

**Summary of
Comparative Studies and Case Studies**

2016 JEGPE

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Introduction

Joint Expert Group for Patent Examination (JEGPE) was established in 2009 in order to promote patent cooperation and to harmonize examination practices among Japanese Patent Office (JPO), Korean Intellectual Property Office (KIPO) and State Intellectual Property Office (SIPO). JEGPE conducted comparative studies and case studies on the Laws, Regulations, and Guidelines as shown in the table below, and published reports indicating the result of each study.

Reports published by JEGPE

	Comparative Study	Case Study
Inventive Step	2010	2011
Novelty	2012	2012
Utility Model	2012	—
Disclosure and claims	2013	2013-2014
Amendment	2014	2015

In 2016, JEGPE prepared a summary of comparative studies and case studies to date. This summary readably and concisely summarizes the results of each study as well as reflects the recent revision of the Laws, Regulations, and Guidelines of each country. The contents in the summary which are different from the contents in the previously published reports are highlighted in **YELLOW**.

The summary contains 5 sections: I. Inventive Step; II. Novelty; III. Disclosure and Claims; IV. Amendment; and V. Utility Model. Each section includes (1) Key Points, (2) Summary of Comparative Study and (3) Summary of Case Study (except Utility Model which includes Key Points only).

For a detailed analysis of the studies, readers are invited to see the reports of comparative studies and case studies previously published when necessary.

Study History

2010 [Comparative Study on Inventive Step](#)

Compare the Laws, Regulations and Guidelines and confirm a point of agreement and difference
Published a report in December

2011 [Case Study on Inventive Step](#)

Compare a determination process and its result in inventive step for 5 cases
Published a report in December

2012 [Comparative Study on Novelty](#)

Compare the Laws, Regulations and Guidelines and confirm a point of agreement and difference
Published a report in December

[Case Study on Novelty](#)

Compare a determination process and its result in Novelty for 5 cases
Published a report in December

[Utility Model](#)

Compare the character of Utility Model system
Published a report in November

2013 [Comparative Study on Disclosure and Claims](#)

Compare the Laws, Regulations and Guidelines and confirm a point of agreement and difference
Published a report in November

[Case Study on Disclosure and Claims](#)

Compare a determination process and its result in Disclosure and Claims for 3 chemical cases (continued to 2014)



2014 Case Study on Disclosure and Claims (contd.)

Compare a determination process and its result in Disclosure and Claims for 3 electrical cases
Published a report in April 2015

Comparative Study on Amendment

Compare the Laws, Regulations and Guidelines and confirm a point of agreement and difference
Published a report in April 2015

2015 Case Study on Amendment

Compare a determination process and its result in Amendment for 37 cases
Published a report in December

2016 Summary of comparative studies and case studies

I. Inventive Step

Key Points

Determination process of inventive step for all three offices (JPO, KIPO and SIPO) constitutes: specifying the claimed invention and relevant prior art, comparing the claimed invention with the relevant prior art, recognizing the difference between them, and determining whether or not the claimed invention would have been easily achieved by a person skilled in the art based on the prior art or is obvious to a person skilled in the art.

In JPO and KIPO, the general determination procedures for assessing the inventive step are as follows:

- (1) Specify the claimed invention and the relevant prior art, and select the prior art closest to the claimed invention
- (2) Compare the claimed invention and the closest prior art, and clarify the difference between them.
- (3) Assess whether or not the claimed invention would have been easily achieved by a person skilled in the art based on the prior art and the common general knowledge.

In SIPO, the determination procedures for assessing the inventive step are as follows:

- (1) Specify the claimed invention and the relevant prior art, and select the prior art closest to the claimed invention
- (2) Determine the distinguishing features of the claimed invention as compared with the closest prior art and the technical problem actually solved by the invention on the basis of the technical effect of the distinguishing features
- (3) Determine whether or not the claimed invention is obvious to a person skilled in the art.

Summary of Comparative Studies

A. Basic approach applied in assessing inventive step

The approach in all three offices includes the steps of comparing the claimed invention with relevant prior art, recognizing the difference between them, and determining whether a person skilled in the art would have been easily or obviously led to the claimed invention.

Also, in all three offices, advantageous technical effects of the claimed invention should be taken into consideration as facts to support to affirmatively infer the involvement of an inventive step.

In JPO and KIPO, the general procedures applied for assessing the inventive step are as follows;

- Specify the claimed invention.
- Specify the cited invention(s).
- Select the cited invention which is the closest to the claimed invention
- Clarify differences between the claimed invention and the closest cited invention by comparing them
- Assess whether an invention described in the claims would have been easily made by a person skilled in the art, in view of cited inventions and the common general knowledge

The assessment can be made from various and extensive aspects. For example, the examiner evaluates whether the claimed invention falls under a selection of an optimal material, a workshop modification of design, a mere juxtaposition of features on the basis of cited inventions, or whether the contents of cited inventions disclose a cause or a motivation for a person skilled in the art to arrive at the claimed invention.

In SIPO, usually the following steps are taken to determine whether a claimed invention is obvious as compared with the prior art.

- Specify the claimed invention.
- Specify the cited invention(s).
- Select the cited invention which is the closest to the claimed invention

- Determine the distinguishing features of the invention and the technical problem actually solved by the invention

In this step, the examiner shall determine the distinguishing features of the claimed invention as compared with the closest prior art and then determine the technical problem that is actually solved by the invention on the basis of the technical effect of the distinguishing features. The technical problem actually solved by the invention, in this sense, means the technical task in improving the closest prior art to achieve a better technical effect.

- Determine whether or not the claimed invention is obvious to a person skilled in the art

In this step, the examiner shall make a judgment, based on the closest prior art and the technical problem actually solved by the invention, as to whether or not the claimed invention is obvious to a person skilled in the art. In the course of judgment, what is to be determined is whether or not there exists such a technical motivation in the prior art as to apply the said distinguishing features to the closest prior art in solving the existing technical problem (that is, the technical problem actually solved by the invention).

B. Criteria for determining the ability to apply prior art from non-analogous technical fields

In JPO, aspects below can be the strong grounds for examiners to apply prior arts from non-analogous technical fields:

- Relevance of technical fields
- Similarity of a technical problem
- Similarity of an operation or a function
- Suggestions shown in the cited inventions

In KIPO, even if the prior art is in a different technical field from a claimed invention, it can be recognized as a cited invention in the case that the prior art might be applied to other technical fields or used by the applicant in the

process of solving a specific technical problem. When a claimed invention is compared to the prior art which belongs to a different technical field from the claimed invention, examiners should take into account the eligibility of citation including the relevance of two technical fields, the close similarity of a problem to be solved, and the close similarity of a function or operation.

In SIPO, for an invention, the examiner shall consider not only the technical field to which the invention belongs, but also the proximate or relevant technical fields, and those other technical fields in which the problem to be solved by the invention would prompt a person skilled in the art to look for technical means.

For a utility model, the examiner will normally focus on the technical field to which the utility model belongs. Where there is a clear technical teaching, for example, where there is an explicit description in the prior art, to prompt a person skilled in the art to look for technical means in a proximate or relevant technical field, the proximate or relevant technical field may be considered.

For example, the prior art including an existing technology which, despite being in a different technical field from the claimed invention, is capable of performing the function of the claimed invention and has disclosed the greatest number of technical features of the invention can be the closest prior art.

C. Criteria for determining the differences between the prior art and the claims

C.1. Problem of common general knowledge i.e. the question as to whether the examiner, if he is reasonably certain that a given feature is common general knowledge but cannot prove it (because there is no supporting document), is entitled to refuse a claim

In JPO, when the examiner cites well-known art or commonly used art for the reasoning in the notice of reason for refusal or decision of refusal, he/she should show their evidence except that no example is required. The above rule is applied regardless of citing well known art or commonly used art as

the prior art, as a basis for design modification or as evidence of the knowledge or ability of a person skilled in the art.

In KIPO, if the invention is regarded as a well-known art or a commonly-used art, the examiner may notify the applicant of the grounds for rejection without any evidential material attached. However, it is inappropriate to cite a well-known art or a commonly-used art as the closest cited invention without any support by evidential materials. If an applicant claims that the invention is not well-known art or commonly-used art in a written opinion in response to the grounds for rejection on the basis of the well-known technology without any evidential material attached, the examiner should in principle provide an evidential material regarding the grounds for rejection. However, in case that the examiner has the difficulty in providing an evidential material, the examiner may deny the inventive step by thoroughly explaining why the invention falls under well-known art or commonly-used art, or pointing out why the applicant's argument is not proper.

In SIPO, the common knowledge of the art cited in the Office Action by the examiner shall be accurate. Where the applicant has objections to the common knowledge cited by the examiner, the examiner shall state the reasons or provide corresponding evidence for proof.

C.2. Criteria for evaluating differences between the prior art and the invention

C.2.a. Change or limitation of use

The practices of the three offices coincide on the following two points:

(1) No office recognizes an inventive step if the feature of the claimed invention is a change or limitation of the use of prior art which could have easily been made by a person skilled in the art and does not produce an unexpected effect/result.

(2) All three offices may recognize inventive step when the new feature

produces an unexpected effect/result.

Especially on the medical use of invention, JPO has commented that even if the medicinal use of the claimed medicinal invention differs from that of the cited invention, when the relevance of the working mechanism between both has been derived from the publicly known art or common general knowledge at the time of filing, the inventive step of the medicinal invention of the present patent application is usually denied, unless otherwise there is another ground for inferring inventive step such as advantageous effect or the like.

Especially for the medical use of invention, KIPO has commented that if it is an invention of which pharmacological effects cannot be easily inferred from chemical structures of effective active substance or compositions of a composition in view of the level of technique at the time of filing or it has significant effects that cannot be easily inferred from pharmacological mechanism described in the prior art by a person with ordinary skill in the art, an inventive step thereof is admitted. And, KIPO has added a comment that the pharmacological effect should be described in the specification to support its medical use at the time of filing.

Especially on the field of chemical products, SIPO has commented 1) a use invention of a new chemical product is regarded as involving an inventive step if the use cannot be expected from the known product having a similar structure or composition; 2) a use invention of a known product is regarded as involving an inventive step if the new use cannot be derived or expected from the structure, composition, molecular weight, known physical/chemical property and existent use of the product, but utilizes a newly discovered property of the product, and produces unexpected technical effect.

C.3. Indication of problem to be solved

All three offices agree in that a close similarity of a problem to be solved can be a strong ground for assessing that a person skilled in the art would be led to a claimed invention by applying or combining cited inventions.

In JPO, the examiner can also attempt the reasoning by a thinking process different from the claimed invention, based on the primary prior art which solves a problem different from the claimed invention. Same applies to a claimed invention of which the problem to be solved cannot be recognized, such as an invention obtained through trial and error.

In KIPO, even in the case that a problem to be solved of a cited invention is different from that of a claimed invention, if it is obvious that a person skilled in the art would have easily arrived at the claimed invention through a proper reasoning, the inventive step of claimed invention can be denied.

In SIPO, the examiner shall first determine the distinguishing features of the claimed invention as compared with the closest prior art and then determine the technical problem that is actually solved by the invention on the basis of the technical effect of the distinguishing features. The technical problem actually solved by the invention, in this sense, means the technical task in improving the closest prior art to achieve a better technical effect.

At the step of determining whether or not the claimed invention is obvious to a person skilled in the art, the examiner shall make a judgment, starting from the closest prior art and the technical problem actually solved by the invention, as to whether or not the claimed invention is obvious to a person skilled in the art. In the course of judgment, what is to be determined is whether or not there exists such a technical motivation in the prior art as to apply the said distinguishing features to the closest prior art in solving the existing technical problem (that is, the technical problem actually solved by the invention).

C.4. Indication of advantage of claimed invention

In JPO and KIPO, if an effect derived from matters defining a claimed invention is advantageous in comparison with that of cited inventions, it should be taken into consideration as a fact to support to affirmatively infer its inventive step.

In SIPO, when evaluating whether or not an invention represents notable progress, the examiner shall primarily consider whether or not the invention

produces advantageous technical effects.

C.5. Unexpected result

The three offices agree in that an unexpected effect/result is an important factor to confirm inventive step, especially when the claimed invention is a selection invention.

In JPO, even though a reasoning seems to be possible that a person skilled in the art could have easily arrived at a claimed invention because of the close similarity between the matters defining a cited invention and the ones defining a claimed invention or because of a combination of plural cited inventions, the inventive step should be positively inferred if a claimed invention has an advantageous effect, qualitatively different or qualitatively the same but quantitatively prominent in comparison with those of cited inventions, and if the advantageous effect cannot be foreseen by a person skilled in the art from the state of the art.

In KIPO, if a selection invention generates an advantageous effect in comparison with a cited invention, the inventive step of the selection invention can be acknowledged. In this case, all specific concepts included in the selection invention should have advantageous effects, which are qualitatively different, or qualitatively same but quantitatively prominent. If a combination invention achieves an effect by a functional interaction between technical features, which is different from or greater than the sum of the effects of the individual technical features, e.g., a combined synergistic effect, the inventive step may be acknowledged since a set of technical features is considered to be a technical meaningful combination.

In SIPO, when determining the inventive step of a selection invention, the main factor to be considered is whether the selection can bring about unexpected technical effect.

In addition, SIPO considers that when judging the inventive step of an invention by diversion, whether unexpected effect is produced should be taken into consideration.

D. Resolving the level of ordinary skill

D.1. A person skilled in the art, an average expert

There is no essential difference among the three offices with respect to the definition of “a person skilled in the art” and the amount of knowledge/skill expected of “a person skilled in the art”.

D.2. Prior art teaching away from the claim (technical prejudice)

All three offices take into account prior art which leads a person skilled in the art away from the claimed invention as a positive factor in judging the inventive step.

In JPO, a piece of prior art is inappropriate for citation where the publication which discloses the prior art provides the descriptions that obstruct a person skilled in the art from easily arriving at the claimed inventions. Therefore, there is an obstructive factor for reasoning where the primary prior art or the secondary prior art is inappropriate. However, even if the prior art documents etc. provide the descriptions that obstruct a person skilled in the art from easily arriving at the claimed inventions at first glance, the prior art is appropriate as cited prior art where there is a sufficient factor in support of the non-existence of an inventive step and the reasoning.

