880	4,268	4,063	3,980	4,175	4,259	4,428	4,559	5,046	4,978	5,762
October	3,312	3,394	3,775	3,680	3,811	3,816	4,022	4,293	4,153	4,171	4,055	4,059	4,027	4,192	4,533	4,251	4,245	4,415	4,966	5,108	5,037	5,521
November	3,039	3,188	3,259	3,504	3,534	3,515	3,753	4,047	3,876	3,802	3,646	3,685	3,973	3,913	4,002	4,055	4,163	4,334	4,345	4,562	4,683	5,680
December	3,022	3,176	3,344	3,343	3,588	3,521	4,282	3,899	3,830	3,838	3,722	3,830	4,094	4,130	4,129	4,368	4,087	4,243	4,597	4,428	4,638	7,248
total	40,209	40,506	43,243	43,053	45,049	45,744	49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959



Nagano	577	616	740		739		741	793	807	812	805	781	835	855	912	951	912	894	933	982	1,002	994
Gifu	570	544	635		596		714	743	747	718	634	724	698	729	713	691	675	736	791	829	796	937
Shizuoka	1,241	1,227	1,319		1,411		1,428	1,628	1,601	1,593	1,517	1,484	1,529	1,516	1,523	1,524	1,566	1,669	1,703	1,798	1,840	1,826
Aichi	2,020	2,168	2,127		2,158		2,428	2,528	2,450	2,656	2,521	2,572	2,579	2,532	2,586	2,782	2,604	2,738	2,924	3,175	3,099	3,501
Mie	706	617	709		728		762	827	839	832	836	836	839	867	774	780	808	799	908	926	924	1,028
Shiga	331	344	356		357		483	537	504	543	505	477	510	574	500	515	511	524	539	542	577	678
Kyoto	874	1,054	1,015		1,074		1,180	1,200	1,150	1,104	1,109	1,082	1,206	1,211	1,199	1,057	1,188	1,104	1,158	1,215	1,239	1,338
Osaka	3,306	3,469	3,669		3,900		4,114	4,074	3,948	4,098	3,867	3,783	3,803	3,851	3,783	3,913	3,930	4,150	4,265	4,552	4,566	4,825
Hyogo	1,695	1,650	1,724		1,943		2,084	2,027	2,058	2,073	1,898	2,006	2,050	2,008	2,043	2,107	2,173	2,213	2,307	2,415	2,436	2,921
Nara	379	359	381		427		541	498	527	592	582	573	575	578	554	567	575	624	602	694	644	722
Wakayama	344	331	360		388		468	430	462	470	434	444	456	403	431	427	414	406	458	491	501	500
Tottori	178	182	200		188		220	215	215	222	177	201	252	188	207	202	201	209	228	230	208	278
Shimane	276	271	283		318		278	332	292	315	307	286	316	301	328	291	294	316	340	359	337	330
Okayama	508	525	569		665		764	699	665	742	677	720	694	747	707	689	750	708	855	893	850	993
Hiroshima	1,045	1,037	1,126		1,024		1,240	1,188	1,191	1,176	1,171	1,153	1,201	1,204	1,201	1,215	1,270	1,273	1,346	1,334	1,367	1,527
Yamaguchi	519	473	526		538		637	608	556	571	557	556	590	596	534	506	582	558	613	621	609	679
Tokushima	288	249	316		291		305	287	277	318	281	299	251	328	311	302	297	314	350	345	343	419
Kagawa	397	413	394		407		459	454	449	412	447	443	397	457	419	422	460	441	466	493	532	609
Ehime	420	477	447		503		544	519	522	520	486	493	505	564	533	519	509	554	568	633	598	632
Kochi	451	451	442		442		420	412	405	338	407	413	449	432	375	434	374	390	384	411	407	461
Fukuoka	1,956	1,940	2,114		2,079		2,337	2,349	2,267	2,243	2,194	2,212	2,269	2,421	2,344	2,455	2,604	2,631	2,717	2,853	2,822	3,273
Saga	335	320	330		351		372	383	397	392	381	410	344	386	412	420	424	457	434	569	505	529
Nagasaki	472	398	475		573		592	629	614	682	636	582	600	623	634	637	638	705	710	715	765	873

