

IV. Patent Application and Examination

1. Patent Application and Granting

In 2013, the number of patent applications in China reached 2,377,000, up 15.9% year on year. China's invention patent applications experienced a strong growth and the proportion of domestic patent application and granted patents was further optimized. The enterprises' dominant position in IP creation is gradually firm. The number of invention patents owned by per 10,000 Chinese people reached in advance the target set for the outline of China's 12th Five-Year Plan.

(1) Patent Application

SIPO received 825,000 invention patent applications in 2013, up 26.3% year on year. In which the number of domestic invention patent applications was 705,000, accounting for 85.5%, up 31.8% year on year; the number of applications from overseas reached 120,000, accounting for 14.5%, up 2.6% year on year.

Among the domestic invention patent applications, 571,000 were service applications, accounting for 81.0% of the total, up 33.4% year on year; while 134,000 were non-service applications, accounting for 19.0% of the total, up 25.2% year on year. Among the domestic service patent applications, 427,000 were



from enterprises, accounting for 74.8%, up 35.1% year on year; 98,000 from universities and colleges, accounting for 17.1%, up 28.9% year on year; 37,000 from scientific research institutions, accounting for 6.5%, up 27.6% year on year and 9,000 from other institutions and organizations, accounting for 1.6%, up 28.6% year on year.

In 2013, SIPO received 892,000 applications for utility model patents, a growth of 20.5% year on year; and 660,000 applications for industrial design patents, increasing by 0.3% year on year.

Table 1 Top 10 Domestic Enterprises Filing the Invention Patent Applications in 2013

No.	Name of Enterprise	Number
1	State Grid Corporation of China	7182
2	Huawei Technologies Co., Ltd.	5012
3	China Petroleum & Chemical Corporation	3701
4	Tencent Technology Shenzhen Co., Ltd.	2002
5	Ocean's King Lighting Technologies Co., Ltd.	1983
6	ZTE Corporation	1948
7	Hongfujin Precision Industry (Shenzhen) Co., Ltd.	1897
8	Lenovo (Beijing) Limited	1870
9	China National Petroleum Corporation	1261
10	Boe Technology Group Co., Ltd.	1173

Table 2 Top 10 Foreign Enterprises Filing the Invention Patent Applications in 2013

No.	Country/Region	Name of Enterprise	Number
1	Republic of Korea	Samsung Electronics Corporation	2276
2	Japan	Panasonic Corporation	2009
3	Japan	Sony Corporation	1810
4	Germany	Robert Bosch GmbH	1775
5	Japan	Canon Inc.	1278
6	Japan	Toyota Motor Corporation	1249
7	USA	International Business Machines Corporation	1186
8	USA	Qualcomm Incorporated	1166
9	USA	General Motors Corporation	1123
10	USA	General Electric Company	1109

Table 3 Top 10 Domestic Colleges and Universities Filing the Invention Patent Applications in 2013

No.	Name of University/College	Number
1	Zhejiang University	2677
2	Southeast University	2030
3	Harbin Institute of Technology	2004
4	Tsinghua University	1937
5	Shanghai Jiao Tong University	1740
6	Jiangsu University	1540
7	Tianjin University	1479
8	South China University of Technology	1434
9	Jiangnan University	1331
10	Beijing University of Aeronautics and Astronautics	1319

Table 4 Top 10 Domestic Scientific Research Institutes Filing the Invention Patent Applications in 2013

No.	Name of Scientific Research Institutes	Number
1	Dalian Institute of Chemical Physics, CAS	743
2	Shenzhen Institutes of Advanced Technology	473
3	Shenzhen Institutes of Advanced Technology, CAS	428
4	Industrial Technology Research Institute	411
5	Institute of Microelectronics, CAS	402
6	Electronic Power Research Institute, Guangdong Power Grid	385
7	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	359
8	Institute of Semiconductors, CAS	352
9	Institute of Process Engineering, CAS	321
10	Datang Telecom Technology & Industry Group	302

(2) Distribution of Origins of Invention Patent Application with Regard to Domestic Areas and Foreign Countries

In 2013, the top ten provinces and municipalities in terms of quantity of invention patent applications were in order Jiangsu, Guangdong, Shandong, Beijing, Zhejiang, Shanghai, Anhui, Shaanxi, Liaoning, and Sichuan.