In KIPO, if there is a description in the prior art document that precludes the reasoning that a person skilled in the art would easily arrive at the claimed invention, the inventive step is not denied by the prior art despite the similarity between the prior art and the claimed invention. KIPO also states that the fact that the technical features in a prior art document are described as inferior cannot be necessarily considered as a preclusion factor in assessing the inventive step.

Both KIPO and SIPO consider that the fact that an invention is made by overcoming technical prejudice and adopting the technical means which was abandoned by the technicians due to the prejudice, and hereby has solved a

technical problem, is regarded as a positive indicator of the inventive step.

Summary of Case Studies

The three offices conducted 5 case studies. They agreed with assessments of the inventive step.

Results of Case Studies of Inventive Step (○ : involving inventive step, × : lacking inventive step)

	JPO	KIPO	SIPO
Case 1	×	×	×
Case 2	×	×	×
Case 3	×	×	×
Case 4	○	○	○
Case 5	○	○	○

The major differences in the process of assessments of the inventive step are shown below:

- (i) In Case 1, there are differences in the three offices in the point of selection of the closest prior art and in the point of the number of prior art.
- (ii) In Case 2, JPO and SIPO are different from KIPO in the point of selection of the closest prior art and in the point of the number of prior art.
- (iii) In Case 3, JPO and KIPO are different from SIPO in the point of selection of the closest prior art and in the point of the number of prior art.

It has been found out the three offices have the different practice in selection one of the cited references as the closest prior art as below:

- (i) JPO selects one of the cited references as the closest prior art which is most suitable for the reasoning. In that case, JPO selects such reference of which the technical field or problem to be solved is the same as or close to that of the claimed invention.
- (ii) when selecting the closest prior art, SIPO considers the following issues: the same or close technical fields, technical problem to be solved, technical effect,, the number of technical features disclosed in the prior art. It should be noted that, the prior art in the same or similar technical field should be the first to be considered.

(iii) KIPO selects one of the cited references as the closest prior art including the most common technical features and having the closest technical background or problem to be solved in comparison with the claimed invention.

An overview of the major case examples will be explained below.

A. Case 1 (Railway Drawbar with Fabricated Section)

Claimed Invention and Prior Arts

Claim(s)

An improved slackless type drawbar assembly for use in connecting together adjacently disposed ends of a pair of railway cars in a substantially semi-permanent fashion, said slackless type drawbar assembly comprising:

(a) . . .

(b) a cavity formed in said radially opposed second end portion of said at least one female connection member, said cavity being defined by an inner surface of a back wall portion, having a second predetermined configuration, an inner surface of a top wall portion and an inner surface of a pair of side wall portions, each side wall portion having a third predetermined configuration, said cavity being open adjacent at least a portion of a bottom and an outer end of said radially opposed second end portion of said at least one female connection member;

(c) ~ (j) . . .

(k) a means engageable with said second end portion of said at least one male connection member and a second end portion of another male connection member for securing said second end portion of said at least one male connection member to said second end portion of said another male connection member thereby forming an improved slackless type drawbar assembly.

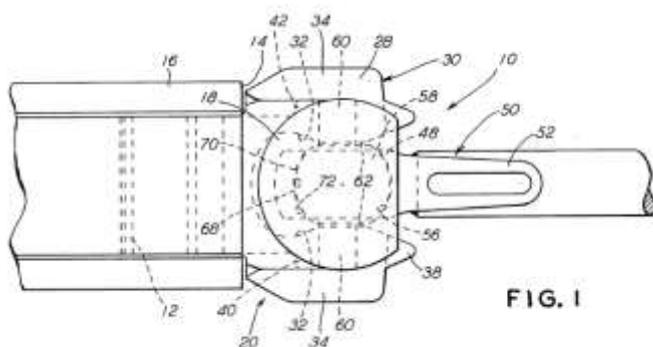


FIG. 1

[D1]

D1 discloses a standard fixed end drawbar 5 which includes vertical openings 8, 10 on each butt end head 12 and 14 and is intended to be used in connecting a pair of railway cars in a substantially semi-permanent fashion. A pin member inserted through the openings, secures the drawbar to the center sill of a railcar. The drawbar consists of an elongated intermediate shank portion 50 and coupling pieces and fixed to each end of the shank portion by welding.

[D2]

D2 discloses the articulated coupling apparatus 10, which includes a male connection member 20 and a female connection member 30, similar to the configuration specified by (a), (c) to (j) in the claimed invention.

Examination Results

Inventive Step		
JPO	KIPO	SIPO
No	No	No

Cited Documents		
JPO	KIPO	SIPO
D1+D2 (primary) (secondary)	D2	D2+D1 (primary) (secondary)

All three offices determine the claimed invention does not involve the inventive step, but they differ in selection of the cited references.

JPO selected D1 as the closest prior art and D2 as a secondary reference. JPO determined when a configuration of the connection member in D2 applies to the connection of railway cars in D1, the direction of the cavity is only a matter of design variation which a person skilled in the art can

properly decide according to the position of the connection.

On the other hand, KIPO selected the single prior art D2 for denial of the inventive step of the claimed invention. KIPO considered that disposing the opening of the cavity in the opposite direction of the radius of the articulated coupling apparatus 10 does not bring any special technical effects, therefore it is a matter of simple design variation for a person skilled in the art.

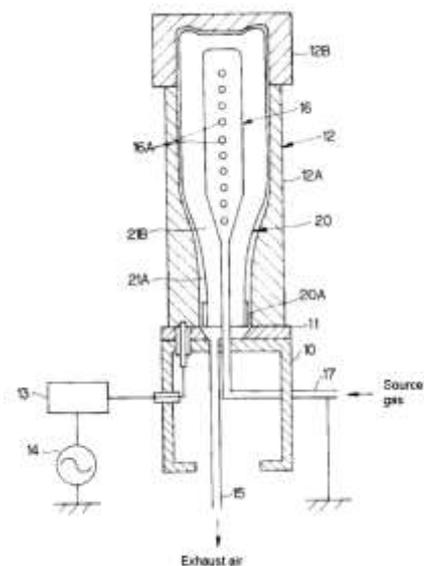
SIPO denied the inventive step by adopting the configuration (k) described in D1 into the invention described in D2.

B. Case 2 (A Carbon-film-coated Drink Bottle)

Claimed Invention and Prior Arts

Claim(s)

A carbon-film-coated drink bottle comprising a plastic drink bottle whose inside wall surface is coated with hard carbon films.



[D1]

D1 discloses the following points:

“A small plastic container on whose surface a silicon oxide film is formed by plasma CVD” (claim 1)

“Polyethylene terephthalate (PET), polycarbonate (PC), acrylonitrile (AN),

polybutylene terephthalate (PBT), polyethylene naphthalate (PEN), polypropylene (PP) and polystyrene (PS), etc. have been widely used as molding materials for a variety of drink containers, as they have excellent formability, and can be made into light molded products. Among these materials, PET has frequently been used as a blow molding material for a variety of drink containers, because it neither has smell of resin nor absorbs its content, and therefore it does not damage the taste of food. However, small PET containers have higher gas permeability than large ones, so small PET containers are not suitable for small containers for carbonated drink, especially for those less than 1,000cc having a high ratio of surface area per volume...” ([0002]-[0004])

“The present invention intends to provide small, recyclable and reasonable plastic containers capable of solving the above-mentioned shortcomings, increasing gas barrier properties and solving the recent environmental problems.” ([0009])

“The above-mentioned purpose can be achieved by forming silicone oxide thin films on the surface of small plastic containers by plasma CVD which has relatively low temperature and low degree of vacuum and does not require costly high vacuum resistance.” ([0010])

“Furthermore, silicone oxide can be evaporated uniformly even on a cubic shape and the plasma CVD processing can be performed on both the interior and exterior surface of containers. Thus, silicone oxide can be evaporated directly and uniformly on ribbed materials having a cubic shape such as PET containers.” ([0015])

[D2]

D2 discloses the following points:

“An instrument with an opening, including an inner space of which cross-sectional area parallel to that of the opening is equal to and/or greater than the area of the opening, wherein a film of diamond-like carbon and/or diamond is formed on an inner surface of the instrument.” (line 5-9, left column, page 1)

“As a material of the instrument, glass and plastic etc. are included.” (lines 9-10, lower right column, page 2)

“The instrument according to the present invention can be widely used for, for example, a beaker; a flask; various kinds of dishes, such as a crystallizing dish and an evaporating dish; bottles, such as a weighing bottle, a suction bottle, an extraction bottle; laboratory wares, such as a cooler, a desiccator, suction unit, a pipet, a graduated cylinder, a buret, a funnel, a Kipp's gas generator, and a filter; livingwares, such as a drinking cup, a dish, and a bowl; and industrial members, such as a steel pipe lined with glass, wherein a thin film of diamond-like carbon or diamond is formed on the surface thereof.” (from line 14, lower right column, page 3, to line 3, upper left column, page 4)

Well-known art

Assuming the following situation:

“It is a well-known fact for a person skilled in the art that the hard carbon films have the gas barrier property.”

Examination Results

Inventive Step		
JPO	KIPO	SIPO
No	No	No

Cited Documents		
JPO	KIPO	SIPO
D1+D2 (primary) (secondary)	D2	D1+D2 (primary) (secondary)

All three offices agreed that the claimed invention does not involve an

inventive step over given prior arts. However, there was a little difference in selecting the closest prior art.

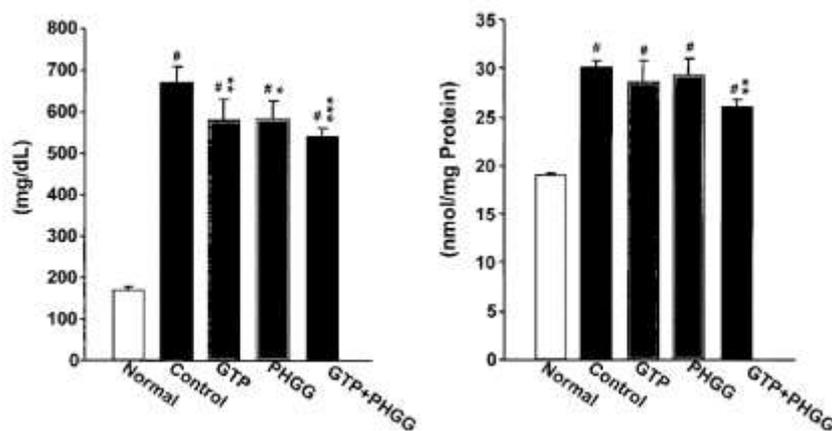
JPO and SIPO focused on the gas-barrier property, and both JPO and SIPO considered that it is easy to apply the hard carbo films in D2 instead of the silicon oxide thin films in D1. On the other hand, KIPO denied the inventive step of the claimed invention based only on the prior art D2 because D2 discloses the “core technical idea” of the claimed invention.

C. Case 3 (Preventive, Relieving or Therapeutic Composition for Diabetes Mellitus and/or Diabetic Nephropathy)

Claimed Invention and Prior Arts

Claim(s)

A composition for prevention, amelioration, or treatment of diabetes mellitus and/or diabetic nephropathy, comprising one or more dietary fiber selected from the group consisting of a degraded galactomannan, an indigestible dextrin, a polydextrose, insulin, arabinogalactan, dietary fiber derived from corn, a water-soluble soybean polysaccharide, psyllium, and a low-molecular weight sodium alginate, and a polyphenol compound obtained from a hot-water extract fraction of green tea.



[D1]

D1 discloses a blood glucose elevation depressant containing an extract from pine tree bark and dietary fibers (see claim 1). It is known that catechin has the effect of controlling diabetes-mellitus in terms of its ability to control the rise of blood sugar levels...”(see [0019])

[D2]

D2 discloses the composition for the prevention of the cardiovascular disease of the diabetes comprising the green tea catechin as active ingredient (see claim 1). And it also discloses that catechin(polyphenol) among the principal component of the green tea has various pharmacological activities including the serum cholesterol declining effect, the anti-oxidant activity, the antihypertensive action, platelet aggregation control possibility and etc.(see background art).

Examination Results

Inventive Step		
JPO	KIPO	SIPO
No	No	No

Cited Documents		
JPO	KIPO	SIPO
D1	D1+D2 (primary) (secondary)	D1+D2 (primary) (secondary)

All three offices agreed that the claimed invention does not involve an inventive step over given prior arts. However, there was a difference in the logic for denying the inventive step of the claimed invention.

JPO and SIPO recognized that the claimed invention and the invention described in D1 are different in the origin of the catechin. Regarding this

point, JPO denied the inventive step of the claimed invention because it is the common general knowledge that a hot-water extract fraction of green tea includes catechin. Regarding this point, SIPO judged that it is obvious for a person skilled in the art to apply a green tea catechin described in D2 to the invention described in D1, and to acquire a polyphenolic compound from the hot-water extract fraction of green tea.

However, KIPO recognized that the claimed invention is related to the composition for prevention, amelioration or treatment of diabetes mellitus and/or diabetic nephropathy while D1 does not disclose these matters, and, therefore, the both inventions differed in this point. And KIPO concluded that the difference was easily conceived by a person skilled in the art based on D2.

II. Novelty

Key Points

The practices of JPO, KIPO and SIPO regarding novelty are substantially identical in most of comparative items. However, it is revealed that there are some differences among them. Such differences, for instance, are shown below:

(1) When the prior art is a known literature, all three offices assess novelty based on the basic concept that the claimed invention is not novel when a difference is not exist, by comparison of the claimed invention and the cited invention. KIPO assesses the claimed invention is not new when it is substantially identical to the cited invention. The substantially identical invention compared with prior arts means that there is no newly produced effect, since the difference in the concrete means for solving problems is caused by mere addition, conversion or deletion of well - known or commonly used arts and the difference between the claimed invention and the cited invention does not practically affect the technical idea of the claimed invention.

(2) Regarding an invention of product with limitation of use, SIPO assesses the invention is not novel in principle even if the product known in the art provides a novel use, since SIPO does not take into account a use not affecting the structure or composition of the product. On the other hand, JPO and KIPO may determine the invention is novel by specifying a use even if the product is known in the art.

(3) Regarding a disclosure which has not been explicitly, SIPO considers the disclosure of the cited reference includes a content not clearly indicated in but directly and unambiguously derivable from the cited reference and a content clearly disclosed in the cited reference. JPO and KIPO consider the invention disclosed in the cited reference includes the matter described in the cited reference and the matter derivable from the above matter by taking into account the common general knowledge.

