

# IV. Patent Application and Examination

## 1. Patent Application and Granting

In 2015, the number of patent applications in China was 2,799,000, up by 18.5% compared with the previous year. Adhering to the general principle of seeking progress while keeping performance stable, focusing on the goal of building China with strong intellectual property competence, new achievements were made in China's IP creation. The number of invention patent applications kept a stable growth rate and the number of annual invention patent application exceeded 1 million for the first time. The enterprises' dominant position in IP creation was further consolidated. The number of invention patents owned by per 10,000 Chinese people reached 6.3, achieving the goal proposed in the Guidelines for 12<sup>th</sup> National Five-Year Plan.

### (1) Patent Application

SIPO received 1,102,000 invention patent applications in 2015, up by 18.7% year on year, among which the number of domestic invention patent



applications was 968,000, accounting for 87.8% of the total, up by 20.9% year on year; the number of applications from overseas reached 134,000, accounting for 12.2%, an increase of 5.2% compared with the previous year.

Among the domestic invention patent applications, 776,000 were service applications, accounting for 80.2%, up by 19.8% year on year; while 192,000 were non-service applications, accounting for 19.8%, up by 25.5% year on year. Among the domestic service invention patent applications, 582,000 were from enterprises, accounting for 75.0%, up by 20.2% year on year; 134,000 were from universities and colleges, accounting for 17.3%, up by 19.3% year on year; 45,000 were from scientific research institutions, accounting for 5.8%, up by 12.4% year on year; 15,000 were from other institutions and organizations, accounting for 1.9%, up by 32.2% year on year.

In 2015, SIPO received 1,128,000 utility model applications, increasing by 29.8% year on year; and 569,000 applications for industrial designs, up by 0.8% year on year.

No.	Name of Enterprise	Number
1	State Grid Corporation of China	6111
2	China Petroleum & Chemical Corporation	4372
3	ZTE Corporation	3516
4	Guangdong OPPO Mobile Telecommunications Co., Ltd.	3338
5	Huawei Technologies Co., Ltd.	3216
6	Beijing Millet Technology Co., Ltd.	3183
7	Beijing Qihoo Technology Co., Ltd.	2777
8	Boe Technology Group Co., Ltd.	2761
9	Gree Electric Appliances, Inc. of Zhuhai	1981
10	Lenovo (Beijing) Limited	1826

No.	Country	Name of Enterprise	Number
1	Cayman Is.	Alibaba Group Holding Ltd.	2742
2	Republic of Korea	Samsung Electronics Corporation	2117
3	USA	Qualcomm Incorporated	1943
4	Japan	Toyota Motor Corporation	1921
5	Germany	Robert Bosch GmbH	1480
6	Republic of Korea	Hyundai Motor Group Ltd.	1441
7	USA	Intel	1258
8	Japan	Mitsubishi Electric Corporation	1210
9	Japan	Canon Inc.	1167
10	The Netherlands	Royal Dutch Philips Electronics Ltd.	1161

No.	Name of University/College	Number
1	Zhejiang University	2739
2	Harbin Institute of Technology	2577
3	Southeast University	2120
4	South China University of Technology	2068
5	Shanghai Jiao Tong University	1838
6	Guangxi University	1825
7	Tsinghua University	1823
8	Tianjin University	1797
9	University of Electronic Science and Technology of China	1636
10	Jiangnan University	1627

No.	Name of Scientific Research Institute	Number
1	Dalian Institute of Chemical Physics, CAS	852
2	China Electric Power Research Institute	839
3	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	428
4	The 41 <sup>st</sup> Institute of China Electronics Technology Group Corporation	368
5	Hefei Institute of Material Science, CAS	360
6	Ningbo Institute of Material Technology and Engineering, CAS	354
7	Electric Power Science Research Institute of Guangdong Power Grid Co., Ltd.	338
8	Datang Telecom Technology & Industry Group	326
9	State Grid Smart Grid Institute	297
10	Industrial Technology Research Institute	296

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

In 2015, the top ten provinces, autonomous regions and municipalities in terms of quantity of invention patent applications were in order Jiangsu, Guangdong, Shandong, Beijing, Anhui, Zhejiang, Shanghai, Sichuan, Chongqing, and Guangxi.