Table 5 Top 10 Provinces, Autonomous Regions and Municipalities Filing the Invention Patent Applications in 2013

No.	Provinces/Autonomous Regions/Municipalities	Number
1	Jiangsu	141259
2	Guangdong	68990
3	Shandong	67642
4	Beijing	67554
5	Zhejiang	42744
6	Shanghai	39157
7	Anhui	34857
8	Shaanxi	26487
9	Liaoning	25292
10	Sichuan	23510

In 2013, 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.

Table 6 Top 10 Foreign Countries Filing the Invention Patent Applications in China in 2013

No.	Country	Number
1	Japan	41193
2	The United States of America	29992
3	Germany	13712
4	Republic of Korea	10866
5	France	4143
6	Switzerland	3212
7	the Netherlands	2546
8	United Kingdom	1849
9	Sweden	1795
10	Italy	1318

(3) Distribution of Patent Applications by Technical Fields

In 2013, SIPO completed international patent classification for 796,000 invention patent applications, up by 90,000 or 12.7% year on year. According to the International Patent Classification (IPC) for invention patent applications in 2013, there were more than 10,000 domestic invention patent applications in each of the six fields, including “Preparations for medical, dental or toilet purposes” (A61K), “Electric digital data processing” (G06F), “Testing or analyzing materials by virtue of the chemical or physical property of the testing materials” (G01N), “Transmission of Digital Information” (H04L), “Preservation of Foods or Foodstuffs, In General” (A23L) □ “Semiconductor Devices; Electric Solid State Devices Not Otherwise Provided For” (H01L).

Table 7 Invention Patent Applications Classified According to IPC in 2013

Total	A-H	A	B	C	D	E	F	G	H
Number(Piece)	795517	137174	134750	126480	14788	30801	67705	149206	134613
Percentage	100%	17.2%	16.9%	15.9%	1.9%	3.9%	8.5%	18.8%	16.9%

Table 8 Top 10 IPC Sub-Classes of Invention Patent Applications in 2013

Total Ranking	Sub-Classes	Number	Domestic Ranking	Sub-classes	Number	Foreign Ranking	Sub-classes	Number
1	G06F	33811	1	A61K	29250	1	G06F	6087
2	A61K	31954	2	G06F	27724	2	H01L	5480
3	H04L	17283	3	G01N	14572	3	H04N	3399
4	G01N	16344	4	H04L	14476	4	H04L	2807
5	H01L	15872	5	A23L	13292	5	A61K	2704
6	A23L	13690	6	H01L	10392	6	A61B	2625
7	H04N	10185	7	C08L	8212	7	H04W	2622
8	H04W	9662	8	C02F	7139	8	H01M	2262
9	C08L	9315	9	H04W	7040	9	G01N	1772
10	C02F	7454	10	H04N	6786	10	G02B	1561

(4) Patent Granting

In 2013, SIPO granted 208,000 invention patents, down by 4.1% year on year, among which 144,000 were granted to domestic applicants, accounting for 69.2% of the total, and 64,000 were granted to foreign applicants, accounting for 30.8%. Among SIPO-granted domestic invention patents, 127,000 were service patents, accounting for 88.2% of the total; 17,000 were non-service patents, accounting for 11.8%.

Among the domestic service patents for inventions, 80,000 were granted to enterprises, accounting for 63.0%, 33,000 to universities and colleges, accounting for 26.0%, 12,000 to scientific research institutes, accounting for 9.4%, 2,000 to other institution and organizations, accounting for 1.6%.

