

IV. Patent Application and Examination

1. Patent Application and Granting

In 2012, the number of patent applications in China reached 2,051,000, up 25.5% year on year. China's invention patent applications experienced a stable growth and the proportion of granted domestic and foreign invention patents was further optimized.

(1) Patent application

According to the latest statistics, SIPO received 653,000 invention patent applications in 2012, up 24.0% year on year. The number of domestic invention patent applications was 535,000, accounting for 81.9% of the total, up 28.7% year on year; the number of applications from overseas reached 118,000, accounting for 18.1%, up 6.2% year on year.

Among the domestic invention patent applications, 428,000 were service applications, accounting for 80.0% of the total, up 32.1% year on year; while 107,000 were non-service applications, accounting for 20.0% of the total, up 16.7% year on year. Among the domestic service patent applications, 316,000 were from



enterprises, accounting for 73.8%, up 36.6% year on year; 76,000 from universities and colleges, accounting for 17.8%, up 20.1% year on year; 29,000 from scientific research institutions, accounting for 6.8%, up 17.0% year on year and 7,000 from other institutions and organizations, accounting for 1.6%, up 53.9% year on year.

In 2012, SIPO received 740,000 applications for utility model patents, a growth of 26.4% year on year; and 658,000 applications for industrial design patents, increasing by 26.1% year on year.

Table 1 Top 10 Domestic Enterprises Filing the Invention Patent Applications in 2012

No.	Name of Enterprise	Number
1	Huawei Technologies Co., Ltd.	4231
2	ZTE Corporation	3446
3	China Petroleum & Chemical Corporation	3334
4	Hongfujin Precision Industry (Shenzhen) Co., Ltd.	2314
5	Tencent Technology Shenzhen Co., Ltd.	1934
6	Lenovo (Beijing) Limited	1768
7	Haiyangwang Lighting Technology Co., Ltd.	1458
8	Boe Technology Group Co., Ltd.	1047
9	Shenzhen China Star Optoelectronics Technology Co., Ltd.	1025
10	Gree Electric Appliance, Inc. of Zhuhai	974

Table 2 Top 10 Foreign Enterprises Filing the Invention Patent Applications in 2012

No.	County/Region	Name of Enterprise	Number
1	Japan	Panasonic Corporation	2191
2	Japan	Sony Corporation	2184
3	Republic of Korea	Samsung Electronics Corporation	1754
4	USA	General Electric Company	1664
5	Germany	Robert Bosch GmbH	1379
6	Japan	Canon Inc.	1352
7	USA	General Motors Corporation	1263
8	Japan	Toyota Motor Corporation	1240
9	Germany	Siemens AG	1225
10	Japan	Sharp Corporation	1220

Table 3 Top 10 Domestic Colleges and Universities Filing the Invention Patent Applications in 2012

No.	Name of University/College	Number
1	Zhejiang University	2301
2	Tsinghua University	1906
3	Shanghai Jiao Tong University	1512
4	Jiangnan University	1390
5	Southeast University	1382
6	Harbin Institute of Technology	1352
7	Tianjin University	1297
8	Beijing University of Aeronautics and Astronautics	1195
9	South China University of Technology	1189
10	Changzhou University	990

Table 4 Top 10 Domestic Scientific Research Institutes Filing the Invention Patent Applications in 2012

No.	Name of Scientific Research Institutes	Number
1	Institute of Microelectronics, CAS	641
2	Dalian Institute of Chemical Physics, CAS	628
3	China Electric Power Research Institute	606
4	Industrial Technology Research Institute	548
5	Datang Telecom Technology & Industry Group	514
6	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	335
7	Changchun Institute of Applied Chemistry, CAS	276
8	Electric Power Research Institute of Guangdong Power Grid Corporation	257
	Institute of Semiconductors, CAS	257
10	Ningbo Institute of Materials Technology and Engineering, CAS	256

(2) Distribution of origins of invention patent applications with regard to domestic areas and foreign countries

In 2012, the top ten provinces and municipalities in terms of quantity of invention patent applications were in order Jiangsu, Guangdong, Beijing, Shandong, Shanghai, Zhejiang, Liaoning, Anhui, Shaanxi and Sichuan.