**Table 5** Top 10 Provinces, Autonomous Regions and Municipalities Filing the Invention Patent Applications in 2015

No.	Provinces/Autonomous Regions/Municipalities	Number
1	Jiangsu	154608
2	Guangdong	103941
3	Shandong	93475
4	Beijing	88930
5	Anhui	68314
6	Zhejiang	67674
7	Shanghai	46976
8	Sichuan	40437
9	Chongqing	35086
10	Guangxi	30815

In 2015, 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, the United Kingdom, Sweden and Italy.

No.	Country	Number
1	Japan	40078
2	The United States of America	37216
3	Germany	13851
4	Republic of Korea	12907
5	France	4702
6	Switzerland	3432
7	The Netherlands	3032
8	The United Kingdom	2221
9	Sweden	1948
10	Italy	1430

### (3) Patent Granting

In 2015, SIPO granted 359,000 invention patents, up by 54.1% year on year, among which 263,000 were granted to domestic applicants, accounting for 73.3% of the total, and 96,000 were granted to foreign applicants, accounting for 26.7%. Among SIPO-granted domestic invention patents, 239,000 were service invention patents, accounting for 90.9% of the total, 24,000 were non-service ones, accounting for 9.1%.

Among the domestic service patents for inventions, 159,000 were granted to enterprises, accounting for 66.5%, 57,000 to universities and colleges, accounting for 23.8%, 19,000 to scientific research institutes, accounting for 8.0%, 4,000 to other institutions and organizations, accounting for 1.7%.

In 2015, SIPO granted 876,000 utility model patents, up by 23.8% year on year, and 483,000 industrial design patents, up by 33.5% year on year.

**Table 7 Top 10 Domestic Enterprises in Terms of the Number of Invention Patents Granted in 2015**

No.	Name of Enterprise	Number
1	China Petroleum & Chemical Corporation	2844
2	ZTE Corporation	2673
3	Huawei Technologies Co., Ltd.	2413
4	State Grid Corporation of China	2081
5	Boe Technology Group Co., Ltd.	1115
6	CSOT Co., Ltd.	728
7	China Nation Petroleum Corporation	641
8	Zoomlion Heavy Industry Science & Technology Co., Ltd	596
9	Tencent Technology (Shenzhen) Ltd.	581
10	BYD Company Ltd.	509

**Table 8 Top 10 Foreign Enterprises in Terms of the Number of Invention Patents Granted in 2015**

No.	Country/Region	Name of Enterprise	Number
1	USA	Qualcomm Incorporated	1350
2	Japan	Canon Inc.	1273
3	Japan	Toyota Motor Corporation	1240
4	Japan	Panasonic Corporation	1117
5	Japan	Mitsubishi Electric Corporation	1095
6	USA	General Motors Corporation	1005
7	Germany	Robert Bosch GmbH	940
8	The Netherlands	Royal Dutch Philips Electronics Ltd	920
9	Germany	Siemens AG	915
10	Republic of Korea	Samsung Electronics Inc.	912

No.	Name of University/College	Number
1	Zhejiang University	1865
2	Harbin Institute of Technology	1454
3	Southeast University	1453
4	Tsinghua University	1165
5	Shanghai Jiao Tong University	1113
6	Jiangsu University	985
7	South China University of Technology	871
8	Beijing University of Aeronautics and Astronautics	860
9	Xi'an Jiaotong University	774
10	Beijing University of Technology	750

No.	Name of Scientific Research Institute	Number
1	Institute of Microelectronics, CAS	403
2	Kuang-Chi Institute of Advanced Technology	340
3	Industrial Technology Research Institute	331
4	China Electric Power Research Institute	314
5	Dalian Institute of Chemical Physics, CAS	277
6	Changchun Institute of Optics, Fine Mechanics and Physics, CAS	249
7	Institute of Chemistry, CAS	230
8	Institute of Process Engineering, CAS	224
9	Datang Telecom Technology & Industry Group	215
10	Shenzhen Institutes of Advanced Technology, CAS	199



No.	Provinces/Autonomous Regions/Municipalities	Number
1	Jiangsu	36015
2	Beijing	35308
3	Guangdong	33477
4	Zhejiang	23345
5	Shanghai	17601
6	Shandong	16881
7	Anhui	11180
8	Sichuan	9105
9	Hubei	7766
10	Shaanxi	6812