(4) When the prior art is a conflicting application, SIPO assesses the claimed invention and the prior art are identical if the difference between the two

only includes a replacement of the conventional art. Even if there is a difference between the claimed invention and the prior art, JPO considers they are identical (substantially identical) if the difference is a minor one in the means for solving the problem. KIPO assesses identicalness in the same manner as the prior art is a published prior art even if the prior art is still unpublished earlier application.

Summary of Comparative Studies

A. Identification of the relevant state of the art**A.1. Admissions as prior art**

JPO has no rule relating admissions as prior art as to novelty issue.

In SIPO, related contents described in the background art part of the description of the filing document cannot be cited as prior art unless detailed cited document or detailed source exists.

KIPO states that “the matters directly derivable from the facts in view of the common general knowledge as of the working can also be a basis for the finding of a publicly worked invention”, “In the case where the filing date of a patent application is the same as the date of the publication, the claimed invention does not lose novelty under the Article 29 paragraph (1) subparagraph (ii) of the Patent Act, except when the filing time of application is clearly after the time of publication”, and “The time of publication for a thesis is being when the thesis is distributed to an unspecified person in public or enters into university libraries after the final thesis examination, except when the contents of the thesis are announced in an open space before the final thesis examination”.

A.2. Enabling disclosure of a prior art document

In JPO, an invention can be “cited invention” only when the invention can be carried out.

In SIPO, when there is an inconsistency between abstract and text, the text should prevail.

In KIPO, even though the prior art constitutes an incomplete expression or there is a defect in some of the prior art, it can be cited in assessing the novelty and the inventive step, when the person skilled in the art can readily understand the technical features of the claimed invention based on common

technical knowledge or empirical rules.

A.3. Implicit/inherent features or well - known equivalents

In JPO, the expression "inventions described in publications" means inventions recognized from the descriptions in the publications or equivalents to such descriptions in the publications. The expression "equivalents to such descriptions" means those that persons can derive from the descriptions based on their common general knowledge.

In KIPO, "Invention described in a distributed publication" means an invention which is explicitly or implicitly described in a publication. "Being implicitly described in a publication" means those that a person skilled in the art can easily recognize from the publication, taking into consideration the common general knowledge.

In SIPO, when a reference document is cited to judge novelty and inventive step of an invention or utility model, the technical contents disclosed in the reference document shall be based upon. Said technical contents include not only those technical contents expressly described in the reference document but also those implied technical contents that can be derived directly and unambiguously from the disclosure by a person skilled in the art.

A.4. Well - known equivalents

JPO has no relative rule.

In SIPO, direct substitution of customary means can be used for violating the novelty of the application only when the cited document is a conflicting application.

In KIPO, the inventions are substantially the same when the inventions disclosed in a cited invention and the claims have differences in non - essential terms and do not affect the technical ideas of the invention. "Well - known art" means technologies generally known in the relevant technical field, e.g., those appeared in many prior art documents, those widely known

throughout the industry, or those well - known to the extent needless to present examples.

A.5. Prior art expressed in specific or generic terms (Generic disclosure and specific examples)

All three offices consider that the disclosure of the cited invention expressed in specific concepts violates the novelty of the invention expressed in generic concepts.

In KIPO, if an invention expressed in specific concepts can be derived directly from generic concepts according to common knowledge, the cited invention expressed in generic concepts can violate the novelty of the invention of the application.

In JPO and KIPO, “generic concept” or “upper level concept” is further defined.

A.6. Prior art expressed by numerical value or numerical range

JPO has no particular rule.

In SIPO, the claimed invention or utility model is not novel, as long as the numerical value or numerical range disclosed by the cited document and numerical range defined by the invention overlaps, no matter how much they overlap.

In KIPO, if no numerical limitation is found in the cited invention while new numerical limitation is included in a claimed invention, and the numerical limitation cannot be arbitrary chosen by a person skilled in the art or be hinted in a cited invention, the invention is regarded as novel. Additionally, when the numerical range of the invention described in the claims is included in the numerical range disclosed in a cited invention, the novelty is assessed by the critical significance of the numerical limitation.

A.7. Non - prejudicial disclosure

JPO and SIPO consider that the disclosure does not impact the novelty within six months from the date on which the invention was first disclosed against the will of the person having the right to obtain the patent. On the other hand, KIPO considers that the disclosure does not impact the novelty within twelve months from the date on which the invention was first disclosed against the will of the person having the right to obtain the patent.

In JPO, when the invention is made disclosed as a result of an act of the person having the right to obtain a patent, these disclosures do not impact the novelty of the invention if the patent application is filed within six months from the first date of disclosure.

And in KIPO, when the invention is made disclosed as a result of an act of the person having the right to obtain a patent, these disclosures do not impact the novelty of the invention if the patent application is filed within twelve months from the first date of disclosure. Meanwhile in SIPO, if a patent application is applied within six months from the date on which it was first exhibited at an international exhibition sponsored or recognized by the Chinese government, or it was first made public at a prescribed academic or technological meeting, the disclosure does not impact its novelty.

B. Assessment of novelty

B.1. Assessment approach to novelty

B.1.a. Comparison of a claimed invention with a prior art

Similarity:

All three offices are using the same basic idea which is to compare the differing and corresponding matters between claim and prior art. If there is difference between the claim and prior art, the application shall achieve novelty.

Difference 1:

The specific requirement in judging the difference between application and prior art

SIPO compare the technical features of the claimed and the cited, besides this, it also considers 4 factors to assess the substantially same technical solution, the technical field, the technical problem, technical effects.

In JPO, the claimed inventions can be identified by comparing the more specific concepts with the claimed inventions to the cited invention to find the corresponding and differing points between them. Some more specific concepts of the claimed inventions include the detailed descriptions of the invention and the descriptions in drawings as modes carrying out the claimed inventions. Matters in the claimed and the cited inventions are interpreted based on the common general knowledge as of the filing.

KIPO does not have specific requirement for this part.

Difference 2:

In KIPO, the substantially identical invention compared with prior arts means that there is no newly produced effect, since the difference in the concrete means for solving problems is caused by mere addition, conversion or deletion of well - known or commonly used arts and the difference between the claimed invention and the cited invention does not practically affect the technical idea of the claimed invention.

As to the publicly available publications and the conflicting applications, JPO and SIPO take a different assessment, JPO takes “novelty” and “identicalness” assessment respectively, while SIPO uses “direct substitution of customary means” for the conflicting applications.

B.1.b. Use of multiple prior art documents to show lack of novelty

Similarity:

All three offices agree with the principle of Separate Comparison. That means: when determining novelty, the examiner shall compare each claim of the application separately with the one integrated technical solution from one prior art document.

Difference:

In KIPO, in a case where there are more than two embodiments in a cited

documentation, an examiner should not assess novelty by combining the two embodiments. Assessing patentability through combination of cited embodiments is not a matter of novelty but inventive step. However, it is exceptional when one cited invention is obviously drawn from more than two embodiments in considering common general knowledge.

B.1.c. Determining whether a claimed invention is novel

Similarity: If there is a difference between the claim of an application and prior art, the claim has novelty.

Difference 1:

In SIPO, if there are only simple changes in wording between the claimed invention or utility model and the reference document, the invention or utility model does not possess novelty. Even though JPO and KIPO do not state this in the guideline, but in practice, they do the same.

Difference 2:

In KIPO, “substantially identical” can be used for novelty. While, in SIPO, only the technical contents that can be derived directly and unambiguously by a skilled person can be used. In JPO, “equivalent to such description”, that can be derived from the description based on their common general knowledge can be used.

B.2. Assessment of the novelty of inventions claimed in specific forms definition

B.2.a. The claim includes an expression specifying a product by its function, properties, characteristics or mode of operation

In SIPO and JPO, claims providing descriptions for defining products by function, properties, characteristics or mode of operation may be difficult to compare to the cited inventions.

In JPO, in this case, the examiner issues a notice of reason for refusal on novelty or an inventive step only where he/she has a certain degree of reasonable doubt that the claimed invention lacks novelty or an inventive

step. The examiner should explain the reasonable doubt in the notice of reason for refusal.

In SIPO, for this kind of claims, the examiner shall consider whether the feature of performance or parameters in a claim implies that the claimed product has a certain particular structure and/or composition. If the person skilled in the art cannot distinguish the claimed product from that disclosed in the reference document, it can be presumed that the claimed product is identical with the product from that disclosed in the reference document.

In KIPO, such an expression should, in principle, be construed as every product that has such function, characteristic, etc., except when it should be construed otherwise because the expression is specifically defined in the detailed description. However, it is noted that there are also cases where a product described by its function, characteristic, etc. should not be construed as a specific product among all products that have such function, characteristic etc. when taking into account the common general technical knowledge at the time of the filing.

B.2.b. The claim includes an expression specifying a product by its parameter

In JPO, there is no specific guidelines regarding claims includes an expression specifying a product by its parameter.

In SIPO, for this kind of claims, the examiner shall consider whether the feature of performance or parameters in a claim implies that the claimed product has a certain particular structure and/or composition. If the performance or parameters implies that the claimed product has a structure and/or composition distinct from that of the product disclosed in the reference document, the claim has novelty. On the other hand, if the person skilled in the art from the performance or parameters cannot distinguish the claimed product from that disclosed in the reference document, it can be presumed that the claimed product is identical with the product in the reference document.

In KIPO, Novelty regarding a parameter invention described in the claims is denied in general if limiting the invention with the parameter only experimentally identifies properties or characteristics of a publicly known product or there is a change only in expression by using a parameter.

In a parameter invention, if there is a “reasonable doubt” that the claimed invention and the cited invention are identical, an examiner can await written arguments or a certificate of experimental results after notifying the ground for rejection on novelty without comparing strictly the claimed invention with cited references.

B.2.c. The claim includes an expression specifying a product by its use

In SIPO, for this kind of claims, the examiner shall consider whether the feature of use in a claim implies that the claimed product has a certain particular structure and/or composition. If the use is fully determined by the inherent property of the product and does not imply any change in the structure and/or composition of the product, the product claim defined by this use feature does not have novelty as compared with the product in the reference document. However, if the use implies that the claimed product has a certain particular structure and/or composition, that is, the use indicates that the structure and/or composition of the product has changed, then the use as a definitive feature of the structure and/or composition of the product must be considered.

In KIPO, where a claim includes an expression specifying a product by its use, the examiner should interpret the claimed invention only as a product especially suitable for the use disclosed in the claim, by taking into account the detailed descriptions in the specification and drawings, and the common general technical knowledge at the time of the filing. Even if a product includes all technical characteristics described in the claims, an examiner should not regard the product as the product described in the claim when the product is not appropriate for the relevant use or when the product needs conversion to be used.

In JPO, it is understood that a product with limitation of use is the product that provides the structures etc. defined by the limitation of use, when the

limitation of use would represent the structures etc. specially adapted for the use. "Use invention" is interpreted to be an invention based on the discovery of an unknown attribute of a product and finding of the product's adaptability of novel use. The concept of the use invention is generally applied to the technical fields in which it is relatively difficult to understand how to use the product from the structure or name of the product, such as the technical field in which compositions containing chemical substances are used. However, chemical compounds limited by the use generally indicate mere usefulness of the compounds, and they are interpreted as simple chemical compounds without limitation of use.

When a food product of the invention stated in a claim has limitation of use, the limitation of use should be regarded as having a role that specifies the claimed invention.

When limitation of use is applied to animals or plants, the examiner interprets such animals or plants as simple animals or plants without limitation of use because such a limitation of use only indicates the utility of animals or plants.

B.2.d. The claim defines a product by its manufacturing process (product - by - process claim)

In SIPO, KIPO and JPO, for this kind of claims, the examiner shall consider whether the feature of manufacturing process results in a certain particular structure and/or composition of the product. If the person skilled in the art can conclude that the process will necessarily result in a product having a particular structure and/or composition different from that of the product in the reference document, the claim has novelty. On the other hand, if the claimed product, as compared with the product in the reference document, has the same structure and composition despite the different manufacturing process, the claim does not have novelty.

C. Conflicting applications (earlier applications still unpublished at the critical date, other types of conflicting applications)

In JPO and KIPO, conflicting application does not involve same applicant or

same inventor. The compared contents are claims, description and drawings of earlier patent or patent application.

In SIPO, the applicant of the conflicting application can be any entity or individual. The compared contents are claims, description and drawings of earlier patent or patent application.

When the prior art is a conflicting application, SIPO assesses the claimed invention and the prior art are identical if the difference between the two only includes a replacement of the conventional art. Even if there is a difference between the claimed invention and the prior art,

JPO considers they are identical (substantially identical) if the difference is a minor one in the means for solving the problem.

KIPO assesses identicalness in the same manner as the prior art is a published prior art even if the prior art is still unpublished earlier application

Summary of Case Studies

The three offices conducted 6 case studies.

Results of assessment of novelty (○ : novel, × : not novel)

	JPO	KIPO	SIPO
Case 1	○	×	○
Case 2	×	×	×
Case 3	○	×	×
Case 4	○	×	×
Case 5	○	○	○
Case 6 Claim 1	×	×	×
Claim 2	○	×	○
Claim 3	×	×	○

It is recognized that the three offices have the same opinion on patentability for most of the case examples taking into account of assessments of inventive step, even for the cases that the three offices differ in assessments of novelty

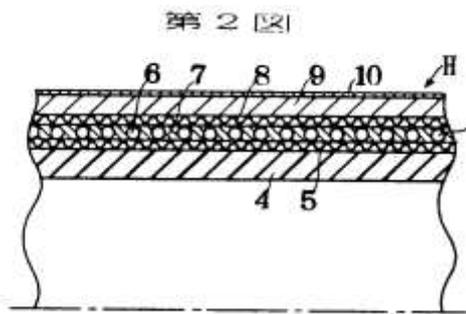
The cases that the three offices differ in assessments of novelty are shown below.

A. Case 1 (Rubber Hose)

Claimed Invention and Prior Art

Claim(s)

A rubber hose having an inner face rubber and an exterior casing rubber, and a pressure-resistant reinforcement layer there between, wherein a polyethylene resin layer having a molecular weight of 100,000 to 5,000,000 is formed on the surface of the exterior casing rubber, wherein the polyethylene resin layer has a thickness of 0.05 to 0.3 mm.



