Note: When any ambiguity of interpretation is found in this provisional translation, the Japanese text shall prevail.

Chapter 1 Requirements for Description and Claims

1. Significance of the Description and Claims

The purpose of the Patent System is to encourage inventions by promoting their protection and utilization so as to contribute to the development of industry (Patent Act, Article 1).

The Patent System promotes protection of inventions by granting a patent right or exclusive right under certain conditions for a certain period of time to those who have developed and disclosed new technology, while it gives the public an opportunity to gain access to the invention by disclosing technical details of the invention. The protection and utilization of an invention as described above are promoted through a description, claims and drawings (hereinafter referred to as "description, etc.") which serve both as a technical document disclosing technical details of an invention and as a document of title defining the technical scope of a patented invention accurately.

Requirements for the statement of the "detailed explanation of the invention" in a description are provided under Article 36(4)(i), and requirements for the statement of the claims are provided under Article 36(5) and (6). Only a description, etc. that meets these requirements serves both as a technical document and as a document of title.

2. Requirements for Claims

The statement of the claims has important significance in that the technical scope of the patented invention is determined on the basis of the statement of the claim. When the claims do not satisfy the requirements of the claims, not only the third party may be unduly restricted by the patent right, but the right holder himself/herself also has to be involved in unnecessary disputes. Therefore, this point should be fully taken into account in examining whether or not the requirements of the claims are complied with.

2.1 Article 36(5)

Patent Act Article 36(5)

The scope of claims as provided in paragraph (2) shall state a claim or claims and state for each claim all matters necessary to specify the invention for which the applicant requests the grant of a patent. In such case, an invention specified by a statement in one claim may be the same invention specified by a statement in another claim.

(1) The first sentence of Article 36(5) provides that matters which the applicant deems necessary to define the invention for which a patent is sought should be stated in the claim without excess or shortage, so that he/she neither states unnecessary matters nor omits necessary matters.

Since it is the applicant who determines for what invention to seek a patent, this Article sets forth that the applicant shall state in the claim all matters the applicant himself/herself deems necessary to define the invention for which a patent is sought.

The second sentence is provided to prevent the misunderstanding that a single invention shall not be defined in more than a single claim.

(2) Article 36(5) also makes clear the nature of the claims. By clearly providing that it is in a

Original Japanese text was revised in 4.2012 English translation was updated in 4.2012 claim that an applicant states matters which he/she deems necessary to define the invention for which a patent is sought (these matters may hereinafter be referred to as the "matters used to specify the invention"), this Article makes it clear that the technical scope of the patented invention is determined on the basis of the statement of the claim and that the subject of the examination is the invention identified based on the statement of the claim.

(3) The scope of claims must be separated into one or more claims each of which sets forth matters which the applicant deems necessary to define the invention for which a patent is sought. A claim constitutes a basic unit for the determination of patentability (Articles 29, 29bis, 39 and 32), effect of a patent right (Article 68), waiver of a patent right (Article 97), request for a trial for patent invalidation (Article 123), fees (Articles 107 and 195), etc.

2.2 Article 36(6)

Patent Act Article 36(6)

The statement of the scope of claims as provided in paragraph (2) shall comply with each of the following items:

- (i) the invention for which a patent is sought is stated in the detailed explanation of the invention.
- (ii) the invention for which a patent is sought is clear;
- (iii) the statement for each claim is concise; and
- (iv) the statement is composed in accordance with Ordinance of the Ministry of Economy, Trade and Industry.

2.2.1 Article 36(6)(i)

2.2.1.1 Purpose of Article 36(6)(i)

The claimed inventions should not exceed the scope stated in the detailed explanation of the invention. To state in a claim an invention that is not stated in the detailed explanation of the invention means to seek a patent protection for an invention which is not disclosed to the public. Article 36(6)(i) is intended to prevent this happening. (See: Intellectual Property High Court Decision dated November 11, 2005 (Hei 17 (Gyo-Ke), No. 10042, Grand Panel case on the action to seek rescission of the JPO decision to revoke the patent for "Manufacturing Method of Polarizing Film.")

2.2.1.2 Basic Rules for Examination on the Requirement of Article 36(6)(i)

(1) A determination on whether the statement of a claim complies with Article 36(6)(i) shall be made based on comparison and review of the claimed invention and the invention stated in the detailed explanation of the invention.

