

Industrial accidents in railway construction work in Japan in 1999-2020

railway construction work industry Code No.030104

Type of accidents in railway construction work 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	18	25	16	19	10	19	14	16	11	13	17	13	9	10	9	12	9	12	13	8	20	16
falling to same level	13	12	9	16	9	7	8	7	11	15	8	9	9	10	10	16	8	11	10	3	18	16
crash	3	5	5	3	6	2	6	7	3	3	5	2	1	1	2	1	5	3	6	1	4	1
struck by flying or falling object	11	13	24	17	14	14	13	16	7	13	12	16	8	12	9	11	8	11	14	18	14	6
collapse	5	2	5	2	4	-	1	5	6	5	2	1	4	2	3	4	4	2	4	1	3	5
crashed by	19	11	11	8	11	10	11	4	8	8	5	7	8	2	7	4	6	6	4	7	7	5
caught in/between	31	31	29	25	28	22	16	19	18	23	14	10	10	15	20	15	17	12	24	12	17	16
cut	9	4	1	7	1	4	5	4	4	8	1	4	1	1	2	6	2	5	3	2	3	5
injury to the sole of the foot	0	0	0	-	1	-	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	1
drown	0	0	0	-	0	-	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
contact to high/low-temperature	0	0	2	1	3	2	0	0	3	0	1	1	1	4	1	1	1	0	2	2	0	1
contact to harmful substance	0	0	0	-	0	-	1	2	0	0	0	1	1	0	1	0	0	0	0	0	1	0
electric shock	1	2	0	2	2	3	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
explosion	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
burst	0	0	0	-	1	-	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
fire	0	0	0	-	0	-	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1
traffic accident (public road)	12	6	12	21	17	9	23	13	20	12	8	10	8	28	21	9	19	25	15	9	10	12
traffic accident (others)	0	1	0	2	0	1	2	1	1	0	2	0	0	0	0	0	1	0	0	0	0	0
reaction to motion/improper motion	3	3	3	4	4	5	5	7	0	4	4	4	3	3	5	12	9	9	5	5	8	4
others	0	0	0	2	0	1	1	2	1	0	1	1	3	1	0	1	2	2	1	1	1	3

unclassifiable	0	0	0	2	0	-	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	
total	125	115	117	131	111	99	107	103	93	105	82	80	69	90	91	92	91	99	101	70	110	92

Causal agents (middle) of industrial accidents in railway construction work 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	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
power transmission mechanism	1	0	0	-	0	-	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
woodworking machine	5	1	1	1	1	2	1	3	2	5	0	2	0	0	0	2	0	1	1	0	0	1
construction machine	11	6	13	7	3	5	6	8	4	5	0	6	3	6	4	4	6	3	10	3	5	7
metal manufacturing machine	1	3	1	1	2	1	2	1	2	1	1	2	0	0	0	5	1	0	2	2	1	2
general machine	5	5	2	5	2	2	1	2	3	3	3	0	2	1	3	3	0	3	3	4	1	2
mobile silviculture machine																	0	0	0	0	0	0
crane	2	10	3	14	5	7	5	4	3	7	4	5	4	2	9	7	3	2	3	1	5	4
conveying machine	14	14	6	9	4	17	19	11	15	10	8	6	6	10	9	3	9	19	16	11	10	4
vehicle	11	8	12	25	16	6	14	13	10	8	12	11	5	20	18	7	21	14	6	6	9	14
pressure vessel	1	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
chemical facilities	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
welding equipment	0	0	0	-	1	-	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
kiln, caldron	0	0	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
electric equipment	1	0	1	-	2	-	0	1	0	2	1	1	0	1	0	1	1	0	1	0	1	0
human power machine, tools	11	6	8	8	15	6	5	5	4	11	7	4	9	4	10	7	6	11	12	2	13	2
tools	3	6	4	5	4	4	4	6	9	5	5	4	1	3	4	2	7	5	2	3	9	5
other equipments, facilities	0	2	1	3	1	1	2	2	2	0	0	2	3	2	0	2	0	0	1	2	4	2
temporary buildings,	21	24	28	24	22	18	19	18	17	24	21	13	13	15	17	23	7	17	18	12	24	27

establishments																						
hazards, harmful substances	0	0	1	1	0	-	1	1	0	0	1	2	2	0	1	0	0	0	0	0	1	1
materials	26	21	22	17	20	12	17	13	14	16	14	17	13	10	9	12	13	12	19	14	13	8
load	1	5	8	2	7	6	4	6	3	3	2	2	0	3	2	6	8	5	0	5	6	3
natural environment	8	3	3	4	4	9	1	4	5	2	3	3	5	10	2	4	4	5	4	2	4	6
other causal agent	1	0	0	-	0	2	1	3	0	1	0	0	1	0	1	0	3	1	0	2	1	2
no causal agent	2	1	3	3	2	1	3	2	0	0	0	0	1	3	1	4	1	1	3	1	2	2
unclassifiable	0	0	0	2	0	-	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
total	125	115	117	131	111	99	107	103	93	105	82	80	69	90	91	92	91	99	101	70	110	92