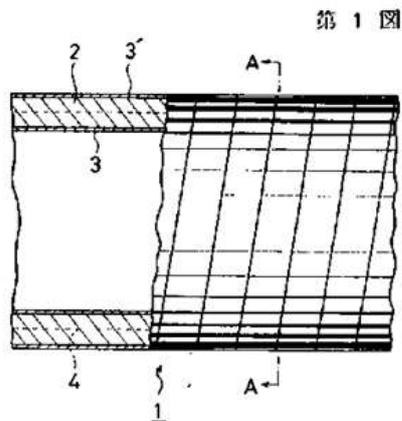
- 4 · · · inner face rubber
- 6 · · · reinforcement wire
- 9 · · · exterior casing rubber
- 10 · · polyethylene resin sheet

Prior Arts

The cited document discloses a composite rubber hose configured such that a covering layer made of ultrahigh molecular weight polyethylene is affixed to and integrated with an inner face and/or an outer face of a hose main layer made of rubber.

The ultrahigh molecular weight polyethylene used in the present device is preferably that which is affixed to a rubber layer by vulcanization and does not melt or deform during formation by vulcanization, and that having an average molecular weight of 1 to 6 million is employed.

The composite rubber hose 1 of Example is formed by affixing thin ultrahigh molecular weight polyethylene covering layers 3, 3' to the inner and external surfaces of the rubber hose main layer 2 and integrating them. The fabric layer for reinforcement 4 is embedded in the layer of the hose main layer 2.



- 1 . . . composite rubber hose
- 2 . . . hose main layer
- 3 . . . covering layer
- 4 . . . fabric layer

Point of Discussion

Whether or not the claimed invention is determined to be novel in a case where a numerical limitation for the thickness of the covering layer described in the claimed invention is not clearly described in the prior art.

Examination Results

All three offices agreed that the numerical limitation for the thickness of the covering layer described in the claimed invention is not disclosed in the prior art and recognized it as a different point between the two inventions. However, there was a little difference in determining the inventive step.

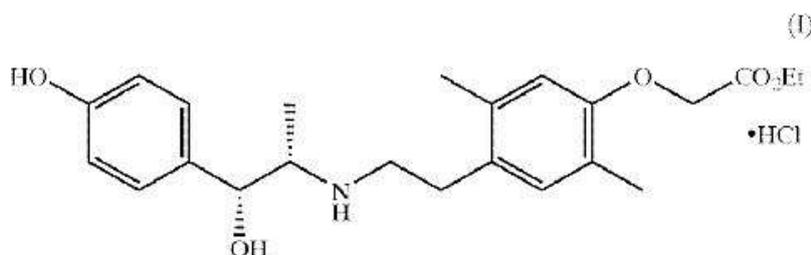
JPO and SIPO determined that the claimed invention is novel since there is no disclosure of the numerical limitation for the thickness of the covering layer in the prior art. On the other hand, KIPO determined that the claimed invention is not novel since the claimed invention is substantially identical with the invention disclosed in the prior art. KIPO, admitting the numerical limitation was a point of difference, could not find the technical meanings and new effects in the difference.

B. Case 3 (Crystal of Hydroxynorephedrin Derivative Hydrochloride)

Claimed Invention and Prior Art

Claim(s)

A compound represented by formula (I) (hydrochloride of a specific compound A):



Prior Art

The prior art describes a chemical compound expressed by general formula or its physiologically acceptable salt. The example also specifically describes the compound A as a chemical compound included in the general formula. In addition, 34 kinds of salts including hydrochloride are listed in equal rank in the detailed description of the invention as the physiologically acceptable salt expressed by the general formula.

Point of Discussion

Whether or not hydrochloride of the particular chemical compound A of the claimed invention can be identified by combination of alternatives in the prior art in a case where more than one salts including the hydrochloride are listed in equal rank in the prior art as a chemical compound which is expressed by the general formula but can include the particular chemical compound and as the physiologically acceptable salt of the said chemical compound expressed by the general formula.

Examination Results

JPO determined the claimed invention is novel since the prior art does not disclose hydrochloride of the specific compound A to the extent that a person skilled in the art can identify it.

KIPO determined the claimed invention is not novel since hydrochloride of the chemical compound A in the claimed invention and widely used salt of the chemical compound disclosed in the prior art are deemed to be substantially identical in terms of the chemical compound.

SIPO determined the claimed invention is not novel since the chemical compound described in the claim is referred to in the prior art and there is no evidence that the applicant did not know such chemical compound at the time of filing.

C. Case 4 (Optical Fiber Line)

Claimed Invention and Prior Art

Claim(s)

An optical fibre line (11) comprising:

a plurality of positive dispersion optical fibres (14) having a positive chromatic dispersion in a signal wavelength band;

a plurality of negative dispersion optical fibres (16) having a negative chromatic dispersion in the signal wavelength band;

wherein the positive dispersion optical fibres (14) and the negative dispersion optical fibres (16) are alternately arranged and coupled in the longitudinal direction of the optical fibre line (11);

characterized in that

the plurality of positive dispersion optical fibres (14) are selected from a positive dispersion optical fibre group the cumulative dispersion value of which conforms to a distribution with a first average value (DA) which is

Whether or not it can be said that matters related to the average value and standard deviation described in the claimed invention are disclosed in the prior art. Whether or not the claimed invention is determined to be novel.

Examination Results

JPO pointed out that the prior art does not disclose the numerical limitation about the standard deviation of dispersion in optical fiber as described in the claimed invention. JPO determined the claimed invention is novel.

KIPO recognized the difference in the numerical limitation, but cannot find any technical meanings and new effects caused by the difference. Therefore, KIPO considered the numerical limitation as an option. Therefore, KIPO determined the claimed invention is not novel as the claimed invention and the cited invention are substantially identical.

SIPO regarded the standard deviation of dispersion in optical fiber in the of the prior art as 0 from the disclosure of the prior art, and this satisfies the numerical limitation about the standard deviation of dispersion in optical fiber described in the claimed invention. Therefore, SIPO determined the claimed invention is not novel.

D. Case 6 (Mobile Communication Terminal)

Claimed Invention and Prior Art

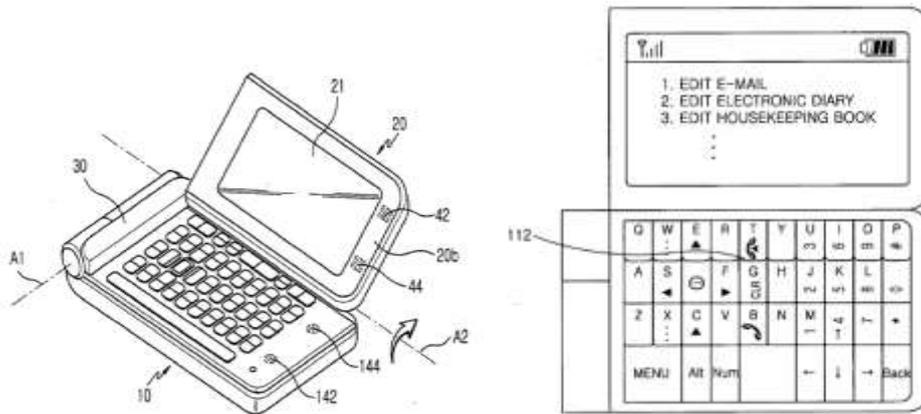
Claim(s)

(1) A mobile communication terminal comprising a main housing, a folder cover and two hinge axes, wherein the folder cover contains a display screen; when the folder cover is opened with respect to the first hinge axe, a general phone mode is used for performing a phone call function; and when the folder cover is opened with respect to the second hinge axe, a computer mode is used while the display content is rotated comparing to the one in the general phone mode.

(2) The terminal of claim 1, wherein only part of the keys in the keypad can

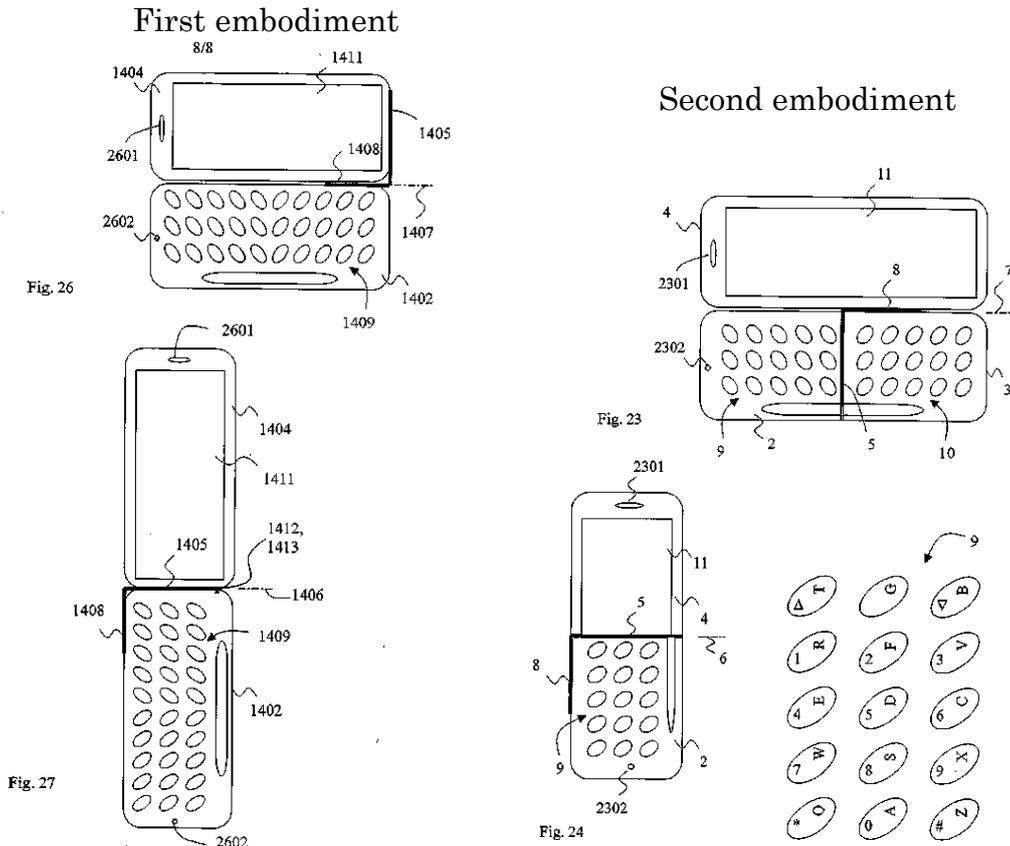
be used in the general phone mode.

(3) The terminal of claim 1, wherein the terminal further comprises an internal antenna.



Prior Art

The document discloses a radio communication terminal comprising a main housing, a display screen and two hinge axes. In a first embodiment, the two hinge axes locate in the short and long sides of the main housing respectively; when rotating around a first hinge, the phone mode is used wherein the keypad (1409) is adapt for use in an orientation with the elongate extension of the terminal arranged vertically; and when rotating around a second hinge (1408), the computer mode is used wherein the keypad is adapt for use in an orientation with the elongate extension of the terminal arranged horizontally. In a second embodiment, the two hinge axes locate in the middle and long side of the main housing respectively; when rotating around the first hinge, the phone mode is used; and when rotating around the second hinge, the computer mode is used, wherein in the phone mode, only absolutely necessary number keys and control keys are accessible.



Point of Discussion

Regarding claim 2, whether or not the claimed invention is determined to be novel when the corresponding configurations are disclosed in more than one embodiments in the prior art. Regarding claim 3, to what extent the state of the art as of the filing takes into account for the matter not clearly disclosed in the prior art in comparison with the claimed invention and the invention disclosed in the prior art.

Examination Results

Regarding claim 1, all three offices determined that the invention described in claim 1 is identical with the embodiment disclosed in the prior art, and concluded that the claimed invention 1 is not novel.

Regarding claim 2, JPO and SIPO, in determination of novelty, did not regard the combination of more than one inventions disclosed in the different embodiments in the same prior art as the invention disclosed in the prior art.

JPO and SIPO determined the difference exists when the claimed invention is compared with each of the two embodiments in the prior art. Then, they consequently determined the claimed invention 2 is novel. On the other hand, KIPO determined the claimed invention 2 is not novel since the additional configuration is the invention disclosed in the prior art.

Regarding the built-in antenna stated in claim 3, SIPO determined the prior art implies the antenna but does not imply the built-in antenna, and therefore the claimed invention 3 is novel. On the other hand, JPO recognized the built-in antenna is equivalent to such disclosure in the prior art and KIPO considered the built-in antenna is a well-known art and substantially identical with the antenna of the prior art. Therefore, JPO and KIPO determined the claimed invention 3 is not novel.

III. Disclosure and Claims

Key Points

In comparison of Laws, the Regulations, and the Guidelines of the disclosure and claims, the basic requirements such as the clarity requirement of the claims, the support requirements, the enablement requirements of the invention and the concept of assessment of those requirements are mostly identical among the three offices. However, there is a little difference among them in the following points.

(1) Description

- In SIPO, if a medical use is stated in the description, the application has to meet the disclosure requirement for the medical invention, no matter this medical use is stated in the claim or not. As to the disclosure requirement for the medical invention, please refer to SIPO Guideline Chapter 10, section 3.1.

(2) The Claims

- JPO considers the support requirements in the light of “the scope of solving the technical problem”, while SIPO considers such requirements in the light of “the scope of obtaining the same effects”. KIPO considers that the support requirements are satisfied when the matters of claims are explicitly or implicitly stated in the description of the inventions in view of a person skilled in the art

- SIPO accepts only one independent claim for one invention. In this case, “one invention” does not mean the scope which satisfies the requirements of unity of invention. SIPO may accept more than one independent claims in the scope satisfying unity of invention.

SIPO states that an invention shall have only one independent claim, which shall precede all the dependent claims relating to the same invention, and all the dependent claims that depend directly or indirectly on a certain independent claim shall be grouped together after the independent claim and before another independent claim.

But one application can have several inventions as long as they get unity, correspondingly, one application can contain several independent claims.

- In SIPO, “invention of a product” should be normally defined by a structure, only when the product can’t be clearly defined by a structure, but it can be defined clearly by function or effects, then it is allowed to define by its function or effects.
- KIPO does not accept a claim which ends with “use”, and thus the claims should be recited “method of use” instead.
- When a term such as a “system” (for example, a “telephone system”) is included in claims, JPO interprets such claims as those that fall under a category of a product. On the other hand, KIPO and SIPO interpret such claims as either a category of product or a method depending on the situations, in that case the category of the claimed invention may be unclear.