This comparison and review shall be conducted by studying what is stated in the detailed explanation of the invention, on the basis of the claimed invention. The judgment should be done while taking care not to be too restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention.

(2) In performing the comparison and review, a substantial correspondence relationship

between the claimed invention and the invention stated in the detailed explanation of the invention shall be examined regardless of the consistency of expression. If it would be enough that there is at least consistency of expression, a patent right which has not substantially been disclosed to the public would be established, thus it is against the purpose of this provision.

(3) Examination for the substantial correspondence relationship 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 (refer to 3.2(1)) could recognize that a problem to be solved by the invention would be actually solved. In case determining that the claimed invention exceeds the scope stated in the detailed explanation of the invention in such a way that a person skilled 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 claimed invention and the invention stated in the detailed explanation of the invention of the invention are not corresponding with each other and the application doesn't comply with the requirement under Article 36(6)(i).

The problem to be solved by the invention is in principle identified from the statement of the detailed explanation of the invention. However, in cases where the problem is not clearly indicated but it is unreasonable as a problem to be solved by the claimed invention in light of other parts of the statement of the detailed explanation of the invention or the common general knowledge as of the filing (see Note) (e.g. where the same problem is clearly indicated to the divisional application and that attached to the original application, and the problem is found to be unreasonable as a problem to be solved by the solved by the invention claimed in the detailed explanation of the invention attached to the divisional application and that attached to the original application, and the problem is found to be unreasonable as a problem to be solved by the invention claimed in the detailed explanation of the invention of the invention of the statement of the detailed explanation of the detailed application and that attached to the statement of the detailed explanation of the invention attached to be unreasonable as a problem to be solved by the invention claimed in the divisional application, when taking into account other parts of the statement of the detailed explanation of the invention or the common general knowledge as of the filing), the problem should be identified while taking into account such common general knowledge as of the filing in addition to all of the statements of the description and drawings.

When identifying 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 common general knowledge as of the filing should be taken into account in addition to all of the statements of the description and drawings.

(Note) "The common general knowledge" refers to technologies generally known to a person skilled in the art (including well-known or commonly used art) or matters clear from empirical rules. Therefore, the common general knowledge includes methods of experimentation, of analysis, of manufacture, and theories of a technology, etc., as far as they are generally known to a person skilled in the art. Whether or not a certain technical matter is generally known to a person skilled in the art should be determined based upon not only how many documents show the technical matter but also how much attention has been given to the technical matter by such a person.

"Well-known art" refers to technologies generally known in the relevant technical field, e.g., by many prior art documents, those widely known throughout the industry, or those well-known to the extent needless to present examples. "Commonly used art" refers to well-known art which is used widely.

2.2.1.3 Typical Examples of Violation of Article 36(6)(i)

The types that do not comply with Article 36(6)(i) are presented below:

(1) The matter neither stated nor implied in the detailed explanation of an invention is stated in the claim.

- Example 1: A claim has a numerical limitation while any specific numerical value is neither stated nor implied in the detailed explanation of the invention.
- Example 2: A claim solely states an invention using an ultrasonic motor while the detailed explanation of the invention states only the invention using a D.C. motor and it neither states nor implies anything about using an ultrasonic motor.

(2) Terms used in the claims and those used in the detailed explanation of the invention are inconsistent and as a result, the relation between the claim and the detailed explanation of the invention is unclear.

Example 3: It is unclear whether the "data processing means" of a word processor stated in the claims corresponds to the "means for changing the size of characters" in the detailed explanation of the invention, or corresponds to the "means for changing line spacing" in the detailed explanation of the invention, or both of them.

(3) 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 points to note when applying this type (Type (3)) are as follows.

(a) 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. (Refer to 2.2.1.2(1).)

(b) A claim can be stated with expansion or generalization based on one or more specific examples in a detailed explanation of an invention. The maximum expansion or generalization varies with the characteristics of each technical field. For example, comparing the technical field where it is difficult to understand the relationships between the function or characteristics, etc. (refer to 2.2.1.2) of a product and the structure of the product (e.g. chemical compounds), and the technical field where it is relatively easy to understand such relationships (e.g. machine field or electric field), the maximum range expansion or generalization based on the specific examples tends to be wider in the latter 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.

(c) This type (Type (3)) is applied if, in accordance with the basic rules for examination for the substantial correspondence relationship (refer to 2.2.1.2(3)), a claimed invention is found to exceed 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. Type (3) should not be applied independently of the problem to be solved by the invention.