In 2013, SIPO granted 693,000 utility model patents, up by 21.4% year on year and 412,000 industrial design patents, down by 11.8% year on year.

Table 9 Top 10 Domestic Enterprises in Terms of the Number of Invention Patents Granted in 2013

No.	Name of Enterprise	Number
1	Huawei Technologies Co., Ltd.	2251
2	China Petroleum & Chemical Corporation	1627
3	ZTE Corporation	1448
4	Hongfujin Precision Industry (Shenzhen) Co., Ltd.	932
5	China National Petroleum Corporation	527
6	Ocean's King Lighting Technologies Co., Ltd.	460
7	Semiconductor Manufacturing International (Shanghai) Corporation	374
8	BYD Company Ltd.	340
9	AU Optronics Corp.	322
10	Taiwan Semiconductor Manufactory Company	317

Table 10 Top 10 Foreign Enterprises in Terms of the Number of Invention Patents Granted in 2013

No.	Country/Region	Name of Enterprise	Number
1	Japan	Panasonic Corporation	1189
2	USA	Qualcomm Incorporated	982
3	Japan	Toyota Motor Corporation	805
4	Republic of Korea	Samsung Electronics Co., Ltd.	802
5	USA	General Motors Corporation	752
6	Japan	Canon Inc.	750
7	Republic of Korea	LG Electronics Inc.	685
8	Netherlands	Koninklijkes Philips Electronics N.V.	664
9	Japan	Sony Corporation	641
10	Japan	Sharp Corporation	636

Table 11 Top 10 Domestic Universities and Colleges in Terms of the Number of Invention Patent Granted in 2013

No.	Name of University/College	Number
1	Zhejiang University	1373
2	Tsinghua University	1112
3	Beijing University of Aeronautics and Astronautics	833
4	Southeast University	700
5	Shanghai Jiao Tong University	699
6	Harbin Institute of Technology	688
7	South China University of Technology	604
8	Tianjin University	502
9	Xi'an Jiaotong University	453
10	Shandong University	422

Table 12 Top 10 Domestic Scientific Research Institutes in Terms of the Number of Invention Patents Granted in 2013

No.	Name of Scientific Research Institute	Number
1	Datang Telecom Technology & Industry Group	576
2	Institute of Microelectronics, CAS	289
3	Industrial Technology Research Institute	277
4	Institute of Process Engineering, CAS	168
5	Dalian Institute of Chemical Physics, CAS	165
6	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	141
	Institute of Metal Research, CAS	141
8	Shanghai Institute of Ceramics, CAS	130
9	Shanghai Institute of Microsystem and Information Technology, CAS	129
10	Institute of Chemistry, CAS	125

Table 13 Top 10 Provinces, Autonomous Regions and Municipalities in Terms of Invention Patents Granted in 2013

No.	Provinces/Autonomous Regions/Municipalities	Number
1	Beijing	20695
2	Guangdong	20084
3	Jiangsu	16790
4	Zhejiang	11139
5	Shanghai	10644
6	Shandong	8913
7	Taiwan	4806
8	Sichuan	4566
9	Anhui	4241
10	Shaanxi	4133

(5) The Number of Valid Patents

By the end of 2013, a total of 1,034,000 invention patents granted by SIPO have remained valid, up 18.2% year on year. Among which, 587,000 were domestic ones, accounting for 56.8% of the total, up 24.1%; 447,000 were from abroad, accounting for 43.2%, up 11.2%. The number of invention patents owned by per 10,000 persons in China (excluding Hong Kong SAR, Macao SAR and Taiwan, China) reached 4.02. (The demographic data came from the year of 2012. Source: China Statistical Yearbook 2013 by the National Bureau of Statistics)

2. Patent Examination

In 2013, the number of examined and concluded applications kept growing, the examination capacity was further enhanced, the examination quality was further promoted, the examination is concluded with higher efficiency and the examination pendency is steady.



Deputy Commissioner Yang Tiejun attended the Promotion Seminar of Patent Prosecution Highway (PPH).