Causal agents (small) of industrial accidents in railway construction work 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	0	0	0	0	0	0	0	0	0	0	0	0
power transmission mechanism			0		0		0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
circular sawing machine			1		0		1	0	1	4	0	2	0	0	0	1	0	0	1	0	0	1
band sawing machine			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
hollow chisel mortiser, wood borer			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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chain saw			0		0		0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0
other woodworking machines			0		1		0	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0
leveling, transporting or loading machine			0		0		1	0	0	1	0	1	1	1	1	0	0	0	0	1	1	0
excavating machine			2		2		1	4	1	1	0	2	1	1	1	3	2	2	4	2	2	3

equipment																						
arc welding equipment			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
other welding equipment			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
kiln, caldron			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
industrial dryer			0	0	0	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	
transmission			0	1	0	1	0	1	0	0	0	1	0	1	0	0	1	0	0	0		
electric power facilities			0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0		
other electrical equipment			1	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0		
human power cranes			1	3	0	0	0	1	0	1	7	1	3	2	0	2	4	0	1	0		
human power hauling equipment			2	2	0	1	0	3	2	0	1	0	3	1	0	0	4	2	6	0		
human power machine			2	2	1	1	1	0	0	0	0	0	0	0	0	1	0	0	2	0		
hand tool			3	8	4	3	3	7	5	3	1	3	4	4	6	8	4	0	4	2		
ladder			1	0	2	3	1	3	2	1	0	1	1	1	3	2	2	0	4	0		
slinging tool			2	3	1	1	2	0	1	2	0	1	0	0	0	2	0	1	0	1		
other tools			1	1	1	2	6	2	2	1	1	1	3	1	4	1	0	2	5	4		
other equipment, facilities			1	1	2	2	2	0	0	2	3	2	0	2	0	0	1	2	4	2		
scaffolding			7	4	3	0	5	0	3	1	2	1	2	1	0	0	1	1	1	1		
timbering			0	1	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0		
stairs, landing stage			2	0	1	1	0	0	0	1	0	3	2	2	0	1	1	0	0	2		
opening			0	0	1	0	1	1	0	1	0	1	0	0	0	2	3	0	2	0		
roof, beam, haze, crossbeam, principal rafter			0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	0	0		
working platform, boot board			1	2	2	2	1	3	5	2	1	0	3	5	0	0	2	2	2	3		
passage			3	3	2	0	4	6	5	2	4	3	4	9	3	8	5	2	4	10		
building, establishment			10	7	6	6	4	7	4	3	3	5	2	2	1	4	3	2	9	4		

19 years old or less	3	5	3	1	4	2	4	0	6	2	2	0	1	6	3	2	2	1	3	2	3	1
20-29	30	18	22	19	22	19	20	21	21	17	9	23	12	17	16	12	10	9	17	11	16	9
30-39	26	24	16	28	19	19	25	23	25	25	17	21	11	17	24	20	28	29	30	18	21	25
40-49	27	21	19	28	18	17	13	15	9	20	14	14	13	19	19	17	20	26	23	22	31	22
50-59	21	31	40	32	32	24	26	31	27	22	23	12	19	14	16	11	18	19	17	10	19	15
60 years old or more	18	16	17	23	16	18	19	13	5	19	17	10	13	17	13	30	13	15	11	7	20	20
total	125	115	117	131	111	99	107	103	93	105	82	80	69	90	91	92	91	99	101	70	110	92

