

Patent Information Search

Chapter 3: International Patent Classification (IPC)

The international patent classification is an exclusive classification in relation to notable technology exchange between countries, increase in usage of foreign patent documents, and patent documents of one's own country. With the difficulties in usage of foreign patent documents, there was a need for a common classification system for each country worldwide, and in accordance with this need the Strasburg agreement (also called the IPC agreement) was entered and became effective in October 1975. It is revised every 5 years and currently the 7th version is being used. The basic level structure consists of section, class, sub-class, main group, and sub-group, and contains close to 70,000 classifications.

1. International Patent Classification (IPC) Overview

A. The Current IPC Situation

(1) Background to the IPC Establishment

As an exclusive classification with notable technology exchange between countries, increase in usage of foreign patent documents, and patent documents of one's own country, there became a need for a common classification system for each country worldwide due to the difficulties in usage of foreign patent documents.

(2) History of the IPC Establishment

Based on the international patent classification proposal by BIRPI (the former WIPO) in 1940, the Council of Europe Patent Specialists Committee formed a classification project team in 1951 for the establishment of a common classification system. An international agreement in relation to international classification of patents was entered (registration of only Council of Europe member nations) and the 1st version of the international patent classification was released in September 1968, and on March 24, 1971 in accordance with the agreement between the Council of Europe and BIRPI, the Strasburg agreement (also called the IPC agreement) in relation to the international patent classification was entered and became effective in October 1975.

It was revised every 5 years from the 1st to the 6th version, and the 7th edition is expected to be in use from January 1, 2000 to December 31 2004. The 8th edition is being drastically revised to match the IPC to the electronic environment and is being prepared for use from January 1, 2005.

(2) The Current IPC Usage Situation

Currently in 2002, over 100 countries, and patent offices of 4 regions are being used at WIPO, and 28million patent documents are in use with the IPC mark (approx. 95% of the patent documents in the world). Korea was registered as an official member nation on October 8, 1999.

B. The Major Composition of IPC

(1) Class Structure

The basic level structure consists of section, class, sub-class, main group, and sub-group, and the interrelated classes between the sub-groups is shown by the number of dots. So, there is no order concept in the numbers themselves that are marked on the sub-groups.

[Table 1] IPC classifications

Classification	Section	Class	Sub-class	Main Group	Sub-group
Markings	A-H	2 numbers	1 English letter	1-3 numbers	2 or more numbers
Composition Number	8	120	623	6,923	60,711
Ex. Soccer boots (A43B 5/02)	A (basic need)	43 (shoe type)	B (features of the shoe type)	5 (sports use)	02 (soccer boots)

(A) Section: A Basic Need

- All technology fields relating to patented inventions are largely divided into 8 sections
- Each section is marked with 1 English capital letter from A to H
- It is comprised of section mark, section title, section overview, and sub-sections

A: Basic need B: Processing control; transportation C: chemicals; metallurgy
 D: fibers; paper E: fixed structures (civil engineering, construction)
 F: Mechanical engineering; lighting; heating; weapons; explosives
 G: physics H: electrical

(B) Sub-section: Personal & Household Appliances

- Classes within each section have been formed with similar categories
- Sub-sections are marked in terms of classification, and the classification markings for themselves are not attached

A(4): farming, foods, cigarettes, personal consumables, household products, health, entertainment

B(4): separation, mixture, casting, printing, transportation

C(2): chemical, metallurgy

D(2): fibers and other plastic materials that are not separately classified, paper

E(2): structures, underground excavation, mining

F(4): engines & pumps, general industry, lighting & heating, weapons; explosives

G(2): machinery, atomic nuclear science

H(0): none

(C) Class: A43 Shoe types of the basic needs

- Sub-sections have been made more specific and have grouped major items
- Marked with 2 numbers after the section mark
- Comprised of class mark, class title, index within the class

(D) Sub-class: A43B Of the shoe types in the basic needs, shoes with special features