Summary of Comparative Studies

A. Description of the invention

A.1. Basic concept in each category of invention

A.1.a. An invention of a product

JPO states that the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to make and use the product.

Similarly, KIPO states that the detailed description of the invention shall contain the clear and full explanation on items allowing a person skilled in the art to produce the product, and a product invention shall be fully described so that a person skilled in the art can use the product disclosed in the claims.

SIPO states that where the claimed invention is a chemical product itself, the description shall describe the identification, preparation and use of the chemical product. If a person skilled in the art is unable, based on the prior art, to predict that the use and/or its technical effect stated in the invention can be carried out, the description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved.

A.1.b. An invention of a process

JPO states that for any type of process inventions, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

KIPO states that the detailed description of the invention shall contain the clear and full explanation on items allowing a person skilled in the art to use the process.

SIPO states that for a chemical process invention, regardless of a process for preparing a substance or any other process, the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary, the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art, when carrying out the invention according to the process described in the description, to solve the problem which the invention intends to solve. As for the raw materials used in the process, the components, property, manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

- An invention for producing a product

JPO states that i) starting materials, ii) process steps and iii) final products shall in principle be stated in such a manner that a person skilled in the art can produce the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing. Of these three factors, however, the iii) final products may be understood from statement of materials and process steps, and in such a case, may be omitted.

Similarly, KIPO states that raw materials for manufacturing the product and a series of the detailed steps shall be fully explained. Though not specifically described, the product manufactured through the concerned process shall be clearly described, except for the case where the product is easily understood based on the raw materials or detailed manufacturing steps.

SIPO states that for a chemical process for preparing a substance, the raw materials, procedures and processing conditions adopted in the process shall be described. If necessary, the effect of the process on the property of the title substance shall be described so as to enable a person skilled in the art, when carrying out the invention according to the process described in the description, to solve the problem which the invention is intended to solve. As for the raw materials used in the process, the components, property,

manufacturing process or source of it shall be described in such a manner that a person skilled in the art can obtain it.

- An invention of use

JPO states that the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the process based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

SIPO states that as for a use invention of a chemical product, the description shall describe the chemical product to be used, the method for using the product and the effect to be achieved to enable a person skilled in the art to carry it out. If a person skilled in the art cannot predict the use according to the prior art, the description shall sufficiently provide data of experimental tests for a person skilled in the art to be convinced that the product is useful for said use and can solve the technical problem or achieve the technical effect as expected.

A.2. Disclosure requiring experimentation

A.2.a. Reasonable experimentation

JPO states that if “a person skilled in the art” cannot understand how to carry out the invention on the basis of teachings in the statements of the description and drawings, as well as the common general knowledge as of the filing, then, such a detailed explanation of the invention should be deemed insufficient for enabling such a person to carry out the invention. For example, if a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent, such a detailed explanation of the invention should not be deemed sufficient.

SIPO states that the requirement of enablement cannot be met if the description sets forth a concrete technical solution but without experimental evidence, while the solution can only be established upon confirmation by experimental result. For example, in general, the invention of a new use for a

known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met.

KIPO states that where the claimed invention is explained by using experiment data, test methods, test/measurement tools and test conditions shall be disclosed in detail so that a person skilled in the art can easily reproduce the experiment results. Similarly, SIPO states that as for the property data showing the effect of the invention, the measuring method shall be specified when various measuring methods for it in the prior art yield different results. If it is a special method, it shall be explained in detail to enable a person skilled in the art to carry it out.

A.2.b. Taking into consideration of later submitted experimental data

JPO states that the applicant may submit a certificate of experimental results to support arguments presented in the written opinion. However, a deficiency of the matters stated in the detailed explanation of the invention cannot be overcome by submitting the experimental results later.

KIPO states that a written argument or other documents including experiment results in response to the notification of the grounds for rejection shall not be a part of the specification of the application. However, as these documents are submitted to clarify or verify the legitimacy of matters in the detailed description, an examiner may refer them to decide the patentability of the concerned application.

SIPO states that the later submitted data is treated as follows;

1. First, SIPO examines all the later submitted experiment data.
2. Second, SIPO judges the purpose of these data, if it is to prove the application is sufficiently disclosed, which examiner thought the application hasn't been disclosed sufficiently and wrote so in the OA. If the data is submitted for this purpose, then SIPO examines these data first, but doesn't accept them.
3. Third, if the purpose of the data is to prove the technical effect which could be obtained from the application, then SIPO continues to examine whether

or not these data can really prove the technical effect.

SIPO states that whether or not the description is sufficiently disclosed is judged by the skilled person in the art on the basis of the disclosure contained in the initial description and claims, the skilled person knows the common general knowledge.

B. Claims

B.1. Claiming format

(i) Number of claims

JPO and KIPO state that claims are not limited in number, provided that requirements for unity of inventions are met.

SIPO states that the number of claims shall be reasonable for the purpose of concise.

(ii) Structure of claims (e.g. Markush claims, Jepson type claims)

In SIPO, an independent claim of an invention shall contain a preamble portion and a characterizing portion. However, an independent claim may be presented in a different manner where the above mentioned manner is not appropriate to be followed because of the nature of the invention.

A Markush type claim is accepted in all three offices.

All three offices require the description of Markush type claims related to chemical substances to hold similar characteristics or functions and this requirement is met if the following requirements are all met:

- ① All the matters shall hold the common characteristics or vitality
- ② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical field to which the invention pertains.

JPO also requires the alternatives to have similar characteristics or functions with one another for the claims other than those relating to chemical substances.

(iii) Categories

All three offices coincide in that claims are divided into two basic kinds: product claims and process claims.

In JPO, such term in a claim as "system" (e.g., "telephone system") is interpreted as those meaning the category of a product, while in KIPO and SIPO, such claims can be interpreted as those meaning the category of a product or a process depending on the circumstances, and such claims could cause make the category of the claimed invention is unclear.

In all three offices, process claims include methods of use. However, in KIPO, such a claim which ends with the term "use" is not allowed, while JPO and SIPO interpret such a claim as that for a method of use.

(iv) Independent and dependent claims

(v) Arrangement of claims

JPO has neither specific classification nor treatment for "independent claims" and "dependent claims". Instead, JPO has classification of "independent form claims" and "dependent form claims" which is defined based on whether the claim refers to other claims or not. The two types of claims differ only in the form of the statement, and are treated in the same manner.

On the other hand, KIPO and SIPO have definition of "independent claims" and "dependent claims", where "dependent claims" means those claims which not only refer to other claims formally, but also add the technical feature to the claims which it refer to. Both in KIPO and SIPO, a claim appearing in the form of dependent claim, but the subject matter disclosed in the claims referred to is substituted with other matter, instead of adding the

technical feature to it, is treated as an independent claim.

JPO and KIPO states that dependent form may be utilized to avoid the redundant description of the same matter.

KIPO states that in a claim that quotes not less than two claims, the quoted claim shall not re-quote two or more other claims. SIPO comments that in the situation that a claim quotes not less than two claims, and the quoted claims re-quote two or more other claims, if unclarity issue arises, the examiner could give objection on the reason of unclarity and reject it on the same reason. If it does satisfy the criteria of clarity, the examiner could give objection on implementation rule 22(2), but they may not reject the application.

In JPO, such a manner of quoting in the claims is allowed.

Three offices coincide in that any dependent (JPO: dependent form) claims shall only refer to the preceding claims. Three offices also coincide in that any multiple dependent claims, which refer to two or more claims, shall refer to the preceding claims in the alternative form only.

SIPO states that an invention shall have only one independent claim, which shall precede all the dependent claims relating to the same invention, and all the dependent claims that depend directly or indirectly on a certain independent claim shall be grouped together after the independent claim and before another independent claim.

But one application can have several inventions as long as they get unity, correspondingly, one application can contain several independent claims.

B.2. Clarity

(i) Basic concept

All three offices state that description in claim should be clear in order to determine the scope of protection of the claimed invention, and to conduct

the determination of patentability.

SIPO states that according to Chinese Patent Law, Article 59, the extent of protection of the patent right for invention shall be determined by claims. The description and the appended drawings may be used to interpret claims. According to Chinese Patent Law, Article 26.4, the claims shall define the extent of the patent protection sought for in a clear and concise manner.

In all three offices, the category of each claim shall be clear.

KIPO states that whether the claimed invention is disclosed clearly and concisely shall be determined by a person skilled in the technical field to which the invention pertains.

SIPO states that the requirement that the claims shall be clear, this means, on the one hand, individual claims shall be clear; on the other hand, the claims as a whole shall be clear as well, that the reference relations between the claims shall be clear.

(ii) Definition by function

JPO states that functional definition of the invention is allowed as far as the claimed invention can be clearly identified. And also states that although the scope of the invention is clear, if the matter defined by the function or characteristics, etc. is not sufficiently specified from a technical perspective, and the claimed invention cannot be examined precisely on the patentability requirements, clarity requirement is violated.

KIPO states that the claims with functional expressions cannot be allowed if the composition of the invention is not deemed to be clear. Cases where the composition of the invention is deemed to be clear even with functional expressions refers to ① where expressing claims functionally is necessary since the technical idea of the invention cannot be clearly disclosed only with the existing technical composition, ② where the meaning of the functional expressions are clearly specified by the description of the detailed description of the invention and description in drawings.

SIPO states that if the description merely states in vague terms that other alternative means may be adopted, but the person skilled in the art cannot understand what they might be or how they might be used, then definition by function in the claims is not permitted.

(iii) Definition by manufacturing process

All three offices coincide in that it is allowed to express the technical features of a product claim by manufacturing process, when the product claim cannot be or is difficult to be expressed otherwise.

In JPO, when a claim for an invention of a product recites the manufacturing process of the product, it can be said that the description of the claim complies with the requirement “the invention shall be clear” only when there exist impossible or impractical circumstances to specify the product directly by its structure or property as of the filing. If this is not the case, the invention is deemed to be unclear. When it is clear “what structure or characteristics of the product are represented by the manufacturing process” considering the description, claims and drawings as well as common general knowledge, the examiner does not consider that the claimed invention violates the clarity requirement on the basis that it corresponds to a case “where a claim recites the manufacturing process of the product”.

KIPO states that where the invention is recognized to be unclear because of the failure in the composition of the product, an examiner shall notify a ground for rejection.

SIPO states that the actual definitive effect of the features of process depends on what impact they may impose on the claimed product per se.

(iv) Definition by parameters

In JPO and KIPO, when a claim has expressions using a numerical limitation which only indicates either a minimum or a maximum such as “more than...” or “less than...,” or a numerical limitation which includes zero

(0) such as “from 0% to 10%”, the scope of the invention could be unclear.

In KIPO, if the technical composition of a parameter invention having the figure that the parameter represents cannot be clearly understood only with the description, the invention shall be deemed not to be described clearly and concisely except for ① where the definition or technical meaning of parameter is clearly understood, ② where a ground for failure in the use of the concerned parameter is clearly shown, and ③ where the relation with the level of technology at the time of application filing is understood, considering a detailed description of the invention or drawing as well as the level of technology.

In SIPO, as for a chemical product which cannot be clearly described merely by its structure and/or composition, the description shall further state the product by proper chemical/physical parameters and/or the manufacturing process, so that the claimed chemical product can be clearly identified.

(v) Definition of terms

In KIPO and SIPO, it is allowed for an applicant to give a certain term used in the claims a special meaning by virtue of the definition in the description. In this case, SIPO states, the examiner should invite the applicant to amend as far as possible the claim whereby the meaning is clear from the wording of the claim alone. As for this point that claims should be as clear as possible for its own, JPO similarly states that content of statement of the claim by itself should not be made unclear particularly by using ambiguous or unclear terms or by stating the matter in only the detailed explanation of the invention, not in the claims, even though the matter can be made clear in the claims.

JPO states that where the statement of a claim is deemed clear by itself, the examiner should examine whether a term in the claim is defined or explained in the description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim unclear. Where the statement of a claim is unclear by itself, the examiner should examine whether a term in the claim is defined or explained in the

description or drawings, and evaluate whether such definition or explanation, if any, makes the statement of the claim clear by considering the common general knowledge as of the filing.

(vi) Description in alternative form

JPO states that when matters used to specify the invention are expressed in alternatives and the alternatives have no similar characteristics or function with one another, it constitute a violation of clarity requirement.

JPO and KIPO have similar guidelines for the Markush type claims related to chemical substances. KIPO states that where more than two technical matters holding similar characteristics or functions, they can be disclosed in a single claim such as a Markush type claim. Where the description of Markush type claims is related to chemical substances, such matters can be deemed to hold similar characteristics or functions if the following requirements are all met:

- ① All the matters shall hold the common characteristics or vitality
- ② All the matters shall share the important chemical structure, or all the matters shall belong to the group of chemical substances deemed as one group in the technical field to which the invention pertains

JPO states that such expressions where optionally added items or selective items are stated along with such words as "when desired," "if necessary," etc., or expressions including such words as "especially," "for example," "etc.," "desirably," and "suitably," would leave unclear the condition on which of the optionally added or selective items are chosen, thus allow the claim statements to be interpreted in many ways.

KIPO also states that where arbitrary additional items or selective items are disclosed along with expressions such as 'at one's will', 'if necessary', 'in particular', 'for example', 'and/or', the invention could be deemed unclear.

SIPO states similarly that such expressions as "for example", "had better", "particularly", "if necessary", and the like shall not be used in a claim, since

they will define different extents of protection in a single claim, making the extent of protection thereof unclear.

SIPO states that in generalization by means of parallel options, the specific options being put in parallel shall be comparable with each other in content. For example, a generic term cannot be connected in parallel with a specific term by the conjunction “or”.

B.3. Support in description of the invention (the description and drawings vs. broadness of claims, e.g. the relationship between the scopes of working examples and claims, or the extent to which addition of working examples is permitted)

- (i) Basic concept
- (ii) Undue breadth
- (a) disclosure problem

All three offices have the provision of the support requirement in their laws, and it is evaluated from the viewpoint of a person skilled in the art. Whether the claimed invention is substantially disclosed is important, not the formal correspondence.

JPO and KIPO comment that the purpose of the provision of the support requirement is to avoid granting a patent to the invention not disclosed in the detailed description of the invention.

In JPO, examination is performed by looking into whether or not the claimed invention exceeds the scope stated in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that a problem to be solved by the invention would be actually solved. The consistency of expression is not important. The types that do not comply with the support requirement are shown in 3(4)(ii)(a) of the Comparative Outline.