Kumamoto	708	713	767		734		711	790	799	777	741	795	825	760	776	774	794	897	871	911	921	1,049
Oita	480	462	485		480		531	511	556	514	484	480	472	459	479	549	541	532	574	538	600	620
Miyazaki	468	490	442		517		526	536	542	530	507	475	509	466	497	514	510	525	533	544	654	703
Kagoshima	525	528	554		662		631	648	663	712	590	686	627	677	665	701	727	867	838	844	879	980
Okinawa	324	318	390		378		385	452	480	535	454	483	513	569	540	589	562	652	670	698	736	855
total	40,209	40,506	43,243		45,049		49,147	50,688	50,076	51,099	48,172	49,320	51,033	51,850	51,420	52,385	52,308	54,280	56,002	60,053	60,208	66,959

Industrial accidents mean fatal and non-fatal injuries and occupational diseases with work absence of 4 days and more. Data of 2011 year include Industrial accidents caused by Great East Japan Earthquake in 2011.

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

Return to [https://www.jisha.or.jp/english/statistics/2020em\\_industry.html](https://www.jisha.or.jp/english/statistics/2020em_industry.html)

=====

#### Fatal accidents in tertiary industry in Japan in 1999-2020

tertiary industry industry Code No.08-17

#### Type of fatal accidents in tertiary industry in 1999-2020

Type of accidents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
fall from height	57	58	59	67	79	61	53	72	58	53	63	74	45	50	53	53	51	46	56	59	48	36
falling to same level	10	7	6	11	13	14	11	12	8	9	7	8	10	9	10	3	12	7	8	10	5	11
crash	4	1	1	1	6	0	1	1	1	3	4	1	1	1	0	0	4	1	1	1	0	5
struck by flying or falling object	4	6	10	13	9	7	12	4	2	3	2	10	6	4	3	6	6	5	1	6	5	9





power transmission mechanism	0	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	2	0	0	1	0	
woodworking machine	0	0	0	0	0	0	0	0	3	0	1	2	0	0	0	0	0	0	0	0	0	0
construction machine	9	11	17	20	16	10	14	8	13	8	6	17	11	9	8	8	11	6	5	7	3	12
metal manufacturing machine	0	0	0	1	1	0	1	0	2	0	1	1	0	0	1	0	0	0	0	1	0	1
general machine	8	7	9	13	9	12	12	4	7	10	15	6	5	7	9	4	5	4	4	3	8	7
mobile silviculture machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
crane	13	11	14	11	10	5	5	8	7	10	7	7	7	8	8	3	7	9	7	7	4	2
conveying machine	96	104	92	82	86	76	100	78	71	69	55	56	53	57	53	56	41	48	51	40	38	50
vehicle	180	164	159	150	151	129	144	133	98	101	92	84	85	103	89	77	71	81	55	62	57	64
pressure vessel	0	1	1	1	0	1	2	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0
chemical facilities	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
welding equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
kiln, caldron	0	0	0	1	0	1	0	0	1	2	0	0	0	0	1	0	0	2	0	0	0	2
electric equipment	2	6	3	0	2	2	0	3	1	2	2	0	0	3	1	3	1	0	0	4	0	1
human power machine, tools	3	3	1	5	3	4	5	5	1	3	1	6	0	1	3	1	2	1	4	2	2	1
tools	9	13	16	10	22	13	12	13	11	10	10	22	12	9	16	15	13	8	13	12	13	7
other equipments, facilities	3	4	5	8	4	5	4	5	2	2	7	3	5	4	3	6	3	6	4	2	1	2
temporary buildings, establishments	44	39	49	40	47	32	34	48	37	42	38	49	32	28	31	30	23	32	42	40	28	20
hazards, harmful substances	13	11	12	9	7	3	2	3	6	1	3	3	6	6	5	7	6	2	1	3	40	4
materials	4	1	5	5	1	1	6	3	1	0	5	3	1	0	4	4	4	1	1	0	0	0
load	3	4	5	6	4	8	2	5	4	3	5	5	4	6	2	6	2	2	3	4	2	2
natural environment	13	19	16	13	16	16	15	20	15	14	21	34	607	23	25	9	26	22	24	34	26	26
other causal agent	8	5	5	8	15	15	8	3	4	1	1	1	1	0	1	7	0	0	0	2	3	12

no causal agent	5	1	2	5	1	9	8	8	19	10	16	19	19	29	21	22	29	21	27	18	11	10
unclassifiable	0	3	2	2	2	4	5	3	2	4	3	2	2	3	1	1	4	0	2	1	2	1
total	413	409	413	391	398	346	380	350	305	295	290	320	852	297	282	259	248	248	244	243	240	225