- The technologies within the class have been divided further and grouped in the relevant types
- Marked with an English capital letter on the class marking (E, I, O, U, W, X, Y, Z excepted)
- Comprised of sub-class mark, sub-class title, index within the sub-class

(E) Group: A43B 5/02 Of the shoe types in the basic needs, soccer boots with special features

- The technologies within the sub-class have been made more specific and are divided into the main group & sub-group
- The main group & sub-group have been classified with a slash (/) after the sub-class mark, and the main group is marked with 1~3 numbers and the sub-group is marked with 2 or more numbers
- Comprised of main group mark, main group title, sub-group mark, sub-group title

2. The Fundamental Principle of International Patent Classification (IPC)

With patent classifications in relation to invention applications, the technology title is first determined centered on the claim of the relevant invention, and based on this, it is a stage where the technology is designated into the relevant classification in IPC according to the IPC booklet. Depending on the details of the invention, the related technology title can be 1 or more, and if there are many titles, the title that is the core to the technology is used as the main classification (called “core technology” hereinafter) and the other titles are put into sub-classes.

The thing that has to be especially considered in this kind of IPC of invention applications is that the main classification must always be given in terms of the overall viewpoint, and these main classifications must always be given the same IPC marking, and by using identical IPCs, technology details of the same kind must be selected so that they all can be found in the same search. For example, in the case of electronic circuits for radios including tuners, demodulators, amplifiers, output circuit etc. they are not classified into 4 separate components but must be combined and included into the radio classification. Of course, if there is a characteristic feature in any one component, it can be put into a sub-class of the relate field.

A. Determining Technical Subjects of Inventions

Technical subjects are technology details within the claim which are backed up by the precise explanation of the invention, and these are needed to be added to the special classification for search purposes for the patent judgment. With this meaning, it has similarities to the “invention summary” which describes the composition of the invention in the patent claim which is generally referred to in the patent process, but there are slight concept differences in that the invention summary is generally an idea that refers to each individual claim while the technical subject refers to those that need to add different classification marks for classification & search purposes.

For example, the invention summary in the claim for the invention of a sit-up machine that is attached to the bed can be the entire or part of the additional device for attachment to the bed, health machine application to the bed, and the interrelated technologies between the health machine and the bed. In this case, if the core technology is the attachment of a bar for the ankles for simply doing sit-ups indoors, the main classification would be A47C in relation to the bed, but if the connection between the machine and the bed is not just a simple hooking method but an attachment of a special band to reduce movement, depending on the situation it can be classified as F16B in relation to the connection technology between the machine constituents.

(1) Claim Standards

The claim is the standard for all judgments and executions of right in relation to patents, and is also the basis of determining the classification decision. Of course in this case, the claim has to sufficiently back up as the precise explanation of the invention in accordance with Article 42 Clause 4 of the patent law. If there is important technology information that has not been included in the claim despite the fact that it has been described in the precise explanation of the invention, the related details must be included in a classification as additional information.

If there are many claim items that have different classifications, there could be disputes in relation to which to take as the main classification standard, but of the entire claim item details, the details of the claim item that constitute the core technology of the invention should be determined as the standard for the main classification. In this case, in the view of convenience for the practice & administration of patent applications, the number 1 claim item should generally be the main classification standard.

- Dependence Item

If there are a few dependence items, those dependence items do not generally have enough significance to be added to independent classifications, but if there is a need for independent classification the details are included in a sub-class.

- Independent Items

In the case of applications with many independent items that have different classifications, if the invention is relevant to category 1 prescribed in Article 45 of the patent law, the claim item 1 must be taken as the main class and the related classification of other items must be taken as sub-classes. If the invention is not relevant to category 1, the claim item 1 must be taken as the main class and the remaining claim items are entered as sub-classes, but this must be resolved in the division procedure in the actual judgment stage.