(d) Refer to 2.2.1.4(1) for the details of the matters to be stated in the notice of reasons for refusal.

- Example 4: While an invention relating to R receptor activating compounds is claimed comprehensively, the detailed explanation of the invention discloses no specific example other than the chemical structures and manufacturing methods of the new types of R receptor activating compounds, X, Y, and Z; 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. (Refer to Case 1.)
- Example 5: While an invention defined by the result to be achieved (e.g. an invention relating to a hybrid car defined by the desired level of energy efficiency) is claimed, the detailed explanation of the invention discloses only an invention with a specified means; 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. (Refer to Case 2.)
- Example 6: While "A DNA encoding a protein having an activity A", that is, an invention relating to DNA defined only by a function, is claimed, only DNA composed of one specified nucleotide sequence is disclosed in the detailed explanation of the invention as the specific example; 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. (Refer to Case 3.)
- Example 7: While an invention relating to a therapeutic agent for a specified purpose, which contains compounds defined by certain properties as active ingredients, is comprehensively claimed, the disclosure in the detailed explanation of the invention supports the use for such specified purpose with regard to only a small portion of the claimed compounds; 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. (Refer to Case 4.)
- Example 8: While an invention relating to chemical substance, defined by a Markush-type formula which has multiple alternatives, is claimed, the detailed explanation of the invention discloses only the manufacturing examples about the chemical substance having a specified backbone structure included in those alternatives; 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. (Refer to Case 5.)
- Example 9: While an invention relating to an antiemetic drug having an ingredient A as an active ingredient is claimed, neither a pharmacological test method nor result, which could support the use of ingredient A in an antiemetic drug, is disclosed in the detailed explanation of the invention, and furthermore, as the use of ingredient A in an antiemetic drug cannot be presumed from the common general knowledge as of the

filing, the detailed explanation of the invention cannot be regarded as disclosing the invention in such a way that a person skilled in the art could recognize that the problem of providing an antiemetic drug would be solved by the invention; therefore, the claimed invention is not stated in the detailed explanation of the invention. (Refer to Case 8.)

- Example 10: While an invention relating to a product defined by a numerical formula or numerical value (e.g. a polymer composition, a plastic film, a synthetic fiber, or a tire) is claimed, the detailed explanation of the invention states that a numerical formula or range of numerical values is specified for the purpose of solving the problem but 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; therefore, the content disclosed in the detailed explanation of the invention can neither be expanded nor generalized to the scope of the claimed invention. (Refer to Case 12.)
- (Note) If a claim is not characterized by the range of numerical values but only states a desirable numerical limitation, this type of 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. (Refer to (c) above.)

(See Intellectual Property High Court Decision dated September 29, 2009 (Hei 20 (Gyo-Ke), No. 10484, a case to seek rescission of the JPO decision.)

(4) As a solution for the problem to be solved by the invention, which is stated in the detailed explanation of the invention, is not reflected in the claim, a patent is being claimed beyond the scope stated in the detailed explanation of the invention.

The points to note when applying this type (Type (4)) are as follows.

(a) The judgment should be carefully done not to be too restrictive on the scope of claims by the specific examples stated in the detailed explanation of the invention. (Refer to 2.2.1.2(1).)

(b) This type (Type (4)) is applied if, in accordance with the basic rules for examination for the substantial correspondence relationship (refer to 2.2.1.2(3)), a claimed invention is found to exceed 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 problem to be solved by the invention should be identified in accordance with 2.2.1.2(3).

(c) If two or more problems are identified from the statement of the detailed explanation of the invention, it is necessary that a solution to any one of those problems is reflected in the claim.

(d) Refer to 2.2.1.4(2) for the details of the matters to be stated in the notice of reasons for refusal.

Example 11: In the detailed explanation of the invention, only a system wherein, when providing information to terminals, the server retrieves, from the storage means, the data format conversion parameter corresponding to the receiving terminal, converts the data format of the information based on the retrieved data format conversion parameter, and transmits the information in the converted format to the terminal is stated as an invention in order to exclusively enable a server to provide information to any terminals

that use different data formats, whereas the content regarding the conversion of data format is not reflected in the claim; in this respect, a patent is being claimed beyond the scope stated in the detailed explanation of the invention. (Refer to Case 15.)