Causal agents (small) of fatal accidents in tertiary industry in 1999-2020

Causal (S) agents	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
engine	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
power transmission mechanism	0	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	2	0	0	1	0	
circular sawing machine	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
band sawing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
wood planer machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
hollow chisel mortiser, wood borer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chamfering machine, router, woodworking milling machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chain saw	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
other woodworking machines	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
leveling, transporting or loading machine	1	8	7	5	7	4	6	2	5	3	1	4	2	4	1	4	2	1	4	4	2	3	
excavating machine	4	0	3	5	4	4	4	3	4	4	0	6	5	3	2	1	2	0	1	1	0	2	
foundation work machine	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
hardening machine	1	0	0	1	1	0	1	1	0	1	0	2	0	1	1	1	0	0	0	0	0	0	
demolition machine	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	4	3	0	2	0	5	
vehicle for high lift work	0	1	2	3	1	0	0	1	2	0	1	1	2	1	1	0	1	1	0	0	1	0	
other construction machines	3	1	3	6	3	2	3	1	2	0	4	4	2	0	3	0	2	1	0	0	0	2	

lathe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
drill press, milling machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
grinding machine, buffing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
power press	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
forging pressure hammer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
shearing machine	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
other metal manufacturing machines	0	0	0	1	1	0	1	0	2	0	0	0	0	0	1	0	0	0	0	1	0	1
centrifugal machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mixer, grinder	2	0	1	6	2	2	5	1	2	4	3	1	0	1	5	1	0	1	0	0	1	3
roll machine (except printingroll machine)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
injection molding machine	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
food manufacturing machine	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
printing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
industrial robot	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other general power machines	5	6	8	7	6	10	6	2	5	6	12	4	5	6	4	3	5	3	4	3	7	3
felling machine																	0	0	0	0	1	0
mobile logging machine																	0	0	0	0	0	0
skyline yarding machine																	0	0	0	0	0	0
other mobile silviculture machine																	0	0	0	0	0	0
crane	1	2	3	1	0	1	1	1	2	0	0	1	0	0	1	0	0	2	0	1	1	0
mobile crane	7	4	4	4	4	2	2	3	1	5	4	3	2	4	6	1	2	1	3	3	2	2
derrick crane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
elevator, lift	4	3	7	3	6	2	2	2	4	4	3	3	4	4	0	2	3	6	4	3	1	0



kiln, caldron	0	0	0	1	0	0	0	0	1	2	0	0	0	0	1	0	0	2	0	0	0	2
industrial dryer	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other kiln, caldron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
transmission	0	4	2	0	1	1	0	1	1	0	2	0	0	1	0	0	0	0	0	0	0	0
electric power facilities	2	1	1	0	1	1	0	1	0	1	0	0	0	1	1	3	1	0	0	4	0	1
other electrical equipment	0	1	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0
human power cranes	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1	0	1	1	0	0	1	0
human power hauling equipment	2	2	1	3	1	3	4	4	0	2	1	6	0	1	2	1	1	0	4	1	1	1
human power machine	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
hand tool	1	0	0	2	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0
ladder	6	10	7	8	18	11	9	9	10	6	8	16	10	9	15	8	11	4	10	12	10	6
slinging tool	1	1	3	1	2	0	0	1	0	2	0	0	1	0	0	0	0	1	1	0	0	0
other tools	2	2	6	1	2	2	3	3	1	2	2	6	1	0	1	7	2	3	2	0	3	1
other equipment, facilities	3	4	5	8	4	5	4	5	2	2	7	3	5	4	3	6	3	6	4	2	1	2
scaffolding	0	0	0	1	0	0	0	2	0	1	1	1	1	1	0	1	0	0	0	0	0	1
timbering	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
stairs, landing stage	7	4	3	5	6	2	8	7	7	8	9	14	4	6	7	5	3	8	9	12	7	4
opening	4	3	1	3	2	5	3	2	2	4	5	3	2	3	2	1	2	0	4	5	2	2
roof, beam, haze, crossbeam, principal rafter	6	4	8	7	4	5	5	4	3	3	2	3	4	4	5	3	4	2	6	4	6	1
working platform, boot board	2	4	4	0	4	0	2	5	1	4	3	4	1	1	1	4	2	1	2	1	2	4
passage	1	3	1	3	1	4	1	8	2	2	2	5	4	3	3	2	2	6	4	2	1	5
building, establishment	21	17	29	17	26	12	12	16	18	17	14	13	15	10	10	9	9	14	12	14	9	2
other temporary buildings, establishments	3	4	3	4	4	4	3	4	4	3	2	6	1	0	3	5	1	1	5	2	1	1