Table 5 Top 10 Provinces, Autonomous Regions and Municipalities Directly under the Central Government Filing the Invention Patent Applications in 2012

No.	Provinces/Autonomous Regions/Municipalities	Number
1	Jiangsu	110091
2	Guangdong	60448
3	Beijing	52720
4	Shandong	40381
5	Shanghai	37139
6	Zhejiang	33265
7	Liaoning	19740
8	Anhui	19391
9	Shaanxi	17043
10	Sichuan	16368

In 2012, the top ten foreign countries in terms of the quantity of the invention patent applications in China were in order Japan, the United States of America, Germany, Republic of Korea, France, Switzerland, the Netherlands, United Kingdom, Sweden and Italy.

No.	Country	Number
1	Japan	42278
2	USA	29510
3	Germany	12659
4	Republic of Korea	8985
5	France	4315
6	Switzerland	2924
7	the Netherlands	2629
8	United Kingdom	1874
9	Sweden	1663
10	Italy	1288

(3) Distribution of patent applications by technical fields

In 2012, SIPO completed international patent classification for 706,013 invention patent applications, up by 255,231 or 56.6% year on year. According to the International Patent Classification (IPC) for invention patent applications in 2012, there were more than 10,000 domestic invention patent applications in each of the four fields, including “Preparations for medical, dental or toilet purposes” (A61K), “Electric digital data processing” (G06F), “Electric solid state devices not included in other categories” (H04L), “Testing or analyzing materials by virtue of the chemical or physical property of the testing materials” (G01N).

Total	A-H	A	B	C	D	E	F	G	H
Number (Piece)	706013	118556	121455	117953	13288	28305	63561	118559	124336
Percentage	100%	16.8%	17.2%	16.7%	1.9%	4.0%	9.0%	16.8%	17.6%

Table 8 Top 10 IPC Sub—Classes of Invention Patent Applications in 2012

Total Ranking	Sub—Classes	Number	Domestic Ranking	Sub—classes	Number	Foreign Invention	Sub—classes	Number
1	A61K	26469	1	A61K	23841	1	H01L	5429
2	G06F	20492	2	G06F	15808	2	G06F	4684
3	H01L	15289	3	H04L	10898	3	H04N	2947
4	H04L	13423	4	G01N	10010	4	A61K	2628
5	G01N	11580	5	H01L	9860	5	H04L	2525
6	H04W	9638	6	A23L	8995	6	H04W	2498
7	A23L	9326	7	H04W	7140	7	A61B	2224
8	H04N	7495	8	C08L	5917	8	H01M	2009
9	C08L	6881	9	C02F	5265	9	C07D	1591
10	C07D	6054	10	C04B	4877	10	G01N	1570

(4) Patent granting

In 2012, SIPO granted 217,000 invention patents, up by 26.1% year on year, among which 144,000 were granted to domestic applicants, accounting for 66.4% of the total, and 73,000 were granted to foreign applicants, accounting for 33.6%.

Among SIPO-granted domestic invention patents, 126,000 were service patents, accounting for 87.5% of the total; 18,000 were non-service patents, accounting for 12.5%. Among the domestic service patents for inventions, 79,000 were granted to enterprises, accounting for 62.7%, 34,000 to universities and colleges, accounting for 27.0%, 11,000 to scientific research institutes, accounting for 8.7%, and 2,000 to other institution and organizations, accounting for 1.6%.

In 2012, SIPO granted 571,000 utility model patents, up by 40.0% year on year and 467,000 industrial design patents, up by 22.8% year on year.