Example 12: The problem to be solved by the invention, as identified from the detailed explanation of the invention, only relates to how to prevent excessive automobile speed, and only a mechanism which aggressively increases force against stepping on the accelerator pedal as speed increases is identified as a solution to that problem in the detailed explanation of the invention, whereas the claim only defines that a means for variable operation force has been installed to vary the force required to operate a means of acceleration along with the increasing speed, and even in light of the common general knowledge as of the filing, it is evident that the problem cannot be solved if the operation force decreases along with the increase in speed; in this respect, a patent is being claimed beyond the scope stated in the detailed explanation of the invention.

2.2.1.4 Notice of Reasons for Refusal due to Violation of Article 36(6)(i)

(1) Type (3) violation (Refer to 2.2.1.3(3))

Where an examiner determines that 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 examiner shall explain the reason why he/she determines so, while showing the grounds for such determination (e.g. the part of the statement of the detailed explanation of the invention and the content of the common general knowledge as of the filing that he/she has taken into account when making the determination). The examiner is also required to set forth in the notice, to the extent possible, a clue for the applicant to understand the direction of an amendment that should be made in order to avoid the reasons for refusal (e.g. the required level of expansion or generalization).

It is not appropriate for the examiner to merely state, "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," without specifying the reasons for such determination, because this would make it difficult for the applicant to make an effective argument or understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

(2) Type (4) violation (Refer to 2.2.1.3(4))

Where an examiner determines that as a solution for the problem to be solved by the invention, which is stated in the detailed explanation of the invention, is not reflected in the claim, a patent is being claimed beyond the scope stated in the detailed explanation of the invention, the examiner shall explain the reason why he/she determines so, while showing the problem to be solved by the invention and its solution as he/she identifies them. If the examiner determines that the problem clearly indicated in the detailed explanation of the invention is unreasonable as a problem to be solved by the claimed invention, he/she shall also specify the reason for such determination. When showing the solution to the problem, the examiner should be careful not to be prejudiced by the specific examples and should make efforts to ensure that the applicant will be able to understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

It is not appropriate for the examiner to merely state, "A solution for the problem to be solved by the invention, which is stated in the detailed explanation of the invention, is not reflected in the claim," without specifying the reasons for such determination, because this would make it difficult for the applicant to make an effective argument or understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

(3) The reasons for refusal shall be deemed overcome if the examiner finds the applicant's argument or clarification (refer to 2.2.1.5) to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the violation of Article 36(6)(i) or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the grounds earlier notified by the notice of reasons for refusal. (Refer to 2.2.5(2).)

2.2.1.5 Applicant's Response to the Notice of Reasons for Refusal due to Violation of Article 36(6)(i)

Upon receiving a notice of reasons for refusal due to violation of Article 36(6)(i), the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like.

(1) Type (3) violation (Refer to 2.2.1.3(3))

Where it is determined that 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 applicant may, in a written opinion, point out the common general knowledge other than that taken into account by the examiner when making such determination, and argue that in light of such common general knowledge, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion. (Refer to Case 6, 7, and 21.)

However, if, due to a deficiency of the matters stated in the detailed explanation of the invention, 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 reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that the disclosed content can be expanded or generalized to the scope of the claimed invention. (Refer to Cases 4, 5, 8, and 9.) (See: Intellectual Property High Court Decision dated November 11, 2005 (Hei 17 (Gyo-Ke), No. 10042, Grand Panel case on the action to seek rescission of the decision to revoke the patent for "Manufacturing Method of Polarizing Film.")

(2) Type (4) violation (Refer to 2.2.1.3(4))

Where it is determined that as a solution for the problem to be solved by the invention, which is stated in the detailed explanation of the invention, is not reflected in the claim, a patent is being claimed beyond the scope stated in the detailed explanation of the invention, the applicant may make an argument to the effect that, by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, it is possible to identify a problem or a solution thereto other than those found by the examiner, and that such other solution

is reflected in the claim.

2.2.2 Article 36(6)(ii)

2.2.2.1 Basic Rules for Examination on the Requirement of Article 36(6)(ii)

(1) The statement of the claim has significance to be used for the basis of identifying the claimed invention which is an object for judgment of the patentability requirements such as novelty and inventive step, etc., and also used to secure the mission for specifying the technical scope of the patented invention. Thus, it is necessary that an invention can be clearly identified from one claim.