(2) Selection of Core Technology

- Negative Approach System

If there are many technical subjects in the invention composition, as previously explained, the selection of claim item 1 as the main class in the general judgment practice, but the selection of the core technology amongst many technical subjects can be made with the following procedure.

- In the case where the invention was made with A+B technology subjects

If the invention maintains the basic purpose without B, A becomes the standard for the main class. However, if the invention cannot maintain the basic purpose, it could be thought of in 2 ways, but again if the invention maintains the basic purpose without A, then B becomes the standard for the main class, and if the invention cannot maintain the purpose, both are entered as the main class and the technology idea that is closer to the core technology of the invention is formally treated as the main class. The technology idea that is not treated as the main class is obviously entered as a sub-class.

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With the previous example where it is an invention of a sit-up machine attached to the bed, the main technological background can be an integration of the health machine (A) and the bed (B). In this case, if the basic purpose of the inventor can be determined without the health machine (A), the bed (B) becomes the viewpoint of the main class. An example of this would be the attachment of a rack for the feet to the simple sit-up machine for general usage. In the case where the basic purpose of the inventor cannot be determined without the health machine (A), but can form the invention summary without the bed, the health machine becomes the standard for the main class. However, if without the bed, the purpose of the inventor cannot be made to coincide, both the health machine and the bed should be treated as the main class. Of course, of the 2, if there is something that is closer to the core of the invention, that formally is treated as the main class.

- In the case where the technology subjects are comprised of A+B+C.....
Repeatedly going through the elimination process explained above, the main class is decided by determining the main technology subject after applying the subjects to the basic purpose of the inventor.

(3) Technical Subject Types of Inventions

The types of technical subjects for inventions shown in the patent claim can largely be divided into "method related," "product related," and "apparatus related."

It refers to the manufacturing & usage methods of products & apparatus.

[Example] compound polymerization (C08F, G etc.), fermentation (C12N etc.), separation (B01D), casting (B29C etc.), transportation (B65G etc.), fiber processing (D06B etc.), energy transformation & transmission (F15B etc.), construction (E04B etc.), food manufacturing (A23L etc.), test (G01N etc.) machine manufacturing method & operation technique (B61B etc.), information processing & transmission (H04B etc.)

(2) Products

Regardless of the functions created by them, products are the result indicator itself of the method or apparatus.

[Example] compounds (C07C etc.), composition (C08L etc.), structures (B32B), manufactured products (B42D etc.)

(3) Apparatus

It is the implement used in products & methods and is related to the intended use & purpose. The fact to note here is that because the apparatus is made by some sort of method, the apparatus itself which does not specify the intended use or purpose can be a product.

[Example] equipment used in chemical & physical methods (B01L etc.), tools (F16K etc.), implements (A01B etc.), apparatus to perform operation (G06F etc.)

B. Confirmation of Classification

Once the core technology & technical subject is determined on analysis of the application form for classification, a search has to be performed in the IPC to find and confirm the appropriate class. To do this, the types of classes in the IPC must first be examined (function orientated & application orientated).

(1) Types of Classes in IPC

Patent classes can traditionally be divided into industry-orientated or application-orientated and function-orientated viewpoints. The former KPC and the former German classifications are the representative examples of the former viewpoint, and the American & English classifications are the examples of the latter viewpoint.

The IPC adopted by WIPO is in principle closer to the function-orientated classification system, but in reality it is a system that combines both viewpoints. So, the individual sub-classes within the same IPC are divided into function-orientated places and application-orientated places.

1) Function-orientated places

Generally the thing itself has its own essential characteristics and functional features, so if it is not limited to a particular usage field or disregards the mention of a usage field it means the place that has no technological relation.

Things: here, things are all technology contents whether tangible or intangible including methods, products, and apparatus.

2) Application places

Application places are related to usage and application methods, and all sections in the IPC except for the previously explained function-orientated places can be seen as application places. The specific types of application places can contain the following.