Workers' number of workplace of industrial accidents in railway construction work 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	26	28	27	37	28	34	25	19	24	31	17	21	11	16	25	26	25	23	27	17	38	15
10-29	62	54	53	50	54	37	57	44	33	50	30	32	28	32	37	37	41	38	45	27	40	45
30-49	18	15	21	19	16	16	17	26	16	15	20	14	19	25	18	16	15	17	14	19	14	10
50-99	16	11	14	23	8	9	5	12	16	3	13	10	7	8	4	8	8	12	12	4	12	15
100-299	3	5	1	2	4	3	1	2	4	5	2	3	3	7	7	4	2	9	3	3	5	6
300 workers or more	0	2	1	—	1	0	2	0	0	1	0	0	1	2	0	1	0	0	0	0	1	1
total	125	115	117	131	111	99	107	103	93	105	82	80	69	90	91	92	91	99	101	70	110	92

Month of industrial accidents in railway construction work 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	22	10	15	10	6	10	6	8	4	4	9	7	4	6	7	6	9	12	7	5	6	5
February	7	8	9	12	6	10	3	7	6	7	8	7	6	8	4	7	7	5	11	9	3	14
March	9	12	12	8	5	12	9	8	4	17	8	9	9	8	9	11	9	2	6	3	10	10
April	8	5	4	8	4	5	11	15	3	6	6	7	1	3	4	2	7	11	3	3	16	10
May	3	6	6	5	8	6	16	3	6	6	7	5	2	1	2	14	7	4	7	3	6	4
June	13	7	12	18	13	9	16	10	11	9	4	3	4	6	8	5	12	6	13	7	12	6
July	9	14	8	12	11	7	7	13	6	6	12	7	8	10	10	11	7	16	11	6	13	6
August	10	10	6	11	15	9	10	9	12	10	3	5	3	8	4	6	6	5	6	9	6	9
September	14	8	11	9	13	8	4	6	9	10	5	10	11	16	7	9	8	10	6	8	12	8
October	9	12	11	16	9	14	9	7	10	7	8	7	2	3	17	6	9	15	7	9	8	7
November	11	10	11	13	11	2	9	9	11	11	5	7	11	5	6	7	7	9	9	5	5	9
December	10	13	12	9	10	7	7	8	11	12	7	6	8	16	13	8	3	4	15	3	13	4

construction machine	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
metal manufacturing machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
general machine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mobile silviculture machine																0	0	0	0	0	0	0
crane	0	0	0	1	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
conveying machine	0	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0
vehicle	2	2	0	2	0	2	3	4	0	0	2	0	0	2	1	1	3	0	0	0	0	2
pressure vessel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
chemical facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
welding equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
kiln, caldron	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
electric equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
human power machine, tools	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
tools	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other equipments, facilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
temporary buildings, establishments	2	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
hazards, harmful substances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
natural environment	1	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1
other causal agent	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no causal agent	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
unclassifiable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

stone, sand, substance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other materials	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
machine/equipment as load	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
natural ground, rock	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
standing tree	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
water	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
abnormal environment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
high/cold temperature environment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other environments	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
other causal agent	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no causal agent	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
unclassifiable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

Workers age of fatal accidents in railway construction work 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	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-29	3	0	1	1	0	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1
30-39	0	0	0	1	1	1	1	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0
40-49	3	0	1	1	0	3	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1
50-59	0	2	0	0	0	1	1	2	1	0	1	0	0	1	0	1	2	0	0	0	0	0
60 years old or more	0	1	0	2	1	1	2	1	0	0	1	0	1	0	1	0	1	1	0	0	0	2
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

Workers' number of workplace of fatal accidents in railway construction work 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	2	1	0	2	2	4	0	0	0	0	1	0	0	0	0	2	1	0	0	0	0	1

10-29	1	1	2	1	0	4	1	1	1	0	2	0	1	3	1	2	0	1	0	0	0	2
30-49	3	0	0	2	0	0	3	3	0	0	0	0	1	0	0	0	1	0	0	0	0	1
50-99	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100-299	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
300 workers or more	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

Month of fatal accidents in railway construction work 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	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	2	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
March	0	0	0	0	0	2	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	2
April	1	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0
May	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	1	0	0	1	0	0	1	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	1
August	0	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
September	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	1	2	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
November	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
December	0	0	0	1	1	2	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

Prefecture of fatal accidents in railway construction work in 1999-2020

Prefecture	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hokkaido	0	0	0	0	0	0	1	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0
Aomori	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iwate	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Miyagi	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Akita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yamagata	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fukushima	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Ibaraki	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0

Oita	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miyazaki	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kagoshima	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Okinawa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
total	6	3	2	5	2	8	4	6	1	0	3	0	4	3	1	2	3	2	0	0	0	4

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

Return to https://www.jisha.or.jp/english/statistics/2020e_industry.html