This Article is intended to maintain these functions of claims and make it clear that a claim should be stated such that an invention for which a patent is sought can be clearly identified. Where an invention for which a patent is sought cannot be clearly identified on the basis of statement of each claim, the claimed invention cannot be examined precisely on the patentability requirements such as novelty or inventive step, etc., and the technical scope of a patented invention cannot be understood.

For an invention to be clearly identified, it is necessary that the scope of the claimed invention is clear, that is, that the invention is stated in such a way that it is possible to understand whether a specific product or process falls within the scope of the claimed invention, and as a premise, it is necessary that the matters used to specify the invention are clear.

(2) Also, in light of the purpose of the system of the claim, it is necessary that one invention can be identified based on the matters stated in one claim. (Refer to 2.2.2.3(4)).

(3) Regarding the requirement of Article 36(6)(ii), examination shall be based on the matters which an applicant deems necessary to define the invention for which a patent is sought, as stated in the claim pursuant to Article 36(5). However, when interpreting the meanings or "technical meanings" (refer to 2.2.2.3(2)⁽²⁾) of such matters used to specify the invention, not only the statement of the claim but also the statements of the description and drawings, as well as the common general knowledge as of the filing, shall be taken into account.

In the identification of a claimed invention, matters not stated in the claim should not be considered. On the contrary, the matters used to specify the invention as far as they are stated in the claim should be considered.

(4) 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. For example, if a clear definition of a term used in a claim, which is either completely inconsistent with or different from what it normally means, is placed, such a definition could make the invention unclear. This is because such a definition could raise confusion in interpretation of the term under the practice for identification of the claimed invention, which is done by taking into account the statements of the detailed explanation of the invention, etc. although the primary basis for the identification is the statement of the claim.

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. If the examiner deems that an invention can be clearly identified as a result of this evaluation, the requirement of Article 36(6)(ii) is satisfied. It would be noted that it goes without saying 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. (See: Tokyo High Court Decision dated March. 3, 2003 (Hei 13 (Gyo-Ke), No. 346.)

2.2.2.2 Matters to Note in Examination on the Requirement of Article 36(6)(ii)

(1) Article 36(5) provides that matters which the applicant deems necessary to define the invention for which a patent is sought should be stated in the claim. In light of the purpose of this Article, various forms of expression can be used in the claim by the applicant to define an invention for which a patent is sought.

For example, in the case of "an invention of a product", various forms of expression such as operation, function, property, characteristics, method, use and others can be used as matters used to specify an invention, in addition to the forms of expression such as combination of products or the structure of products. Similarly, in the case of "an invention of a process (a sequence of acts or operations connected in time series)", the objects used for these acts or operations and others can be used as matters used to specify an invention, in addition to such form of combination of processes (acts or operations).

(2) On the other hand, since a claim should be stated in such a manner that an invention can be clearly identified from one claim according to the provision of Article 36(6)(ii). Therefore, it should be noted that such definition of an invention is allowed as far as the claimed invention can be clearly identified.

(3) In case that the statement of the claim does not express a specific use but a general use, where a claim directed to a use invention (Refer to Part II: Chapter 2. 1.5.2(2)), it should not be deemed a violation of Article 36(6)(ii) merely because the statement expresses a general use (i.e., merely because the scope of the claim is relatively broad) unless the expression makes unclear the invention for which a patent is sought. (For example, not a "pharmaceutical/agrochemical agent for disease X comprising...")

Where a claim is directed to a composition and does not include any statement to define the use of the composition or the property of the composition, it shall not be deemed a violation of Article 36(6)(ii) merely because the claim does not include any definition of the use or property of the composition.

2.2.2.3 Typical Examples of Violation of Article 36(6)(ii)

Typical examples of the statement of the claims violating Article 36(6)(ii) are shown below.

(1) The invention is unclear resulting from the statement of the claim itself being unclear.

① The invention is unclear because the claim includes statements that are inadequate as Japanese language expressions.

For example, in a case where a claim includes statements inadequate as Japanese language expression such as errors or an ambiguous statement, thereby a claimed invention is made unclear. It is not a violation of Article 36(6)(ii), however, if defects in the claim are minor and do not place the claimed invention unclear to a person skilled in the art.