- a. A classification of things suitable for certain usage or purpose, that is, the things that are adjusted or specially designed for the given usage or purpose.
- b. Classifications for special usage or application of the thing.
- c. A classification for moving the thing into a larger group in the case where the thing is used as a part of a larger place.

In dividing the types of classifications in the IPC, the function-orientated places and the application places are not strictly divided, and the fact that those classifications are not absolute must be taken note of. That is, depending on the viewpoint, a place can more function-orientated than another place while in another viewpoint it can be less function-orientated.

(2) Searching the Relevant IPC

In searching the classifications of the IPC in relation to a particular technology detail, considering that the entire structure is comprised of section – subsection – class – subclass – main group – subgroup stages, the search must be performed in order from the higher stages to the lower stages.

(A) When there is a place with the relevant technology detail in the IPC

The classification marking of the relevant classification place is decided as the classification of the relevant technology.

(B) When there is no place with the relevant technology detail in the IPC

- It is put into the most similar classification, then whether a “X” marking is required is determined and if it is required, the “X” marking is attached after which the related details are notified to the classification division, and dealt with accordingly. In a situation where there is no relevant place for the related technology detail in the IPC, if the classification cases of similar places accumulate to above a certain level, this fact is reported to the classification division and the requirement of a more precise marking is examined.

- If there are no similar classifications, an inquiry is made to the classification division and the results of the inquiry are followed.

(C) In the case where there are 2 or more similar IPCs

In the viewpoint of the entire IPC, the most appropriate place should be the main class and the remainder should be the sub-class. If it is difficult for the adjudication panel to precisely determine the IPC alone, an inquiry is made to the classification division and the results of the inquiry are followed.

(3) Function & Usage Classification Method

As previously explained, there are the function-orientated and application-orientated types in the classification place of the IPC, so if the patent application is to be classified in accordance with the

IPC, whether the core of the subject technology is in the usage or the function itself must first be examined to determine whether to classify the invention into the function or the usage place.

(A) In the case of single usage inventions

If it is a single usage invention and there is a relevant classification in the IPC, it is classified into the classification relevant to the usage, and if there are no relevant classifications, the classification of the related function is made the main class and the similar place of the related usage is made the sub-class.

(B) In the case of multi-usage inventions

If the relevant technology is a multi-usage invention, in principle, it is classified into the related function classification, and apart from the main usage, if the other usages are just mentioned briefly for usage expansion purposes, it is classified according to the main usage, and the classification of the relevant function is made the sub-class.

(C) In the Case of functional Inventions

Things that have their own essential characteristics and functional features and are not limited to any particular field or usage (example: C07 compounds) can be seen as purely functional inventions. In the case of function-orientated inventions, they are classified into the classifications of the related function (in this case the main usage classification should be included as the sub-class) and if there are no classifications of related technology in the IPC it is classified as the main usage classification.

(4) Classification selection method per technology type

(A) Compounds

If the technical subject of the invention is in relation to compounds (organic, inorganic or high molecular), as a principle, it is classified in the relevant place of the C section depending on the essential characteristics of the compound, i.e. compound structure. Also, if the compound is related to a usage field at the same time, and a suitable classification related to the details & composition of the technical subject characteristics exists, it is also classified into the usage field classification.

However, if the technical subject of the invention is in relation to only the application of the compound, it is only classified in that usage field.

(B) Mixtures or Composites

If the technical subject of the invention is comprised of mixtures or composites and there is a same classification (glass composites C03C, cement or ceramic composites C04B, alloy composites C22C), it is classified in the relevant place in accordance with the essential characteristics of the composite, but if there are no relevant classifications, it is classified in accordance with its use or application. And, if there are characteristic features in the usage or application, it is classified in the mixture or composite themselves and its usage or application.