In KIPO, an examiner shall determine whether an invention disclosed in claims are stated in a detailed description of the invention based on whether a person skilled in the technical filed to which the invention pertains can

figure out the items corresponding to the invention disclosed in the claims are written in the detailed description of the invention.

SIPO states that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants. That the technical solution in a claim has the same wording as that in the description does not mean the claim is necessarily supported by the description. In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art.

(b) claims reading on inoperative subject matter

JPO states that when the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention even in light of the common general knowledge as of the filing, the description of the claims is considered not to comply with the support requirement.

KIPO states that a clear and precise description of the claimed invention should lead a person skilled in the art to easily work the invention based on the technical knowledge, specification and drawings at the time of filing the application.

SIPO states that the technical solution for which protection is sought in each of the claims shall be a solution that a person skilled in the art can reach directly or by generalization from the contents sufficiently disclosed in the description, and shall not go beyond the scope of the contents disclosed in the description

(c) Relationship between working examples and claims

JPO states that the maximum expansion or generalization based on one or more specific examples in a detailed explanation of an invention varies with the characteristics of each technical field. It is necessary to first determine to which technical field the invention to be examined pertains, and what kind of common general knowledge as of the filing exists in the relevant technical field, and then make a judgment, for each application, as to whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention.

KIPO states that if the content disclosed in a detailed description of the invention cannot be extended or generalized to the scope of the claimed invention based on the level of technology of the concerned technical field at the time of application filing, the claimed invention is not supported by the description.

SIPO states that the preferred modes for carrying out the invention are extremely important for supporting and interpreting the claims. The number of working examples shall be determined in accordance with the nature of the invention and the claimed extent of patent protection, etc.

All three offices comments that the allowed extent of expansion or generalization based on specific examples in a description depends on the relevant technical field.

(d) Particular disclosure

- Definition by generic terms

In JPO, when judging whether the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention, the judgment should be carefully done so as not to be too restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention. Moreover, the above mentioned judgment should not be done independently with the issue of whether a

person skilled in the art could recognize that a problem to be solved by the invention would be actually solved.

KIPO states that if the items disclosed in claims are means or steps to perform particular functions, but specific composition corresponding to such means or steps is not disclosed in the detailed description of the invention, the claimed invention is not supported by the description.

SIPO states that claims are usually generalizations from one or more embodiments or examples as set forth in the description. If the person skilled in the art can reasonably predict that all the equivalents or obvious variants of the embodiments set forth in the description have the same properties or uses, then the applicant shall be allowed to generalize the protection extent of the claim to cover all the equivalents or obvious variants. In determining whether the generalization of a claim is appropriate, the examiner shall refer to the relevant prior art.

- Definition by function

Both in JPO and SIPO, if the person skilled in the art can reasonably doubt that one or more means embraced in the definition by function cannot solve the technical problem aimed to be solved by the invention and achieve the same technical effect, then the definition by function as embracing the other alternative means or means incapable of solving the technical problem shall not be allowed in the claim.

SIPO also states that if the function is carried out in a particular way in the embodiments of the description, and the person skilled in the art would not appreciate that the function could be carried out by other alternative means not described in the description, the definition by function shall not be allowed in the claim. Furthermore, if the description merely states in vague terms that other alternative means may be adopted, but the person skilled in the art cannot understand what they might be or how they might be used, then definition by function in the claims is not permitted. In addition, claim of pure functional definition cannot be supported by the description, and therefore is not permitted.

- Definition by parameter

In JPO, for a claimed invention relating to a product defined by a numerical formula or numerical value, the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention if the detailed explanation of the invention does not contain a sufficient example or explanation, even in light of the common general knowledge as of the filing, so that a person skilled in the art could recognize that the problem could be solved by such numerical formula or within such range of numerical values. Note that if a claim only states a desirable numerical limitation, above mentioned violation shall not apply even when any specific examples within such range of numerical values are not stated in the detailed explanation of the invention.

In KIPO, if the cause and effect relationship between the parameter and effect as well as the relation between the technical problem and the parameter as its solution shall be clearly understood through comparative examples of the satisfactory cases as well as the unsatisfactory case of the parameter, claims with such a parameter on physical-chemical figure which is not the standard or prevalently used in the concerned technical field or a parameter in operation expression by using the correlation among multiple variables are acceptable.

In SIPO, when the chemical product has unclear structure and cannot be precisely characterized merely by using its chemical name, structural formula or composition, it is permitted to use physical/chemical parameter(s) to characterize the claim of a chemical product. The said parameter (s) shall be clear enough.

C. Requirement for disclosure and claims in special fields

KIPO states that Examination Guidelines for inventions of special fields are managed by corresponding examination divisions.

C.1. Computer program

All three offices coincide in that a computer related invention can be drafted as an invention of a process or an invention of a product.

In JPO, where information processing by software is concretely realized by using hardware resources,” the said software is deemed to be "a creation of technical ideas utilizing a law of nature.

In KIPO, where software data processing is specifically realized by using a hardware, the data processing apparatus (device) operated in cooperation with the concerned software and the computer-readable media recording the operation method and the concerned software are the creation of technical ideas utilizing the rules of nature.

SIPO states that the invention relating to computer programs said here refers to solutions for solving the problems of the invention which are wholly or partly based on the process of computer programs and control or process external or internal objects of a computer by the computer executing the programs according to the above mentioned process.

Only JPO allows the claim which ends with the term “program”.

(i) Enablement requirement

(ii) Computer program list and computer program flowchart

JPO and KIPO partly coincide in cases where enablement requirement is not met for computer program invention as listed below:

- Where the detailed description of the invention only abstractly discloses the technical steps or functions corresponding to the claimed invention and the claimed invention cannot be worked because the detailed description of the invention fails to disclose how the steps or functions are executed or realized with a hardware or software.
- Where the detailed description of the invention simply describes a hardware or software realizing the function of the invention in claims with a

functional block diagram or outline flowchart and the claimed invention cannot be worked because of the unclear description of the functional block diagram or outline flowchart on how the software and hardware are organized

- Where claims specify functions, but the detailed description of the invention describes such functions with a flowchart and the claimed invention cannot be worked because of unclear correlation between the functions in claims and the flowchart of the detailed description of the invention.

SIPO states that the description of an invention relating to computer programs shall, in addition to outlining the technical solution of the invention as a whole, illustrate the concept of design and the technical features of the computer program concerned and the mode of exploitation to produce the technical effect in a clear and complete manner. In order to outline the main technical features of the computer program clearly and completely, the principal flow chart of the computer program shall be presented in the drawings of the description. An explanation of every step of the computer program shall be made in the description in natural language based on the said flow chart in chronological order. The main technical features of the computer program shall be described in the description to such extent that a person skilled in the art can, on the basis of the flow chart presented in the description and explanation thereof, produce the computer program capable of producing the technical effect as described in the description.

C.2. Chemistry

(i) Chemical Compound invention

KIPO has the definition of chemical compounds in the Examination Guideline for organic and non-organic chemical compounds and ceramics inventions.

- (a) Enablement requirement
- (b) Description which supports use for enablement

Three offices coincide in that more than one technically significant utility of

the invention should be disclosed as for compound inventions.

Both JPO and SIPO require the description to include embodiments, in case of an invention of a product, for instance, those which specifically show how to make the product and how to use it.

In JPO and KIPO, where claims are disclosed in Markush type and the detailed description of the invention only discloses embodiments concerning parts of components out of all the components disclosed in claims, if a skilled person in the art finds based on the description of the concerned embodiment that he/she cannot easily work the invention regarding other components based on the specification and the common technical knowledge as of the filing, the examiner should notify the ground for rejection based on the ground that the invention in the claims cannot be easily worked only based on the embodiments described in the detailed description of the invention.

JPO states that if a person skilled in the art cannot understand how to make another product defined by its function or characteristic, etc. other than products of which manufacturing method is concretely stated in the detailed explanation of the invention (or those which can be made from these products taking into account the common general knowledge), the statement of the detailed explanation of the invention is violating the enablement requirement. (For example, where a person skilled in the art who intends to work the invention would have to make trials and errors, beyond the reasonably-expected extent.)

In KIPO, compound verification data is required in some cases. As for inventions of novel compounds, embodiments with specified technical means should be disclosed.

SIPO states that chemistry is an experimental science, and a number of inventions in this field need to be verified by experimentation. Where the claimed invention is a chemical product itself, the description shall describe the identification, preparation and use of the chemical product.

If a person skilled in the art is unable, on the basis of the prior art, to predict

that the use and/or its technical effect stated in the invention can be carried out, the description shall sufficiently provide qualitative or quantitative data of experimental tests for the person skilled in the art to be convinced that the technical solution of the invention enable the use to be carried out and/or the effect as expected to be achieved.

(ii) Medical invention

In JPO, the claimed invention is not treated as medical invention unless a new medicinal use which is provided based on discovering an unknown attribute of the material is specified in the claim.

In KIPO, whether an invention constitutes medical invention shall be determined based on the description of the purpose as medicine in claims, however, in some cases, the invention is treated as medical invention even when claims do not clearly disclose the purpose of the invention as medicine.

In SIPO, if a medical use is stated in the description, the application has to meet the disclosure requirement for the medical invention, no matter this medical use is stated in the claim or not. As to the disclosure requirement for the medical invention, please refer to SIPO Guideline Chapter 10, section 3.1.

(a) Enablement requirement

(b) Description which supports use for enablement

JPO states that as for medical invention, normally one or more representative embodiments or working examples are necessary in order to state the detailed explanation of the invention so as to enable a person skilled in the art to work the invention, and a description of the result of the pharmacological test is usually required to support the medicinal use.

KIPO states that as for medicinal use invention, description of medical data proving that the subject matter of the invention contains the same medical effect or description detailed enough to replace such medical data shall be disclosed unless particular conditions exist such as the certain mechanism

indicating the medical effects disclosed in the specification before the application filing is disclosed.

SIPO states that for a new pharmaceutical compound or pharmaceutical composition, if a person skilled in the art is unable, on the basis of the prior art, to predict that said use or action stated in the invention can be carried out, the qualitative or quantitative data of the laboratory test (including animal test) or clinical test shall be sufficiently provided. SIPO also states that the invention of a new use for a known compound requires experimental evidence in the description to validate the new use and effects thereof; otherwise, the requirement of enablement cannot be met.

Summary of Case Studies

The three offices conducted case studies applying 6 cases from various perspectives.

• Case 1 (Drug Containing Chymase Inhibitor as an Active Ingredient)

	JPO	KIPO	SIPO
Condition 1	Composition	Compound or Composition	Composition
Condition 2	Use	Use	Product itself
Condition 3	Function	Function	Function
Condition 4	—	—	—
Condition 5	OK	NG	NG
Condition 6	Not required	Not required	Not required
Condition 7	Depending on the case	Depending on the case	Depending on the case

• Case 2 (Method for Producing Organic Compounds using Microorganisms)

	JPO	KIPO	SIPO
Claim 1	OK	NG	NG
Claim 2	OK	OK	NG

• Case 3 (Medical Compounds)

	JPO	KIPO	SIPO
Condition 1	OK	OK	NG
Condition 2	OK	OK	NG
Condition 3	OK	OK	OK
Condition 4	NG	NG	NG
Condition 5	NG	NG	NG
Condition 6	NG	OK	Depending on the case

• Case 4 (Spatial User Interface for Audio System)

	JPO	KIPO	SIPO
Claim 1	Clear, Product	Clear, Product	Clear, Product

Claim 7	Unclear	Unclear	Unclear
Claim 13	Clear	Unclear	Clear
Claim 15	Clear	Unclear	Non-statutory subject matter
Claim 16	Clear	Clear	Clear
Claim 17	Unclear	Unclear	Non-statutory subject matter
Claim 18	Unclear	Unclear	Non-statutory subject matter
Claim 19	Unclear	Unclear	Non-statutory subject matter

• Case 5 (An Antenna Control System)

	JPO	KIPO	SIPO
Condition 1	Clear	Clear	Clear
Condition 2	Satisfying the support requirements	Satisfying the support requirements	Satisfying the support requirements
Condition 3	Satisfying the clarity requirements and support requirements	Satisfying the clarity requirements and support requirements	Satisfying the clarity requirements and support requirements

• Case 6 (Transcoding Method and Device thereof)

	JPO	KIPO	SIPO
Claim 1	Unclear, Unclear	Unclear, Unclear	Unclear, Unclear
Claim 2	Do not satisfy the support requirements	??	Do not satisfy the support requirements
Claim 4	Unclear	Unclear	Unclear

The main issues of the case studies are shown below.

A. Case 1 (Handling of Experimental Data Submitted after Filing)

[Case Overview]

An invention relates to a drug containing a chymase inhibitor as the active ingredient. Whether or not the applicant overcomes the description requirement rejection by submitting the experimental data when he/she receives a OA of the disclosure and claims (such as the support requirements, enablement requirements).

(JPO)

The experimental data submitted after the filing cannot be a substitute of the the original description. However, the examiner considers sufficiently the content of the data in the examination because the data clarifies and proves the matters stated in the original description correct and appropriate.

(KIPO)

The examiner considers the experimental date as a supplementary document only when there is a doubt in the effects of the invention.

(SIPO)

It is not acceptable to add the experimental data to the description after filing an application. However, the examiner considers such experimental data in the examination. In some cases, the experimental data may be considered as a proof supporting the support requirements.

B. Case 3 (Support Requirements for Invention of Chemical Compound)

[Case Overviews]

An organic compound which is the sphingosine derivative and has a selectable substituent expressed by symbols such as R. Whether or not the

support requirement is satisfied, when the description only describes the evaluation method for the chemical compounds, but not the results of pharmacological test, etc.

(JPO, KIPO)

It is sufficient for the invention of chemical compounds to include a specific use with technical meanings in the description. In a case of the pharmaceutical invention, it requires the pharmacological test result supporting the pharmaceutical use.

(SIPO)

The disclosure of the pharmacological test data is required for satisfying the support requirement even for the invention of chemical compounds if the description includes the pharmaceutical use.

C. Case 5 (Handling of the Claim Identified by Functional Expression)

[Case Overviews]

Each office determines as follows as to whether or not the claim specified by functional expression (the electromechanical means for shifting the direction of the signals from the antenna downwardly) satisfies the support requirements.