explosive substance	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
inflammable substance	5	6	6	0	1	0	1	0	1	1	2	0	1	2	1	0	2	1	0	1	37	1	
inflammable gas	1	1	1	0	0	1	0	0	3	0	0	0	3	2	0	1	1	0	0	1	0	0	
harmful substance	6	4	4	8	4	2	1	3	2	0	1	2	2	1	3	5	2	0	1	1	1	1	3
radiation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other hazards, harmful substances	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	2	0
metal material	3	1	2	3	1	1	3	1	1	0	3	1	1	0	2	2	2	0	0	0	0	0	0
lumber, bamboo	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	
stone, sand, substance	1	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other materials	0	0	1	1	0	0	0	1	0	0	2	2	0	0	2	2	0	0	0	0	0	0	0
load	3	3	5	6	3	6	2	4	3	3	5	5	2	6	2	4	2	2	3	3	2	2	
machine/equipment as load	0	1	0	0	1	2	0	1	1	0	0	0	2	0	0	2	0	0	0	1	0	0	
natural ground, rock	3	3	6	2	5	2	2	7	2	0	5	3	3	4	2	1	5	2	2	2	2	2	4
standing tree	2	0	4	0	3	4	1	3	0	3	2	3	0	5	3	2	2	2	1	3	4	3	
water	6	11	2	2	5	6	3	3	5	3	9	8	589	5	8	4	4	9	14	11	4	6	
abnormal environment	0	0	2	3	0	0	0	2	0	0	0	2	1	2	0	0	0	1	1	2	4	2	
high/cold temperature environment	0	1	2	2	1	0	5	1	6	3	2	11	7	3	8	1	11	3	4	9	9	8	
other environments	2	4	0	4	2	4	4	4	2	5	3	7	7	4	4	1	4	5	2	7	3	3	
other causal agent	8	5	5	8	15	15	8	3	4	1	1	1	1	0	1	7	0	0	0	2	3	12	
no causal agent	5	1	2	5	1	9	8	8	19	10	16	19	19	29	21	22	29	21	27	18	11	10	
unclassifiable	0	3	2	2	2	4	5	3	2	4	3	2	2	3	1	1	4	0	2	1	2	1	
total	413	409	413	391	398	346	380	350	305	295	290	320	852	297	282	259	248	248	244	243	240	225	