(C) Manufacture or Processing of Compounds

If the technical subject of the invention is in relation to the manufacture or processing of compounds, it is classified as the compound itself, but if there is a place for the manufacture or processing

method, it is also classified into that. However, if a relevant place exists for the general methods of compound manufacture and processing, it is classified into that place.

(D) Apparatus and Method

If a relevant place exists for the apparatus and method, it is classified into that. If a place for the apparatus does not exist, it is classified into the place for the method used by the apparatus. If a place for the method does not exist, it is classified into the place for the apparatus which uses the method. If a place for either the apparatus or the method does not exist, it is classified into the place for the manufactured product produced by that apparatus or method.

(E) Manufactured Products

Manufactured products are classified into the place related to its type, but if a relevant place does not exist, it is classified into an appropriate function-orientated place, and if this place does not exist, it is classified into the usage field of the product.

(F) Multi-level Processes & Plants

Multi-level processes & plants involving the combination of many processes and many apparatuses are classified into such places (e.g. B09B). If such combined places do not exist, they are classified into the place which deals with the products produced by that combination. And, if there are features in each factor of the combination, they are also classified into the places for those factors. However, if there are no characteristic features in the combination but there are features in each factor, they are not classified into a place for the combination.

(G) Detailed and Composition Sections

If the structural and functional detailed, structure components are used only in particular apparatuses, they are classified into the place for that apparatus. However, if those detailed, structure sections can be applied to more than 2 apparatuses they are classified into those places for the detailed, structure sections, and if there are no relevant places, they are classified in appropriate places for the apparatus.

(H) Those related to 2 or more technical subjects; a single technical subject included in many groups

If an invention is directly & characteristically related to 2 or more technical subjects and each technical subject is included in different groups, it is classified into each of those groups.

Also, if a single technical subject is included in 2 or more identical classes under the same main group, the details themselves included in each group is not very important in terms of search purposes, and if the technical subject simply returns to the combination of those details, it is classified into the group of a higher class. However, if the technical subject is included in many groups under a different main group, it is classified into all of those groups.

(I) Markush Type Compound Classification

In the case of organic compounds that can be included as the so called Markush type, the following procedure for classification is followed.

i) Stage 1: If classification into a place with compounds with a small number of general chemical

formulas (e.g. less than 5) is possible, the classification is made for the whole.

ii) Stage 2: If the sufficiently categorized compounds are relevant to the following, classification is given to each.

- The claimed thing itself, especially in the case of composites
- The claimed products of the process
- Their derivatives

Here, the “sufficiently categorized” refers to the compounds and products relevant to the following.

- Compound structures that are determined by name or formula, and those that can be deduced by the methods in accordance with particular reactants,
- Compounds or products that have physical properties specified (e.g. melting point) in the specifications or in the case where it is expressed as an operation example describing specific details

iii) Stage 3: Useful information on other searches are also classified

(5) IPC Rules

If there are 2 or more places classifying a particular technology detail in the IPC, a set regulation is provided to arrange classification additions. A representative example is the last place rule of the chemical related place. This kind of rule limits multi-classifications and maintains consistency with the purpose of raising search efficiency, and is clearly indicated through the notes to the highest class of the place applicable to the relevant rule.

(A) The Last Place Rule

If a technical subject is included in 2 or more places in the same class in terms of class mark, the last place rule instructs the classification into the final place of the 2 or more places. This rule is often applied to compound related places such as A61K, C03C 1/00~14/00, C07, C08G, C12M~Q.S, G07D 5/00 etc.

(B) The First Place Rule

If a technical subject is included in 2 or more places in the same class in terms of class markings, unlike the last place rule, the first place rule classifies into the first place in the class mark. This rule appears in the notes to C05 and B32B.

(C) Main Substance Rule

This is a rule that classifies in accordance with the main substance that constitutes the compound and applies to C08L.

(D) Miscellaneous

Apart from the (A) ~ (C) rules, the places where there are notes for special classification rule designations include B31B, C04B 38/00, G05D, C12S etc.