Table 9 Top 10 Domestic Enterprises in Terms of the Number of Invention Patents Granted in 2012

No.	Name of Enterprise	Number
1	Huawei Technologies Co., Ltd.	2734
2	ZTE Corporation	2727
3	Hongfujin Precision Industry (Shenzhen) Co., Ltd.	1099
4	China Petroleum & Chemical Corporation	1044
5	Semiconductor Manufacturing International (Shanghai) Corporation	530
6	BYD Company Ltd.	510
7	AU Optronics Corp.	439
8	Huawei Device Co., Ltd.	347
9	Hangzhou H3C Technologies Co., Ltd.	318
10	China Mobile Communications Corporation	303

Table 10 Top 10 Foreign Enterprises in Terms of the Number of Invention Patents Granted in 2012

No.	Country/Region	Name of Enterprise	Number
1	Japan	Panasonic Corporation	1660
2	Japan	Sony Corporation	1277
3	Republic of Korea	Samsung Electronics Co., Ltd.	1256
4	Japan	Canon Inc.	965
5	Japan	Toyota Motor Corporation	950
6	Japan	Sharp Corporation	938
7	Republic of Korea	LG Electronics Inc.	909
8	USA	General Motors Corporation	765
9	Netherlands	Koninklijkes Philips Electronics N.V.	738
10	USA	Qualcomm Incorporated	623

Table 11 Top 10 Domestic Universities and Colleges in Terms of the Number of Invention Patent Granted in 2012

No.	Name of University/College	Number
1	Zhejiang University	1672
2	Tsinghua University	1198
3	Beijing University of Aeronautics and Astronautics	863
4	Shanghai Jiao Tong University	827
5	Harbin Institute of Technology	825
6	Southeast University	650
7	South China University of Technology	586
8	Tianjin University	478
9	Xi'an Jiaotong University	457
10	Chongqing University	443

Table 12 Top 10 Domestic Scientific Research Institutes in Terms of the Number of Invention Patents Granted in 2012

No.	Name of Scientific Research Institute	Number
1	Industrial Technology Research Institute	400
2	Datang Telecom Technology & Industry Group	215
3	Institute of Semiconductors Chinese Academy of Sciences	200
4	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	174
5	Dalian Institute of Chemical Physics, CAS	172
6	Changchun Institute of Applied Chemistry, CAS	161
7	Institute of Computing Technology, CAS	150
8	Institute of Chemistry, CAS	141
9	Institute of Process Engineering, CAS	139
	Institute of Automation, CAS	139

Table 13 Top 10 Provinces, Autonomous Regions and Municipalities Directly under the Central Government in Terms of Invention Patents Granted in 2012

No.	Provinces/Autonomous Regions/Municipalities	Number
1	Guangdong	22153
2	Beijing	20140
3	Jiangsu	16242
4	Zhejiang	11571
5	Shanghai	11379
6	Shandong	7453
7	Taiwan	6211
8	Sichuan	4460
9	Hubei	4050
10	Shaanxi	4018

(5) The number of valid patents

By the end of 2012, a total of 875,000 invention patents granted by SIPO have remained valid, up 25.6% year on year. Among which, 473,000 were domestic ones, accounting for 54.1% of the total, up 34.7%; 402,000 were from abroad, accounting for 45.9%, up 16.4%. The number of invention patents owned by per 10,000 persons in China (excluding Hong Kong SAR, Macao SAR and Taiwan, China) reached 3.23.

