

TABLE S8-39

USPTO patents and patent families granted in civil engineering, by region, country, or economy: 1998–2018

(Number)

Region, country, or economy	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018	
	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families	USPTO patents	Patent families		
China	4	58	5	93	8	163	13	219	9	210	12	414	16	489	14	587	25	726	33	851	38	1,214	30	2,113	56	2,844	60	4,011	85	4,936	100	4,492	120	6,317	120	12,237	148	16,237	196	16,300	207	15,775
India	1	1	0	0	1	0	0	2	0	0	0	0	2	0	2	1	0	2	1	0	2	0	2	1	4	2	3	9	6	11	8	17	11	19	12	19	40	10	36	9		
Japan	232	7,577	234	8,218	235	5,678	211	5,171	205	4,911	182	5,338	163	5,210	171	5,980	180	6,450	160	7,423	149	6,849	167	5,968	203	6,658	198	7,218	203	7,080	249	7,317	279	6,812	317	4,792	313	5,447	339	5,420	293	5,611
Malaysia	3	3	0	1	1	0	1	2	3	0	0	5	2	5	1	8	1	16	2	31	3	5	2	19	4	2	29	2	4	8	25	17	8	16	7	22	7	23	5	33		
Singapore	2	6	1	3	4	2	3	3	4	5	3	0	9	3	3	4	5	3	2	1	6	1	3	1	7	6	5	5	3	8	5	18	3	19	3	19	6	23	8	20	3	
South Korea	27	327	33	1,132	34	511	32	315	40	588	57	1,363	40	1,502	42	2,449	38	4,844	51	5,533	43	2,973	36	2,547	62	3,541	43	4,938	63	5,754	69	6,107	90	5,462	99	4,433	125	4,733	138	5,241	119	5,379
Taiwan	113	184	129	187	102	176	112	235	159	244	166	214	169	238	151	222	271	133	261	139	202	271	119	219	110	239	129	251	138	270	135	282	125	347	128	407	125	399	120	310		
All others	2	16	4	10	2	5	2	2	2	7	2	4	1	4	1	4	2	5	2	3	2	3	4	4	2	6	4	2	8	5	7	6	4	2	3	6	6	7	5	16	3	10
Middle East	12	20	8	15	17	32	22	34	18	18	17	19	18	17	16	15	17	11	14	14	21	20	16	15	28	24	18	51	37	48	41	72	44	68	40	85	44	82	71	113	39	
Israel	11	7	6	5	14	8	21	11	17	7	15	4	12	5	11	4	13	4	3	9	3	10	8	8	18	7	15	28	11	28	5	28	11	24	6	24	6	25	4	29	7	
All others	1	13	3	10	3	23	1	23	1	11	2	15	5	12	5	11	4	7	5	11	11	18	8	7	10	17	11	13	24	36	30	36	44	33	44	33	61	39	58	67	83	32
Africa	19	53	14	61	10	46	11	45	8	43	15	52	9	47	9	40	11	30	6	28	9	40	6	35	30	17	30	12	45	12	28	20	32	10	14	11	9	14	6	12	9	
South Africa	19	44	14	46	10	31	10	29	8	25	14	29	7	25	9	33	9	23	5	21	32	21	6	32	10	16	10	10	32	14	10	16	14	9	7	9	13	2	11	2	9	
All others	0	9	1	15	0	15	1	16	0	19	1	22	2	21	0	7	1	8	1	7	1	3	0	4	0	9	1	20	2	13	2	18	4	18	1	7	2	8	0	5	2	7
Australia and Oceania	71	75	55	64	64	99	66	147	52	105	60	90	65	170	47	172	58	164	43	178	40	172	43	175	72	170	75	198	92	211	105	201	125	188	132	211	117	221	123	140	120	129
Australia	63	75	46	63	61	99	55	147	47	104	53	87	60	169	40	170	49	163	38	174	36	171	39	172	72	169	63	197	81	210	86	199	105	187	117	209	103	220	108	137	102	128
New Zealand	8	0	9	1	4	0	10	0	6	1	8	2	5	1	7	2	1	163	38	174	36	171	39	172	72	169	63	197	81	210	86	199	105	187	117	209	103	220	108	137	102	128
All others	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Unclassified	0	14	1	159	0	165	1	8	0	5	0	4	0	7	0	10	1	11	0	0	1	1	20	2	1	1	0	1	0	1	0	0	1	1	2	4	0	0	0	1	0	

EU = European Union; USPTO = U.S. Patent and Trademark Office.

Note(s)

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. International Patent Documentation (INPADOC) patent families across all patent offices covered in the Worldwide Patent Statistical Database (PATSTAT) are counted according to the year of the first granted patent in the patent family. Patent families are allocated according to patent inventorship information found on the priority patent of the INPADOC patent families. To account for missing ownership information in PATSTAT for some offices, a method designed by de Rassenfosse et al. (2012) is used to fill in missing information on priority patents using information in successive filings within the patent families (see technical documentation for details). Patent families are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Because of data coverage issues for some patent offices in PATSTAT, statistics for some countries may be underestimated partially for some years or across the whole trend. Countries with identified issues include India (missing data) and South Africa (no data for 2018). For Italy, because of data gaps regarding information on granted patents, patent applications are used instead, which slightly overestimates Italy's output and creates a small shift in the year for which its output is accounted. The EU includes 28 member countries. China includes Hong Kong.

Source(s)

Science-Matrix; PATSTAT, accessed April 2019; PatentsView, USPTO, accessed June 2019.