② The claimed invention is unclear because the meaning of a term used in the claim is incomprehensible even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

Example 1: "A process for manufacturing compound D, consisting of a process for synthesizing compound C by a reaction of compound A and compound B in ethanol at normal temperatures, and a process for synthesizing compound D by heating compound C at a temperature between 80 and 100°C in the presence of KM-II catalyst" (The meaning of the term "KM-II catalyst" is incomprehensible because this term is neither defined in the detailed explanation of the invention nor included in the scope of the common general knowledge as of the filing.)

(2) The invention is unclear, resulting from a technical defect existing in the matters used to specify the invention.

① Claim states technically incorrect matters.

Example 1:"An alloy composed of 40 to 60wt% A, 30 to 50wt% B, and 20 to 30wt% C" (The statement of this claim is technically incorrect because total sum of the maximum amount of component A and the minimum amounts of components B and C exceeds 100wt%.)

② In addition to the incomprehensibility of the technical meaning of a matter to define the invention, it is evident that the matters used to specify the invention are deficient in light of the common general knowledge as of the filing.

When the scope of the claimed invention (refer to 2.2.2.1(1)) is clear, normally, the invention can be clearly identified from the statement of the claim.

However, even when the scope of the invention is clear, if the technical meaning of a matter to define the invention is incomprehensible and it is evident that the matters used to specify the invention are deficient in light of the common general knowledge as of the filing, the claimed invention cannot be examined precisely on the patentability requirements, such as novelty or inventive step, etc. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is in violation of Article 36(6)(ii).

The "technical meaning" of a matter to define the invention refers to the function or role that such matter plays in the claimed invention, and in the course of understanding said meaning, the statements of the description and drawings, as well as the common general knowledge as of the filing should be taken into account.

The function or role that a matter to define the invention plays in the claimed invention can mostly be understood by making reference to the statement of the detailed explanation of the invention (refer to 3.2.1(2)⁽²⁾) or the common general knowledge as of the filing, and in such case, the application does not constitute this type of violation.

The application constitutes this type of violation not only because the technical meaning of a matter to define the invention cannot be understood, but also because it is not evident that the matters used to specify the invention are deficient in light of the common general knowledge as of the filing. Determination as to whether or not it is evident that the matters used to specify the invention are deficient should be made based on the common general knowledge as of the filing in the technical field to which the invention pertains. Accordingly, this type of violation shall not apply when the content of the common general knowledge that is the ground for such determination cannot be specified.

Example 1: "A machining center equipped with a bed made by casting, elastic body, metal plate, automatic tool changer arm, and tool magazine"

The claim does not define the structural relationships of the elastic body and metal plate with other components, and even taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, the technical meanings of the elastic body and the metal plate (the functions or roles that these components play in the claimed invention) cannot be understood. With regard to an invention relating to a machining center, it is common general knowledge as of the filing that the structural relationship of a particular component with other components greatly differs depending on the technical meanings of the relevant component, and in light of such common general knowledge, it is evident that the matters used to specify the invention in this claim are deficient for understanding the structural relationships of the elastic body and metal plate with other components. In conclusion, the invention cannot be clearly identified from the statement of the claim. (Refer to Case 17.)

(Supplementary explanation)

In light of the common general knowledge as of the filing, the technical meanings of some components of the invention, namely, "bed made by casting," "automatic tool changer arm," and "tool magazine," are obvious. However, in order to understand the technical meanings of the "elastic body" and the "metal plate," it is insufficient that the claim only states that the invention is equipped with these components. Suppose the description indicates a specific example in which the elastic body is mounted on the lower part of the bed made by casting and the metal plate is mounted on the lower part of the elastic body, both serving as damping members. While it is possible to understand the roles that the elastic body and the metal plate play in this specific example, the claim does not state such structural relationships, and therefore this limitative interpretation cannot be applied to the roles to be played by the elastic body and the metal plate in the claimed invention. Consequently, even by taking into account the statements of the description and drawings, the technical meanings of the elastic body and metal plate cannot be understood.

Example 2: "An image encoding chip which compresses the input image data and outputs the Xencoded image data, comprising: an A-encoding circuit which encodes the externally input image data by an A-encoding system that is reversible, thereby producing Aencoded data; an A-decoding circuit which decodes the produced A-encoded data into the original image data by an A-decoding system; and an X-encoding circuit which encodes the decoded image data by an X-encoding system that is irreversible, thereby producing X-encoded image data, and externally outputs the produced X-encoded image data."