B31B especially is relevant to the rule which decides whether the classification that is not indicated in the class mark, can be utilized in the classification purpose, and also the case limiting the usage of the sub-class relevant to C12S.

(6) The Meaning of Prior Citing in Classification

In performing the actual classification, the IPC stated in the prior citing of related fields often have significant meaning in confirming the appropriate classification place for the relevant invention application. It is a fact that classifying into the place with many prior citings to maintain consistency in classifications would be efficient in terms of the actual judgment. However, in the case where this kind of classification would cause difficulties for continuous application in terms of the IPC interpretation, the movement of prior citings through class changes must also be seriously considered.

(7) “X” Symbol Attachment Method

The IPC has approximately 70,000 (based on the 6th edition) technology places and the original purpose is to include the scope for all technologies if possible, but because of the continuous new technological developments in line with the characteristics of invention patents, there could be those that are not sufficiently reflected in the current IPC. As a result, by using the “X” symbol, classification of technology contents not sufficiently included in the current classifications is being considered.

(A) “X” Symbol Additions to Sub-Classes, Classes, and Sections

They are marked like A01BX, A01X, AX, and in the case where the relevant sub-class, class, and section sufficiently includes related technical subjects but the detailed places which can completely classify the technology contents within the sub-class, class, and section are incomplete or insufficient, the marking of the relevant classification is replaced with the X mark. For example, it is used to classify the invention relating to fiber processing, D06X, which cannot currently be classified in any sub-class of D06.

(B) “X” Symbol Additions to the main group

They are marked like A01B 1/00X, and in the case where the technical subject is included in the relevant sub-class but classification in a specific main group of the same sub-class is not appropriate, it is classified in the most similar main group with the X mark added. For example, in the case of solid materials in strength examination resulting from mechanical application, they are classified as G01N 3/00, but in the case of semi-liquid crystal materials, they are classified using G01N 3/00X.

(C) Sole usage of the “X” symbol

In the case where the technical subject of an invention cannot be included in any section, it is classified using only the X symbol.

Technology inventions using this X symbol are in relation to the contents that have not been taken into consideration by the IPC, and because it becomes an important point of consideration in revising the IPC, all those with the X symbol must be notified to the International Administration Division of WIPO.

C. Classification Symbol Marks

The IPC agreement member countries must state the IPC symbol on all application forms and publications relating to patents and utility models in accordance with the regulations in Section 4 of the agreement. Korea became registered as of October 8, 1999 and has adopted and is using the Korean patent classification system as the IPC, and is encouraging the mention of the IPC mark by providing a IPC line on the patent & utility model application form, and the complete IPC is also

stated on patent & utility model reports published by the intellectual property office.

The IPC mark must be completely indicated so that it includes all technology details shown in the application form. The classification symbol mark in relation to the invention information including the indexing code is, in principle, marked in the following format.

The classification mark, additional information, and indexing code in relation to the technical subject stated in the claim are classified between each other using the double slash (/), and behind the double slash (/) is the classification mark for the additional information, connected indexing code, and non-connected indexing code respectively. In the case where the mark behind the double slash (/) starts on a new line, the double slash (/) must be shown at the beginning of the new line.

When marking classification symbols, all symbols and codes are divided by commas (,), but when marking connected indexing codes commas are not used between the parentheses. And, in the case where 2 or more classifications in the same sub-class are stated in continuity, the sub-class symbol is only stated in the first classification mark, and from the 2nd the sub-class symbol is omitted and only the relevant numbers are used divided by commas. However, within the parentheses marking the connected indexing code, even the details contained in the same sub-class cannot omit the sub-class symbol.