#### (4) The Number of Valid Patents

By the end of 2015, a total of 1,472,000 invention patents granted by SIPO have remained valid, up by 23.1% year on year. Among which, 922,000 were domestic ones, accounting for 62.6%, up by 30.1%, 550,000 were from abroad, accounting for 37.4%, up by 12.9%. The number of invention patents owned by per 10,000 persons in China (excluding Hong Kong SAR, Macao SAR and Taiwan, China) reached 6.3 by the end of 2015. (The demographic data is the data in Statistical Communiqué of the People's Republic of China on the 2015 National Economic and Social Development)

## 2. Patent Examination

In 2015, the number of concluded applications kept growing and the examination quality was further promoted. The examination was concluded with higher efficiency; the examination pendency kept steady and the examination capacity was further enhanced.

## (1) The Number of Examined and Concluded Applications

In 2015, the number of examined and concluded invention patent applications, utility model applications and industrial design applications kept growing. SIPO concluded 2,080,000 applications, increasing by 10% year on year, among which, 558,000 were invention patent applications. SIPO delivered 661,000 First Office Actions for invention patent applications. In addition, SIPO received 10,036 requests for priority examination of invention patent applications, increased by 55% year on year.

## (2) Examination Quality

In 2015, the social satisfaction rate of patent examination was 82.8, reaching an increase compared with 2014 (81.9), falling in the satisfactory range for five consecutive years. In 2015, SIPO totally settled nearly 760 complaints from the public, decreasing by 140 compared with the previous year.

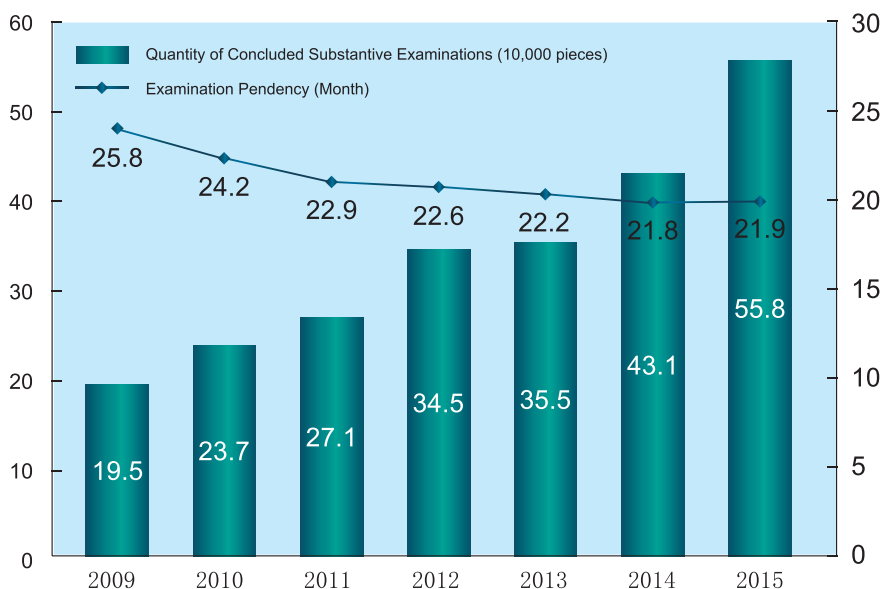
To ensure the quality and efficiency of patent examination, in 2015, SIPO continued to improve the examination quality guarantee system and the professional guidance system. Quality guarantee divisions were established in every examination department, thus further guaranteed the examination quality and strengthened the coordination and communication in the same technical field. We also established examination guiding groups to give more guidance to examiners by solving difficult questions and illustrating typical cases. Several examination learning activities were organized to enhance the examiners' understanding of law and to train them to formulate legal thinking, and therefore promote the coordinated understanding of examination standard. SIPO continued to intensify capacity building of "morality, law, and skills", and organized "the Responsibility Year" activity.

### (3) Examination Pendency

Against the background of growing patent applications, the examination pendency for invention patent applications, utility model applications and industrial design applications maintained steady and even decreased slightly. The pendency for invention patent applications was 21.9 months, further shortened than the previous year; the pendency for utility model applications was 2.9 months, and the pendency for industrial design applications was 3.0 months.

### (4) Examination Capacity

By the end of 2015, there were 2,301 patent examiners in SIPO and 8,001 patent examiners in the Patent Examination Cooperation Centers in Beijing, Jiangsu, Guangdong, Henan, Hubei, Tianjin and Sichuan.