Yamagata	3	5	2	2	2	0	5	5	4	4	3	0	4	3	2	1	2	1	3	2	2	1
Fukushima	8	10	10	6	6	7	9	8	7	7	2	4	23	8	3	5	5	7	6	2	6	5
Ibaraki	13	6	15	12	10	6	6	13	8	2	7	13	6	10	11	10	8	8	1	5	3	9
Tochigi	7	17	14	7	12	8	11	11	4	9	3	9	3	7	9	4	5	6	4	7	7	4
Gunma	7	9	1	10	3	6	8	4	5	6	11	2	1	5	5	6	5	5	5	5	4	3
Saitama	13	14	16	17	19	21	18	14	14	15	8	15	17	9	17	5	9	8	9	9	10	4
Chiba	24	20	17	8	12	11	14	18	13	21	13	9	7	4	10	10	9	9	14	4	12	8
Tokyo	39	34	46	35	33	39	30	38	40	25	24	32	32	34	20	19	28	19	27	31	18	15
Kanagawa	11	20	19	24	27	13	18	14	8	14	13	16	11	13	19	8	13	9	13	13	8	10
Niigata	9	9	11	5	11	8	6	5	8	3	7	10	6	3	6	3	4	8	2	2	5	5
Toyama	4	4	5	1	2	3	3	2	2	5	5	2	3	2	1	1	5	5	2	5	1	4
Ishikawa	6	3	5	2	7	2	2	2	7	5	8	1	1	7	4	5	4	4	2	6	4	5
Fukui	5	3	4	2	3	2	2	1	1	2	3	1	2	2	4	4	3	0	1	0	3	0
Yamanashi	0	1	2	2	5	2	4	5	1	1	3	3	4	1	3	3	4	3	0	2	1	1
Nagano	12	14	5	8	5	9	10	4	5	3	7	6	7	3	4	1	7	5	7	6	6	5
Gifu	6	12	8	7	8	9	3	5	6	5	7	5	5	6	3	5	3	2	4	5	4	4
Shizuoka	13	13	9	13	12	14	16	12	13	9	4	7	6	11	2	11	5	5	8	9	4	8
Aichi	22	16	18	24	21	12	21	21	19	21	17	19	13	9	9	23	11	15	8	9	13	15
Mie	4	6	10	10	10	9	7	4	7	4	6	8	7	8	2	4	2	3	6	3	3	6
Shiga	7	8	6	4	3	7	3	2	6	5	6	5	3	2	6	3	2	6	1	5	2	6
Kyoto	4	11	5	9	11	6	5	2	8	3	6	4	8	4	6	7	3	2	4	4	39	3
Osaka	21	24	18	32	29	19	32	16	18	15	20	19	16	17	22	17	12	14	15	27	14	17
Hyogo	18	18	14	12	9	13	15	17	8	17	9	8	7	10	13	11	17	19	5	10	6	11

Nara	4	3	6	3	5	1	2	5	5	7	5	4	3	2	1	3	1	3	0	2	0	4
Wakayama	2	4	8	2	4	3	3	2	2	4	4	2	1	3	3	3	2	2	1	2	2	4
Tottori	4	8	2	3	1	0	2	4	1	0	0	6	4	2	2	0	0	0	0	0	1	1
Shimane	3	1	2	1	2	3	0	1	2	3	0	2	2	2	2	2	4	3	1	0	1	1
Okayama	7	7	8	8	5	8	9	3	6	5	3	3	2	8	10	4	2	3	4	3	5	4
Hiroshima	15	11	7	6	9	11	14	8	7	9	6	7	4	12	7	7	12	3	8	4	2	5
Yamaguchi	6	5	4	2	7	7	7	9	5	3	8	4	3	4	5	6	1	6	2	4	2	2
Tokushima	2	2	1	5	4	0	3	8	4	2	0	1	2	4	3	1	1	2	1	3	0	1
Kagawa	3	3	6	3	1	6	5	1	2	2	3	8	0	2	2	2	4	1	4	3	2	5
Ehime	6	9	6	5	4	4	8	7	5	5	3	3	4	2	4	2	6	7	1	2	1	2
Kochi	1	3	3	2	2	4	2	3	2	2	2	3	1	2	1	1	0	1	2	1	0	3
Fukuoka	20	12	17	19	17	12	13	11	6	5	10	11	9	14	12	11	5	10	10	9	8	9
Saga	7	1	1	8	2	1	2	1	2	1	2	3	0	1	1	2	3	0	1	1	1	2
Nagasaki	1	1	5	3	9	1	2	4	2	1	3	4	4	2	6	2	1	1	5	0	1	3
Kumamoto	5	5	7	6	6	5	7	8	3	4	5	4	5	7	2	2	2	2	4	2	3	1
Oita	9	4	1	2	3	9	6	5	2	4	1	4	5	3	4	0	3	0	4	2	6	3
Miyazaki	4	5	1	2	5	3	1	4	5	0	3	2	2	3	3	4	3	2	3	4	1	1
Kagoshima	4	8	4	4	5	5	4	2	3	5	4	3	3	2	2	4	2	6	4	4	4	4
Okinawa	3	1	4	1	4	4	2	2	0	0	5	6	2	5	2	1	3	2	6	0	1	2
total	413	409	413	391	398	346	380	350	305	295	290	320	852	297	282	259	248	248	244	243	240	225

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

Return to [https://www.jisha.or.jp/english/statistics/2020em\\_industry.html](https://www.jisha.or.jp/english/statistics/2020em_industry.html)