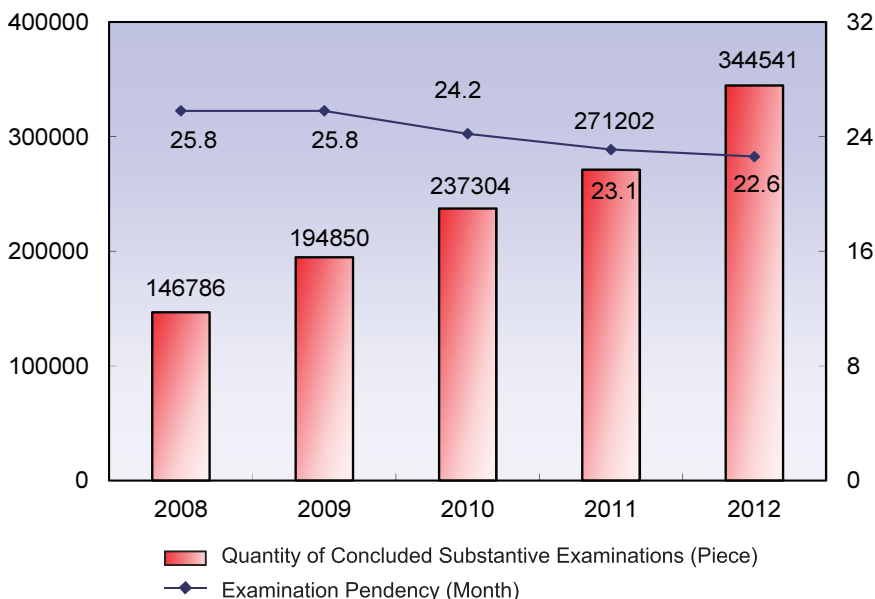
2. Patent Examination

In 2012, the number of examined and concluded applications kept growing and the examination capacity was further enhanced.

SIPO delivered 338,000 First Office Actions, increasing by 15.8% year on year, completed the substantive examination of 344,000 invention patent applications, growing by 27.0% year on year, carried out the examination of 673,000 utility model applications, up 51.8 % year on year, and completed the examination of 562,000 industrial design applications, a year-on-year growth of 11.8%.

In spite of the rapid increase of patent filings, the examination pendency for invention patent applications and that for utility model applications were 22.6 months and 4.4 months respectively, with a further decrease from the previous year. The pendency for industrial design applications was 2.9 months.

The headquarter of SIPO had a total of 2,872 patent examiners. In recent years, SIPO has set up Patent Examination Cooperation Centers in Beijing, Jiangsu, Guangdong and Henan in succession. Currently, all the patent examination cooperation centers have 4,335 patent examiners. By the end of 2012, SIPO had a total of 7,207 examiners.



Changes in the Quantity of Concluded Substantive Examinations and Examination Pendency from 2008 to 2012

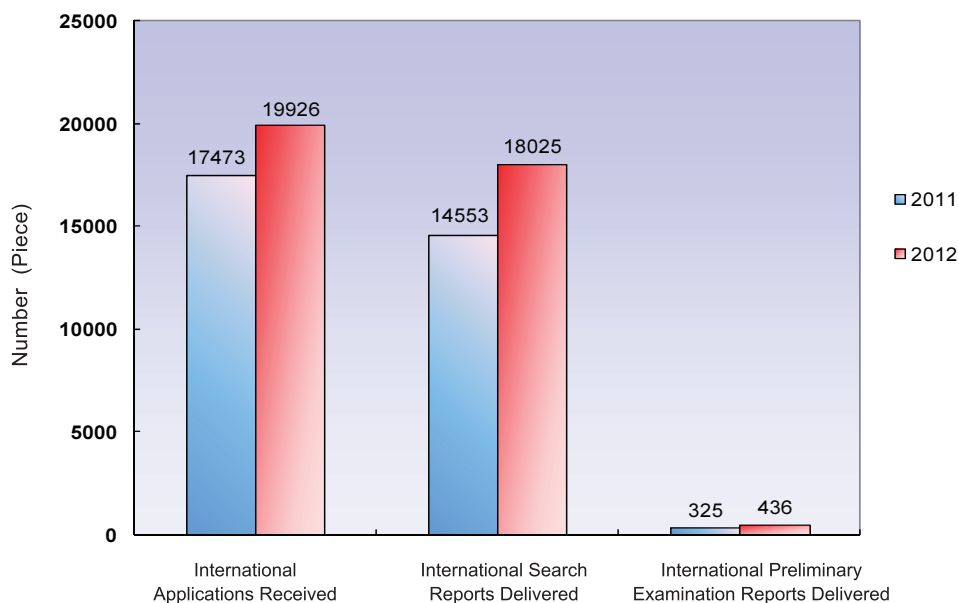
3. PCT International Applications

As a receiving office of the Patent Cooperation Treaty (PCT), SIPO received a total of 19,926 PCT applications in 2012, up 14.0% year on year. From 1994 to 2012, SIPO had received a total of 83,000 PCT applications.