(1) Number of Examined and Concluded Applications

In 2013, the number of examined and concluded invention patent applications and utility model applications kept growing. SIPO delivered 407,478 First Office Actions, increasing by 20.4% year on year, completed the substantive examination of 355,051 invention patent applications, growing by 3.1% year on year, carried out the examination for 742,095 utility model applications, up 10.2% year on year, and completed the examination of 525,260 industrial design applications, a year-on-year decrease of 6.6%.

(2) Examination Quality

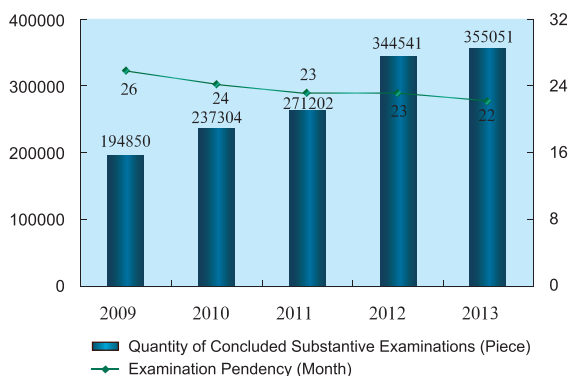
In 2013, the social satisfaction rate of patent examination is 81.8, with a slight increase than 2012 (81.6), and keep on staying in the satisfactory range. In 2013, SIPO totally settled nearly 1000 complaints from the public.

To ensure the quality of patent cases concluded, SIPO further improved the professional guidance system and the examination quality guarantee system, and make best use of these systems. The special work on enhancing searching capability was also launched and a *patent searching guidebook* in 24 technical fields was formulated.

In accordance to related laws, SIPO has contributed more efforts to examine the obvious substantial drawbacks of utility models and industrial designs, with the purpose to ensure the quality of granted patents.

(3) Examination Pendency

The examination pendency for invention patent applications and that for utility model applications were 22.2 months and 4.3 months respectively with a further decrease from the previous year. The pendency for industrial design applications was 3.8 months.



Changes in the Quantity of Concluded Substantive Examinations and Examination Pendency from 2009 to 2013

(4) The Examination Capacity

By the end of 2013, the headquarter of SIPO had a total of 2,757 patent examiners. The Patent Examination Cooperation Centers in Beijing, Jiangsu, Guangdong, Henan, Hubei, Tianjin and Sichuan totally have 5,844 patent examiners.

3. PCT International Applications

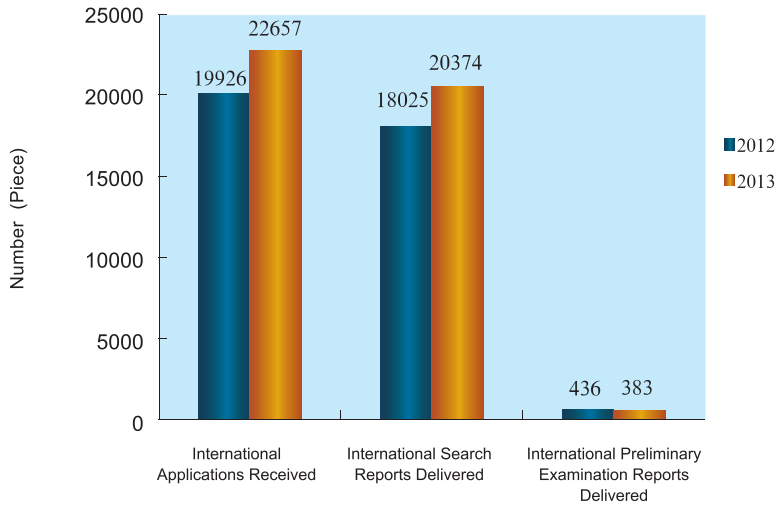
As a receiving office of the Patent Cooperation Treaty (PCT), SIPO received a total of 22,924 PCT applications in 2013, up 15% year on year. From 1994 to 2013, SIPO had received a total of 106,396 PCT applications.