(JPO)

JPO determines that the claimed invention does not exceed the extent of disclosure in the description to which a person skilled in the art would recognize that a problem to be solved by the invention would be actually solved. Therefore, JPO determines the claimed invention satisfies the support requirements.

(KIPO)

KIPO determines the claimed invention satisfies the support requirements since the description includes the major embodiments.

(SIPO)

Since the claimed invention cannot solve the technical problem of the invention, correspondingly, it can't achieve the technical effect of the claim, so the claim does not meet the support requirement. If the configuration described in the claimed invention is restricted to the specific configuration described in the embodiment, the claimed invention may satisfy the support requirement.

IV. Amendment

Key Points

There are some differences among the three offices regarding the amendment.

(1) A period during which an amendment can be made prior to issue a first OA

(JPO, KIPO)

The description, etc. can be amended at any time prior to transmit a certified copy of a decision of patent

(SIPO)

The description, etc. can be amended within three months from the date on which a request for examination is filed or a notice to inform the start of a substantive examination is received. The notice to inform the start of a substantive examination is issued to an applicant when an examination moves into a substantial examination after a substantive examination is completed.

(2) Restriction of the scope where the description, etc. can be amended after a OA is issued.

(JPO, KIPO)

An applicant can decide which part of the description, etc. is amended.

(SIPO)

When an applicant amends the description, etc. after receiving a notice of reasons for refusal, he/she can amend only a defect which is pointed out in the notice of reasons for refusal. For example, after an issuance of a notice of reasons of refusal, an amendment to expand the scope of the claims by voluntarily deleting the technical features in the independent claim is not acceptable.

In SIPO, the amendment shall be made in answer to the defects indicated in the Office Action. If the manner of the amendment is not in conformity with the Rule 51.3, the amendment shall generally be unacceptable. However,

where the contents and scope of the amendment are in conformity with the provisions of Article 33, the application documents amended in this way may be acceptable, provided that the defects existed in the initial application documents are eliminated and there is prospect for the application to be granted.

(3) Amendment after the final notice of reasons for refusal

Regarding “amendment after the final notice of reasons for refusal”, JPO and KIPO each have their specific requirements. After the final OA is issued, JPO and KIPO accept an amendment which is intended for deletion of claim(s), restriction of the scope of the claimed invention in a limited way, correction of errors, or clarification of an ambiguous statement. KIPO, in addition, accepts an amendment intended for deletion of a new matter, but JPO does not accept it. KIPO accepts one of the above-mentioned amendments (deletion of a claim, restriction of the scope of the claimed invention in a limited way, correction of errors, or clarification of an ambiguous statement) for the claims prior to an addition of new matter.

In addition to the requirement of “not beyond the scope of the original disclosure”, SIPO has another requirement for an amendment stipulated by Rule 51.3,. This requirement demands an applicant for an amendment intended for the purpose of overcoming the problem raised in a OA(OA). This requirement shall be applied to all amendments during the examination as well as an amendment made after the final OA.

(4) Addition of new matter

All three offices do not accept an amendment adding a new matter. The determination criteria whether an amendment adds a new matter are as below.

(JPO)

JPO accepts an amendment which can be made within the scope of the matters stated in the original description, etc. The matters stated in the

original description, etc., refer to technical matters derived by totalizing the whole statements in the original description, etc. by a person skilled in the art.

(KIPO)

KIPO accepts an amendment which is made within the scope of matters which clearly stated in the original description, etc. and which are obvious from the original description, etc. for a person skilled in the art.

(SIPO)

SIPO accepts an amendment which is made within the scope of matters stated in the original description, etc. The matters stated in the original description, etc., refer to (i) a content stated in the original description, etc. (ii) a content directly and unambiguously derivable from the statement of the original description, etc.

The differences in determining the addition of new matter are found in several cases of Case Studies.

Summary of Comparative Studies

A. Addition of new matter**A.1. General rule**

KIPO, JPO and SIPO state that the addition of new matter to any of the specification (description), claims or drawing(s) shall not be accepted.

In KIPO, to find out whether new matter is added to the amended specification, claims or drawing(s), the specification, claims or drawing(s) originally attached to the patent application shall be the subject of comparison. Determining the addition of new matter shall be done by checking that elements in the amended documents are in the scope of the elements in the original documents of application. The phrase of 'being in the scope of the elements described in the specification or drawing(s)' does not mean being completely and eternally the same within the scope of matters in the specification, claims or drawing(s) originally attached to the patent application. Matters obvious for a person skilled in the art based on matters in the specification, claims or drawing(s) originally attached to the patent application shall be deemed as being in the scope of matters in the specification or drawing(s).

In JPO, "the matters stated in the description or drawings "mean technical matters which a person skilled in the art can understand, taking into account all statements in the description or drawings. Where an amendment does not add any new technical matters to the technical matter which can be understand in this manner, the amendment can be deemed to be made within "the scope of the matters stated in the description or drawings.

SIPO states that after the amendment, if a person skilled in the art understands it becomes a different invention from the original one, and it can't be directly and unambiguously determined from the original application, then the amendment is not acceptable. The scope of the original application doesn't include the contents of any priority documents.

A.2. Completing an incomplete invention

In KIPO, in the case of completing an incomplete invention, the amendment generally shall be deemed to contain new matter.

In SIPO, additions are not allowed if it can't be directly and unambiguously determined from the initial description, claims and drawings.

In JPO, since an amendment to complete an incomplete invention includes contents beyond the scope of "matters stated in the originally attached description, etc." (the amendment including new matter), the amendment is not permitted.

A.3. Amending conflicting elements

KIPO and JPO state that where a person skilled in the art clearly understands which of more than two contrasting elements is right based on matters described in the specification (description) or drawing(s), the amendment of writing the correct matters is permitted.

JPO states that addition of irrelevant or inconsistent matters is not permitted. If two or more kinds of inconsistent statement are present in the description, etc. and it is evident to a person skilled in the art from the statement of the originally attached description, etc., which of them is correct, an amendment to match it with the correct statement is permitted. Moreover, even if the statement is not in itself unclear, an amendment to make it clear is permitted if its inherent meaning is evident to a person skilled in the art from the statement of the originally attached to the description, etc.

In SIPO the general principle is the amendment should not go beyond the scope of the original application. Polishing languages, standardization of words, unifying technical terms are allowed provided that initial technical solution is not changed

A.4. Disclaimer claim

KIPO and JPO state that an amendment to a disclaimer claim is not mostly deemed as addition of new matter.

JPO states that after exclusion, the disclaimer shall be included within a scope of matter state in the originally attached description, etc.

In JPO, (1) if the claimed invention overlaps with the prior art and is thus likely to lose novelty, etc., an amendment to exclude only the overlap is made while leaving the expression of the statement of matters stated in claims before the amendment. Amending claims to provide the disclaimer makes them patentable if the invention is remarkably different from the prior art as the technical idea, and inherently involves an inventive step but accidentally overlaps with the prior art. If parts of disclaim occupy a major portion of the claimed invention or extend many portions, an invention may not be clearly identified from one claim. (2) If the claimed invention includes the term “human being” and does not satisfy the requirement of the main paragraph of Article 29(1) or falls under unpatentable grounds, and the said reason for refusal is eliminated by exclusion of the term “human being”, an amendment to exclude only the term “human being” is made while leaving an expression of the statement of matters stated in claims before amendment. Since both (1) and (2) do not introduce any new technical matters, the amendment is permitted.

In SIPO, disclaimer amendment is usually deemed as addition of new matter when excluding certain numerical value from the original claims, except that:

when applicant can, according to the originally attached description(OAD), prove that the invention can't be carried out with the disclaimed numerical value, or

when applicant can, according to the OAD, prove that the invention is novel and involves an inventive step after excluding

A.5. Changing scope of numerical limitation

JPO describes that an amendment for adding numerical limitation (range) is permitted if the numerical limitation (range) is within a scope of matters stated in the originally attached description, etc.

SIPO describes that the amendment to the numerical range of the claim is allowable only when the two extreme values of the revised numerical range are really described in the initial description and/or claims and the revised numerical range is within the initial numerical range.

KIPO states that if amended matters by changing the scope of numerical limitation are not obvious based on the matters described in the specification or drawing(s), it shall be deemed as addition of new matter.

A.6. Changing a subordinate concept into a generic concept in an invention

JPO and SIPO describe that the amendment shall be within the scope of the original application.

KIPO states that if amended matters are not obvious based on the matters described in the specification or drawing(s), the amendment of changing features of an invention into a generic concept or subordinate concept shall be deemed as addition of new matter.

In JPO, the amendment which is not made within the scope of matters stated in the original description, etc. is not permitted,

If by amending a matter that specifies the invention of claims to a generic concept including removing the matters used to specify the invention, matters other than those stated in the originally attached description, etc. are added, or

if by amending it to a more specific concept including adding the matters used to specify the invention, matters other than those stated in the original description, etc. are individuated.

In JPO, however, the amendment does not introduce new technical matters when the amendment does not clearly add any new technical significance,

if removing part of the matters used to specify the invention in claims and amending them to make the generic concept conceptually, or

if limiting part of the matters used to specify the invention in claims so that the limited matters fall under the generic concept conceptually of the matter stated in the original description.

This is even the case when the amended matter does not fall under the matters explicitly stated in originally attached description, etc. or matters obvious from the statement in the originally attached description, etc. and this amendment is permitted.

SIPO states that when amend the subordinate concept into a generic concept in an invention , if the amended invention go beyond the scope of the original application, then it is not accepted.

A.7. Changing a generic concept into a subordinate concept in an invention

In KIPO, if amended matters are not obvious based on the matters described in the specification or drawing(s), the amendment of changing features of an invention into a generic concept or subordinate concept shall be deemed as addition of new matter.

JPO –Same as A.6.

SIPO states that new contents introduced by changing indefinite contents into definite and specific contents are not allowed.

A.8. Adding embodiments

In KIPO, if amended matters are not obvious based on the matters described in the specification or drawing(s), the amendment of adding embodiments

shall be deemed as addition of new matter.

In JPO, since adding an example of the invention or adding materials falls under amendment beyond the scope of matters stated in the originally attached to description, etc., such an amendment to add embodiments is not permitted.

In SIPO, it is not allowed to add a specific mode or embodiment to prove that the invention can be carried out.

A.9. Later submitted experimental data

KIPO states that if amended matters are not obvious based on the matters described in the specification or drawing(s), the amendment shall be deemed as addition of new matter.

JPO states that written opinions and reports of experiment results submitted in response to the OA cannot substitute for the detailed description of the invention in the description, but if the applicant argues and proves thereby that the matters disclosed in the description or drawings as originally filed are correct and proper, the examiner should take into consideration of these particulars.

In JPO, upon receiving a notice of reasons for refusal, the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like. However, if the violation is based on the deficiency of the matters stated in the detailed explanation of the invention, the reasons for refusal cannot be overcome.

SIPO states that it is not allowed to add the experimental data into the description to illustrate the advantageous effects of the invention. But it doesn't mean it is no use submitting the later experiment data or embodiments to persuade examiner as an evidence.

A.10. Changing or adding purpose or effect of an invention

JPO and SIPO describe that when the technical feature(s) such as the structure, operation, or function of the invention and the effect is clearly described in the initial application documents, the amendment is permitted.

KIPO describes that if amended matters are not obvious based on the matters described in the specification or drawing(s), the amendment of adding or changing purposes or effects of an invention shall be deemed as addition of new matter.

In JPO, generally an amendment to add effects of the invention falls under an amendment beyond the scope of matters stated in the originally attached description, etc.

In SIPO, only when the advantageous effect can be directly and unambiguously determined from the original application, it can be added to "Contents of Invention"

A.11. **Amendment from prior art stated in the specification**

KIPO states that the amendment shall be deemed as addition of new matter when such added matters cannot be obvious to a person skilled in the art based on the specification, claims or drawing(s) originally attached to the patent application.

SIPO states adding prior art to the "Background Art" is permitted since it only amends the background art other than the invention per se, and the contents added are already known to the public

In JPO, an amendment to add the prior art document information (name of publications in which the relevant invention was stated and location of other information of the inventions disclosed in the publication) in the detailed description of the invention and to add contents stated in the document to "Background Art" of the description does not introduce new technical matter and is permitted. However, an amendment to add information on evaluation of the invention, such as comparison with the invention in the application or information on implementation of the invention introduces new technical

matter and is not permitted.

A.12. Adding well-known prior arts

KIPO states that though the added matters through amendment are well-known prior arts, if it is not obvious for a person skilled in the art whether the added matters are the same as the matters described in the specification or drawing(s), the amendment of adding such well-known prior arts shall be deemed as addition of new matter out of the scope of the matters described in the specification or drawing(s)

In JPO, making an amendment to “matters obvious from the statement in the originally attached description, etc.” does not introduce new technical matters and is permitted. However, the technology in well-known art or commonly used art cannot sufficiently be considered as “matters obvious from the statement in the originally attached description, etc.” just because the technology itself is well-known art or commonly used art. Therefore, adding well-known arts or commonly used art is considered as addition of new matter and is not permitted.

In SIPO, the fundamental principle as to amendment is “not go beyond the scope of the original application”. If the added well-known art can be directly and unambiguously determined from the original application, then the adding is allowed, however if the adding leads to an improved invention, then it is not allowed.

B. Types of amendment

B.1. Voluntary amendment (self-amendment)

In KIPO, the voluntary amendment or the self-amendment refers to the amendment made within the time period before the commissioner of the Korean Intellectual Property Office delivers a certified copy of a decision to grant a patent, excluding an amendment which is made to a notice of grounds for rejection and shall be within the period for submission of

opinions following the relevant notice.

In SIPO, when requesting for substantive examination, or, within 3 months after receiving the notification on the entry into substantive examination, the applicant may amend the application on his own initiative, and the examiner shall accept the amendment.

In JPO, an applicant for a patent may amend the description, claims, or drawings attached to the application, before the service of the certified copy of the examiner's decision notifying that a patent is to be granted, provided that the applicant has not received a notice of reasons for refusal.

B.1.a. Scope of the amendment

Three offices coincides in that an amendment to the description, claims or drawing(s) shall be made within the scope of matters written in the original description, etc.

SIPO states that the contents of the application documents in foreign language shall not be taken as the basis to judge an amendment meets the said criteria, except for the originally filed text in foreign language of a PCT application entering into the national phase. SIPO also states, as to the amendment made during the international phase, it should comply with Article 19 or Article 34 of the PCT.