[Example of the classification symbol mark containing connected indexing codes]

C08F 210/16, 255/04 // A61K 46/00, C09J 151/06(C08F 210/16, 214:16)(C08F 255/04, 214:06)

*C08F 210/16, 255/04 indicates the classification symbol in relation to the technical subject stated in the claim, A61K 46/00, C09J 151/06 indicates the classification symbol of the additional information, and (C08F 210/16, 214:16)(C08F 255/04, 214:06) indicates the connected indexing code.

[Example of the classification symbol mark containing non-connected indexing codes]

B29C 65/08 // B29K 83:00, B29L 23:18

* B29C 65/08 indicates the classification symbol in relation to the technical subject stated in the claim, and B29K 83:00, B29L 23:18 indicates the non-connected indexing code.

3. Other Classification Systems

A. Classification System in Korea

From 1948, the foundation period of patent & utility model reports in Korea, to June 1979, the KPC (Korean Patent Classification) which was influenced by the Japanese classification system was used, and in accordance with the unification trends of world patent classifications, a decision was made to introduce the IPC and the 2nd edition of the IPC was started to be used from July 1, 1979 in conjunction with the KPC. From June 1, 1981 usage was completely moved to the 3rd edition of IPC and from then on only the IPC has been used.

Its structure basically consists of class, sub-class, and sections. The class divides largely based on the technology details consisting of 1 to 136 classes, and are marked from 1~136 in Arabian numbers. Like the classes 1~8 agriculture & fisheries related, 39~48 fiber related, 55~62 computer related etc. mutually similar technology details are divided into a total of 1,104 sub-units which are marked with 1 capital letter in the alphabet. In each sub-class, the items which sub-divide the technology contents are marked with 3 or less Arabian numbers. The first number which marks the

item is the basic sub-divided item showing the groups for each type, and there are a total of 5,833. The total number of items including these basic items comprise of 24,608.

[Table 2] Comparison between KPC & IPC

Classification	KPC	IPC
1. Classification system	Classification based on the usage of the item	Classification by combining the function and usage of the technology content
2. Classification composition	Class-subclass-item	Section-subsection-class-subclass-main group-subgroup
3. Revision procedure	Regular revisions	Revised every 5 years by WIPO (regular revisions after 2005)
4. Example	109 A 1 2 1	G 04 B 1/14

B. Classification System in Japan

Japan adopted the IPC in 1978 but recognizing the limitations of the IPC, Japan has constructed an independent internal classification system, the F-Term (File Forming Term) which classifies prior technology materials related to the relevant field into 50~70 cases by sub-dividing the IPC in accordance with the technological viewpoints including the purpose, function, structure, materials, manufacturing methods, processing & operation methods, control methods etc. of particular technology fields of detailed expansion (identification symbols, part identification symbols), the FI (File Index) consisting of complete symbol + expanded symbol + part identification symbol of IPC as the classification system formed within the search purpose in the patent office of one's country, advance field etc.

C. Classification System in the US

America is using both the IPC and the self-developed USPC (US Patent Classification, function-orientated). The USPC is comprised of the class indicated by numbers and the subclass which is indicated by decimal points or the alphabet.

D. Classification System of EPO

IPC is adopted as the basic classification, and as the detailed qualification, the ECLA (EPO Classification), which introduced the detailed expansion classification to harmonize with the European classification before the establishment of the IPC, is being used.

E. Trademark Classification

From the early period of the Korean trademark law, which became effective in 1950, the Korean trademark classification system had been used, and from March 1, 1998 the international product classification (NICE classification) was adopted (8th edition being used as of January 2002 to the present) and is currently in use.

The NICE classification was established in an international agreement in relation to products and services contracted at NICE in June 1957, and is comprised of 45 classifications including services (approximately 10,000 products), and as at January 2001 it is being used by approximately 130 countries.

F. Design Classification

In design classifications, the usage concept of the item is the main factor, and depending on requirements, classifications are also made using the concept of the configuration. Both the design

related international classification (32 classes, 233 sub-classes, 6,600 items), the Locarno classification, and the Korean classification in the report on applications after January 2001 are marked together.