Changes in the Quantity of Concluded Substantive Examinations and Examination Pendency from 2009 to 2015

### **3. PCT International Applications**

As a receiving office of the Patent Cooperation Treaty (PCT), SIPO received a total of 30,548 PCT applications in 2015, up by 16.7% year on year. Since 1994, SIPO had received a total of 163,113 PCT applications.

As an international searching authority, SIPO delivered 27,925 international searching reports in 2015, growing by 9.02% year on year. Since 1994, SIPO had delivered 146,296 PCT international searching reports.

As an international preliminary examination authority, SIPO delivered 436 international preliminary examination reports in 2015. Since 1994, SIPO had delivered 7,473 international preliminary examination reports.

In 2015, SIPO received 82,965 PCT applications which entered into China's national phase, up by 2.9% year on year, among which 81,867 were invention patent applications and 1,098 were utility model applications. Since 1994, SIPO had received a total of 848,379 PCT applications which entered into China's national phase.

### **4. Applications for Layout Designs of Integrated Circuits**

In 2015, SIPO received 2,058 applications for layout designs of integrated circuits, with 1,800 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 13,175 applications for layout designs of integrated circuits in total, with 11,889 registrations published and certificated.

### **5. Reexamination and Patent Invalidation**

#### **(1) Requests for Reexamination Received and Cases Concluded**

In 2015, the Patent Reexamination Board received 12,678 requests for reexamination, down by 48% than the previous year. Of all the requests, 11,920 cases were related

to invention patent applications, accounting for 94% of the total; 673 were related to utility models, accounting for 5%, and 121 were related to industrial designs, accounting for 1%.

In 2015, 25,756 requests were resolved, including 24,026 patent applications for inventions, 1,506 for utility models and 224 for industrial designs.

The Patent Reexamination Board had received in total 130,182 reexamination requests since 1985 and concluded 116,611 reexamination cases by the end of 2015.

## (2) Patent Invalidation Requests Received and Cases Concluded

In 2015, the Patent Reexamination Board received 3,724 invalidation requests, growing by 9% year on year. Of all the invalidation requests received in 2015, 746 were related to invention patents, accounting for 20% of the total; 1,767 were related to utility models, accounting for 47%, and 1,211 were related to industrial designs, accounting for 33%.

In 2015, 3,652 invalidation requests were resolved, including 743 patent applications for inventions, 1,459 for utility models and 1450 for industrial designs.

The Patent Reexamination Board had accepted in total 41,511 invalidation requests since 1985, with 37,537 cases concluded by the end of 2015.

## (3) Patent Administrative Litigation

In 2015, the No.1 Intermediate People's Court of Beijing and the Higher People's Court of Beijing received a total of 1,676 cases of administrative litigation, of which 478 were filed against reexamination decisions of the Patent Reexamination Board (PRB) of SIPO and 1,198 were against invalidation decisions of the PRB.

In 2015, the No.1 Intermediate People's Court of Beijing tried and concluded 410 cases in relation to decisions of the PRB, of which 99 were filed against reexamination decisions and 311 were against invalidation decisions.

In 2015, the Higher People's Court of Beijing tried and concluded 312 cases in relation to decisions of the PRB, of which 62 were filed against reexamination decisions and 250 were against invalidation decisions.

In 2015, the Supreme People's Court received 111 appeal cases and tried and concluded 68.

#### **(4) Revocation of Layout Designs of Integrated Circuits Registration**

Since the promulgation of the Regulations on the Protection of Layout Designs of Integrated Circuits on October 1, 2001, the PRB has accepted 13 requests for revocation of layout designs of integrated circuits. 5 requests have been examined and resolved by the end of 2015.

#### **(5) Establishment and Use of Circuit Tribunals**

By the end of 2015, the PRB has established 11 circuit tribunals in 10 provinces and autonomous regions, including Guangdong, Henan, Shandong, Xinjiang and Sichuan. In 2015, the PRB's online management platform was expanded to cover the circuit tribunals in Guangdong and Jiangsu Provinces.

#### **(6) Ratio of Electronic Reexamination and Invalidation Requests**

The ratio of reexamination and invalidation requests filed through the PRB's electronic system continued to increase. According to statistics, 60.57% of the reexamination requests and 19.42% of invalidation requests filed in 2015 were electronic-based.