JPO state that in the case of a foreign language written application, the translation of the foreign language document that is deemed to be the description, etc. (in the case where the amendment to the description, etc. has been made through the submission of the statement of correction of an incorrect translation, said translation or the amended description, etc.) would be the scope of the matters described in the original description, etc.

KIPO states that in the case of an application written in a foreign language, an amendment shall be made within both the original specification or drawing(s), and the final Korean translation or drawing(s) which is initially attached to the application (excluding the explanation of drawing(s)).

B.2. Amendment in response to non-final notice of rejection

In KIPO and SIPO, an applicant may amend the application within the specified time limit.

KIPO states that where an applicant receives a notice of grounds for rejection, an amendment shall be made within the period for submission of opinions following the relevant notice of grounds for rejection.

SIPO describes that where the applicant amends the application after receiving the OA, he or she shall amend according to the defects indicated by the OA.

In JPO, the applicant who received a OA shall submit the amendment within the designated time limit under the Patent Act Article 48septies or the Patent Act Article 50.

B.2.a. Scope of the amendment

KIPO and JPO states that an amendment to the specification (description), claims or drawing(s) shall be made within the scope of matters written in the specification (description), claims or drawing(s) originally attached to the patent application.

In KIPO, an amendment to the specification, claims or drawing(s) within the designated period has no limit to the scope of an amendment except for the prohibition of the addition of new matter.

JPO states that in addition to prohibition of an amendment to add new matter, so-called a “shift amendment” is not allowed. According to Patent Act Article 17bis (4), the invention for which determination on its patentability is stated in the OA received prior to making the amendment and the invention constituted by the matters described in the amended claims shall be of a group of inventions recognized as fulfilling the requirements of unity of invention.

In SIPO, the amendment shall be made in answer to the defects indicated in the Office Action. If the manner of the amendment is not in conformity with the Rule 51.3, the amendment shall generally be unacceptable. However, where the contents and scope of the amendment are in conformity with the provisions of Article 33, the application documents amended in this way may be acceptable, provided that the defects existed in the initial application documents are eliminated and there is prospect for the application to be granted.

B.3. Amendment in response to final notice of rejection or on request for reexamination or appeal

B.3.a. Scope of the amendment

In KIPO, an amendment in reply to the final notice of grounds for rejection or carried out upon a request for reexamination shall additionally satisfy the Article 47(3), along with Article 47(2) of the Patent Act (prohibition of new matter).

According to the Article 47(2), the amendment to the claims shall be limited to those for the following purposes:1. Where the scope of claims for a patent is reduced by limiting, deleting, adding claims;2. Where wrong description is corrected;3. Where ambiguous description is made clear;4. With regard to an amendment beyond the scope referred to in paragraph (2), where returning to the scope of claims made prior to the amendment, or amending the scope of claims pursuant to subparagraphs 1 through 3 in the course of returning to the said scope of claims.

JPO states that in addition to the prohibition of addition of new matter and shift amendment, the amendment to the claims shall be limited to those for the following purposes:(i)the deletion of a claim or claims;(ii)restriction of the claims;(iii)the correction of errors; and(iv)the clarification of an ambiguous statement. Moreover, in the case of amendment for the purpose as provided the above(ii), an invention constituted by the matters described in the amended claims must be one which could have been patented independently

at the time of filing of the patent application. And amendment in response to a final OA or an amendment made when filing an appeal against an examiner's decision of refusal can be subject to a dismissal of amendment when the amendment does not satisfy the requirement.

In SIPO, the person making the request may amend its or his patent application at the time when it or he requests reexamination or responds to the notification of reexamination of the Patent Reexamination Board. However, the amendments shall be limited only to eliminate the defects pointed out in the rejection decision or in the notification of reexamination. Amendments by the petitioner shall be limited only to overcome the defects indicated in the rejection decision or by the panel. In the course of requesting for invalidation, the patentee may amend its or his claims, but may not broaden the scope of patent. The patentee may not amend its or his description or drawings.

B.3.b. Restriction of amendment on claims

KIPO, JPO and SIPO state that the manners of an amendment to claims shall be limited to reduction of scope of claims by limiting claims, correction of clerical errors, clarification of ambiguous descriptions, or deletion of new matter (JPO -deletion of the claim, restriction of the claims, correction of errors in the description, and clarification of an ambiguous description).

In KIPO, amendment requirements shall be applied only to the amended claims. In this case, if an independent claim is amended, the dependent claims which refer to the independent claim shall be deemed to be amended.

JPO describes that if the claims amended in response to “the final notice of reason for refusal” includes “the invention that a special technical feature”, the examiner will dismiss the amendment. The amendment to the claims which does not satisfy requirements for the purposes or independent patentability is also subject to a dismissal of amendment.

In SIPO, the petitioner may amend the application at the time of submitting the request for reexamination, responding to Notification of Reexamination

(including Notification of Oral Proceedings for Request for Reexamination), or appearing in oral proceedings. Any amendment shall meet the requirements of Article 33 and Rule 61.1. Generally the requirement is not considered to be met where a claim amended extends the extent of protection as compared with the claim rejected in the decision of rejection; where a claim in the amendment is derived from the technical solution that lacks unity with the claims rejected in the decision of rejection; where the type of a claim is altered, or the number of claims is increased; or where the amendments are directed to the claims or the description that were not involved in the decision of rejection, unless they are intended merely to correct obvious clerical errors or to amend the defects of the same nature indicated in the decision of rejection. In the course of the examination of the request for invalidation, the patentee may amend its or his claims, but may not broaden the scope of patent. Any amendment to the patent documents shall be limited to the claims only, and shall follow the principles that the title of the subject matter of a claim cannot be changed; the extent of protection cannot be extended as compared with the granted patent; the amendment shall not go beyond the scope of disclosure contained in the initial description and claims; and addition of technical features not included in the claims as granted is generally not allowed. Before the Patent Reexamination Board makes a decision on the request for invalidation, the patentee may either delete a claim or delete a technical solution contained in a claim. The patentee may amend the claims by the way of combination within the time limit in the following 3 situations: 1. responding to the request for invalidation; 2. responding to causes for invalidation or evidence added by the petitioner; 3. responding to invalidation or evidence not mentioned by the petitioner but introduced by the Patent Reexamination Board.

Summary of Case Studies

The three offices conducted 37 case studies. The assessments of the three offices are shown below.

“○” : Acceptable amendment “×” : Unacceptable amendment

“○/×” : Acceptable amendments for some of the claims, but unacceptable amendments for the rest of the claims

Types	No.	Title of the Invention (Technical Field)	JPO	KIPO	SIPO
Numerical limitation	1	Adhesive agent for temporary adhesion	○	○	○
	2	adhesive agent for temporary adhesion	○	○	×
	3	(Polymeric composition)	×	○	×
	4	(Method for preparing chemical compound)	○	○	×
	5	(A bait for rats)	○	○	×
	6	(Medical Composition)	○	○	○
	7	(Chemical compound)	○	○	×
	8	Method for controlling light emission characteristics in LCD	○	○	○
Change between closed-ended claim and open-ended claim	9	(Enteric-soluble immediate-release tablets)	○	○	×
	10	Enzymatic composition useful for treating the risk of a digestive tract infection	○	○	○
Recombination of features	11	(Protein)	○	○	○
	12	Method for calibrating temperature compensation coefficient to calculate accurate flow measurements	○	○	○

Types	No.	Title of the Invention (Technical Field)	JPO	KIPO	SIPO
Change of subject matter	13	Lipidomic biomarkers for identification of high-risk coronary artery disease patients	×	×	×
Adding information related to prior art	14	Golf ball	×	×	×
	15	(Multi-layer film)	○	○	○
	16	(Semiconductor device)	○	×	○
Adding embodiment or technical effect	17	Output controller for an internal combustion engine	×	×	×
	18	Suikinkutus (water harp cave)	×	×	×
	19	(Ink for printing)	×	×	×
	20	(A sensor for detecting snow)	×	×	×
Amendment after final office action	21	(A mainframe supported by a spring)	×	×	×
	22	(Device)	○/×	○/×	○/×
	23	(Device)	×	○/×	○/×
Correction of obvious mistake	24	Device for reading figures in using an abacus	○	○	×
Amendment based on drawings	25	Beverage container serving plate	○	○	○
	26	Table position control device	○	○	×
Disclaimer	27	Photosensitive plate for planography	○	○	×
	28	(Surgical method)	○	○	○
	29	(A compound)	○	○	○
	30	(A composition)	○	○	○
Generic and subordinate concept	31	(Method for preparing a compound)	○	○	○
	32	(A compound)	○	○	○
	33	(A compound)	○	○	×
	34	Functional readthrough	○	○	×

Types	No.	Title of the Invention (Technical Field)	JPO	KIPO	SIPO
		protein			
Deletion of claimed matter	35	Mobile communication system	○	○	○
	36	Composition useful for the treatment of a T-cell mediated disease	○	○	○
Common general knowledge	37	(Alloy)	○	○	×

The major case examples showing differences in assessments among the three offices are given as below.

A. Case 2(Numerical Limitation)

	Original	Amended	
Title of the Invention	Adhesive agent for temporary adhesion		
Description	(Working Example)		
	HLB	Softening point (°C)	Adhesive strength (Pa)
			Washing time (sec.) (Warm water at 60°C)
	11	50	0.0118
	10	60	0.0147
	9.5	50	0.0118
	9	60	0.0196
	8.5	65	0.0294
	8	72	0.0490
	7.5	85	0.0784
Claims	<p>Claim 1: An adhesive agent for temporary adhesion which is insoluble in water but easily soluble in warm water, wherein the active ingredient of the agent is either a fatty acid ester of polyglycerin, an ethylene oxide adduct of polyglycerin, or a propylene oxide adduct of polyglycerin</p>	<p>Claim 1: An adhesive agent for temporary adhesion which is insoluble in water but easily soluble in warm water, wherein the active ingredient of the agent is either a fatty acid ester of polyglycerin, an ethylene oxide adduct of polyglycerin, or a propylene oxide adduct of polyglycerin, all of which have an HLB of 7.5-11, or a mixture thereof. [Case 2-2] ..., all of which have an HLB of 9.5-11,</p>	

Notes	(No numerical range is disclosed in the description) HLB is a numerical value which represents a balance between hydrophilic groups and lipophilic groups in molecules of surfactants.
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(JPO · KIPO)

This case does not fall under the addition of new matter since it is clear that 7.5 (9.5) to 11 of HLB is referred to in light of the whole statement of the original description.

(SIPO)

The newly added numerical range by amendment is not described in the original description and it cannot be directly and unambiguously derived from the statement of the original description, etc. Therefore, the amendment shall be deemed to fall under addition of new matter. In a case where the original description, etc., includes the statement such as “9 to 11 of HLB is particularly preferable”, SIPO may accept the amendment of claim.

B. Case 26 (Amendment based on Drawings)

	Original	Amended
Title of the Invention	Table position control device	
Description	... a table (3) is connected to a motor (5) through a feed mechanism, and the position of the table (3) is controlled through the control of the rotation of the motor (5).	
Drawings		
Claims	<p>Claim 1: A table position control device comprising: a table; a motor connected to the table through a feed mechanism; and a control device which controls the rotation of the motor and the position of the table.</p>	<p>Claim 1: A table position control device comprising: a table; a motor connected to the table through a screw feed mechanism which moves the table linearly by the rotation of a screw; and a control device which controls the rotation of the motor and the position of the table.</p>

(JPO · KIPO)

The additional matter by the amendment is obvious for a person skilled in the art from the originally attached drawing. Therefore, this case does not

fall under the addition of new matter.

(SIPO)

It can be directly and unambiguously derived from the drawings that the screw feed mechanism is used in the claimed invention, but in a case where the screw feed mechanism is used, it cannot be directly and unambiguously derived from the statement of the original description, etc. that the table moves linearly since the table may also rotate. Therefore, the amendment shall be deemed to fall under the addition of new matter.

C. Case 34 (More Specific Concept)

	Before amendment	After amendment
Title of the Invention	Producing functional readthrough protein encoded by nucleic acid sequence comprising nonsense mutation useful for treating disease associated with nonsense mutation in gene involves orally administering nonsense codon suppressor agent	
Claims	Claim 1: A functional protein having any amino acid residue at position 414 except glutamine	Claim 1: A functional readthrough protein having amino acid residue selected from Arginine, glutamate, histidine, isoleucine, methionine, phenylalanine, proline, serine, tryptophane or valine at position 414
Notes	The description does not disclose the specific amino acid at said position.	

(JPO)

It is obvious that the individual amino acid described in the amended claim is included in “an amino acid other than glutamine” (19 kinds of amino acids) described in the claim before amendment, and it is not recognized selection

of the individual amino acid specified by the amendment brings any new effect. Therefore, the amendment does not fall under the addition of new matter.

(KIPO)

It is obvious for a person skilled in the art that the individual amino acid added by amendment is included in “an amino acid other than glutamine”. Therefore, the amendment shall not be deemed as the addition of new matter.

(SIPO)

Even if the individual amino acid is known in the art, it cannot be derived directly and unambiguously from the statement of the original description, etc. that the amino acids having 19 possibilities in the claim before amendment are limited to 10 kinds of specific amino acid.

V. Utility Model

Key Points

- Common issues in the three offices

Protection for an application of utility model covers shape or structure of an article or the combination thereof.

Duration of the protection is 10 years from the application date.

- Examination

In JPO and SIPO, a utility model right is effected after the preliminary examination.

In KIPO, a utility model application is examined by filing a request for examination.

- Report of utility model technical opinion and execution of the right

JPO and SIPO have a system of a report of utility model technical opinion.

In JPO, a holder of a utility model right or an exclusive licensee may not exercise his/her utility model right or exclusive license against an infringer, etc. unless he/she has given warning in the report of utility model technical opinion regarding the registered utility model. Any person may request the report any number of times.

In SIPO, there are no provisions related to the obligation to present a report of technical opinion. A patentee or an interested party of the utility model may request the report only once.

• Others

	JPO	KIPO	SIPO
Divisional Application	○	○	○
Converted Application Utility Model → Patent	○	○	×
Converted Application Registered Utility Model → Patent	○	×	×
Third Party Observation	○	○	×
Exception to lack of novelty	○	○	○
Amendment <JPO> within one month from the application date <KIPO> during the pendency of the case, within two months after the OA is issued <SIPO> within two months from the application date	○	○	○