SIPO started to receive PCT-SAFE applications on May 1, 2007. In 2013, the PCT-SAFE applications accounted for 94% of the total PCT applications.

As an international searching authority, SIPO delivered 20,374 international search reports in 2013, growing by 13% year on year. Since 1994, SIPO had delivered 92,757 PCT international search reports.

As an international preliminary examination authority, SIPO delivered 383 international preliminary examination reports in 2013. Since 1994, SIPO had delivered 6,693 international preliminary examination reports.

In 2013, SIPO received 73,583 PCT applications that entered China's national phase, up 4.8% year on year, among which 72,867 were invention patent applications and 716 were utility model applications. Since 1994, SIPO had received a total of 684,813 PCT applications that entered into China's national phase.



The Amount of PCT International Applications, International Searching and International Preliminary Examinations from 2012 to 2013

4. Applications for Layout Designs of Integrated Circuits

In 2013, SIPO received 1,561 applications for layout designs of integrated circuits, with 1,612 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 in total 9,279 applications for layout designs of integrated circuits, with 8,536 registrations published and certificated.

5. Reexamination and Patent Invalidation

(1) Requests for Reexamination Received and Cases Concluded

In 2013, the Patent Reexamination Board received 18,829 requests for reexamination, growing by 8.7% year on year. Of all the requests, 18,464 cases

were related to invention patent applications, accounting for 98.06% of the total applications in 2013. 278 were related to utility models, accounting for 1.48%, and 87 were related to industrial designs, accounting for 0.46%.

In 2013, 14,805 requests were resolved, including 14,697 patent applications for inventions, 52 for utility models and 56 for industrial designs.

Since 1985, the Patent Reexamination Board had accepted in total 93,052 reexamination requests and concluded 70,462 reexamination cases by the end of 2013.

(2) Patent Invalidation Requests Received and Cases Concluded

In 2013, the Patent Reexamination Board received 2,930 invalidation requests, decreasing by 0.4% year on year. Of all requests received in 2013, 603 were related to invalidation of invention patents, accounting for 20.6% of the total; 1,394 were related to utility models, accounting for 47.6%, and 933 were related to industrial designs, accounting for 31.8%.

In 2013, 2,313 invalidation requests were resolved, involving 445 patent applications for inventions, 1,107 for utility models and 761 for industrial design.

Since 1985, the Patent Reexamination Board had accepted in total 34,365 invalidation requests, with 31,143 cases concluded by the end of 2013.

(3) Patent Administrative Litigation

In 2013, concerned parties submitted totally 1,025 cases to Beijing No.1 Intermediate People's Court and Beijing High People's Court, of which 231 cases were against the reexamination decisions and 794 were against the decisions on requests for invalidation.



The Working Conference of the Circuit Trial Court of Patent Reexamination Board in 2013.

In 2013, Beijing No.1 Intermediate People's Court tried and closed 670 cases, of which 162 cases were against reexamination decisions and 508 cases were against decisions on requests for invalidation.

In 2013, Beijing High People's Court tried and closed 404 cases, of which 115 cases were against reexamination decisions and 289 cases were against decisions on requests for invalidation.

By the end of 2013, the Supreme People's Court had accepted 72 cases and tried and closed 50 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 has accepted 11 requests for revocation of layout designs of integrated circuits. Five requests had been examined and resolved by the end of 2013.

(5) Establishment and Use of Circuit Trial Court

By the end of 2013, the Patent Reexamination Board has established 10 Circuit Trial Court in 9 Provinces and Autonomous Regions, including Guangdong, Henan, Shandong, Xinjiang, Sichuan etc.. The Circuit Trial Court is not only an important place where the Patent Reexamination Board hear cases outside Beijing, but also becoming the local intellectual property law education base, practice teaching base as well as propaganda and training base.