SIPO started to receive PCT-SAFE applications on May 1, 2007. In 2012, the PCT-SAFE applications accounted for 92% of the total PCT applications.

As an international searching authority, SIPO delivered 18,025 international search reports in 2012, growing by 23.9% year on year. Since 1994, SIPO had delivered 72,000 PCT international search reports.

As an international preliminary examination authority, SIPO delivered 436 international preliminary examination reports in 2012. Since 1994, SIPO had delivered 6,310 international preliminary examination reports.



The Amount of PCT International Application, International Searching and International Preliminary Examinations from 2010 to 2011

In 2012, SIPO received 70,221 PCT applications that entered China's national phase, up 5.9% year on year, among which 69,693 were invention patent applications and 528 were utility model applications. Since 1994, SIPO had received a total of 611,000 PCT applications that entered into China's national phase.

4. Applications for Layout Designs of Integrated Circuits

In 2012, SIPO received 1,778 applications for layout designs of integrated circuits, with 1,629 registrations published and certificated. Since the Regulations for the Protection of Layout-design of Integrated Circuits came into force on October 1, 2001, SIPO had received 7,718 applications for layout designs of integrated circuits, with 6,924 registrations published and certificated.

5. Reexamination and Patent Invalidation

(1) Requests for reexamination received and cases concluded

In 2012, SIPO received 17,320 requests for reexamination, 4,374 more than 2011, growing by 33.8% year on year. Of all the requests, 17,238 cases were related to invention patent applications, accounting for 99.5% of the total applications in 2012. 61 were related to utility models, accounting for 0.4%, and 21 were related to industrial designs, accounting for 0.1%.

In 2012, 11,427 requests were resolved, including 11,363 patent applications for inventions, 19 for utility models and 45 for industrial designs.

Since 1985, SIPO had accepted 74,223 reexamination requests and concluded 55,657 reexamination cases by the end of 2012.

(2) Patent invalidation requests received and cases concluded

In 2012, SIPO received 2,941 invalidation requests, 192 cases more than 2011, growing by 7% year on year. Of all requests received in 2012, 602 were related to invalidation of invention patents, accounting for 20.5% of the total; 1,318 were related to utility models, accounting for 44.8%, and 1,021 were related to industrial designs, accounting for 34.7%.

In 2012, 2,599 invalidation requests were resolved, involving 519 patent applications for inventions, 1,224 for utility models and 856 for industrial design.

Since 1985, SIPO had accepted 31,435 invalidation requests, with 28,830 cases concluded by the end of 2012.

(3) Patent administrative litigation

In 2012, concerned parties submitted 900 cases to Beijing No.1 Intermediate People's Court, of which 216 cases were against the reexamination decisions and 684 were against the decisions on requests for invalidation. Concerned parties submitted 446 cases to Beijing High People's Court, of which 104 cases were against the reexamination decisions and 342 were against the decisions on requests for invalidation.

In 2012, Beijing No.1 Intermediate People's Court tried and closed 774 cases, of which 182 cases were against reexamination decisions and 592 cases were against decisions on requests for invalidation.

In 2012, Beijing High People's Court tried and closed 391 cases, of which 80 cases were against reexamination decisions and 311 cases were against decisions on requests for invalidation.

By the end of 2012, the Supreme People's Court had accepted 53 cases and tried and closed 51 cases.

(4) Revocation of layout designs of integrated circuits registration

Since the promulgation of the *Regulation on Protection of Layout Designs of Integrated Circuits* on October 1, 2001, the Patent Reexamination Board had accepted 11 requests for revocation of layout designs of integrated circuits. Five requests had been examined and resolved by the end of 2012.