With regard to an invention relating to an image-encoding chip, it is common general knowledge as of the filing that priority is given to speeding up, downsizing, promoting efficiency, and cost reduction. It runs against such common general knowledge to provide a circuit which only decodes the encoded data into the original data, as stated in the claim. Even in light of the statements of the description and drawings, the technical meanings of the A-encoding circuit and A-decoding circuit (the functions or roles that these components play in the claimed invention) cannot be understood. It is also common general knowledge as of the filing that the processing contents to be processed by an image-encoding chip greatly differ depending on the technical meanings of the circuits mounted on that chip. In light of such common general knowledge, it is evident that the matters used to specify the invention in this claim are deficient for understanding the roles of the A-encoding circuit and the A-decoding circuit in the image-encoding chip. In conclusion, the invention cannot be clearly identified from the statement of the claim. (Refer to Case 18.)

(Supplementary explanation)

Suppose the description indicates a specific example in which the A-encoding circuit measures an encoding time, and the parameter to be used for X-encoding is determined based on such encoding time. While it is possible to understand the roles that the A-encoding circuit and the A-decoding circuit play in this specific example, the claim does not state the feature of using the information obtained by the A-encoding circuit for X-encoding, and therefore this limitative interpretation cannot be applied to the roles to be played by the A-encoding circuit and the A-decoding circuit in the claimed invention. Consequently, even by taking into account the statements of the description and drawings, the technical meanings of the A-encoding circuit and A-decoding circuit cannot be understood.

- ③ Matters used to specify the invention are inconsistent.
- Example 1: A claim states "a method for producing a final product D comprising the first step for producing an intermediate product B from a starting material A, and the second step for producing the said final product D from an intermediate product C" in which the intermediate product produced by the first step is different from the starting material in the second step, and the relation between the first step and the second step is not clear to a person skilled in the art even if interpreting the meaning of "the first step" and "the second step" stated in the claim by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.
- ④ Matters used to specify the invention are not related technically.

Example 1: "A road on which automobiles mounting a specific engine are traveling."

Example 2: "An information transmission media transmitting a specific computer program." The transmission of information is a function inherent to the transmission media. To define the invention to be "an information transmission media transmitting a specific computer program" only means that a specific computer program is being transmitted at any time

and to any place on the information transmission media. It defines the only inherent function of the transmission media, and does not specify any relation between the information transmission media and the computer program.

5 Non-technical matter is stated in a claim as a whole, as a result of existence of such statements as sales area or distributors, etc.

(Note) Where a claim includes a statement to define a product by means of a trademark, such a statement is deemed as making unclear the claimed invention unless it is clear to a person skilled in the art that the product had been maintained a certain quality, composition and structure, etc., at least for a certain period of time to the filing date.

(3) The invention is unclear because the category of an invention (an invention of a product, an invention of a process, an invention of a process for producing a product) for which a patent is sought is unclear, or something that does not fall in any category is stated in a claim.

Patent Act provides that "a patentee shall have the exclusive right to work the patented invention" (Article 68), and gives definitions to the term "working" by categorizing inventions into an "invention of a product", an "invention of a process," and an "invention of a process for producing a product" (Article 2(3)). In considering them, it is inadequate to grant a patent to such inventions as below-mentioned examples because it makes unclear the extent of protection.

Example 1: "A method or apparatus comprising "

Example 2: "A method and apparatus comprising"

Example 3: A claim which cannot be determined whether it is directed to a product or a process as a result that the claim states only operation, function, property, objective or effect. (E.g., "an anti-cancer effect of chemical compound A")

Such term in a claim as "system" (e.g., "telephone system") is interpreted as those meaning the category of a product. "Use" is interpreted as a term meaning a method for using things which is categorized into "a process." (E.g. "Use of substance X as an insecticide" is interpreted as "method for using substance X as an insecticide." Also, "Use of substance X for the manufacture of a medicament for therapeutic application Y" is interpreted as "method for using substance X for the manufacture of a medicament for therapeutic application Y.")

(4) Matters used to specify the invention are expressed in alternatives and the alternatives have no similar characteristics or function with one another.

① In light of the purpose of Article 36(6)(ii), it is necessary that an invention can be clearly identified from one claim. Also, in light of the purpose of the system of the claim, it is necessary that one invention can be identified based on the matters stated in one claim.

2 Therefore, when there exist alternatives related to matters used to specify an invention for which a patent is sought and these alternatives do not have a similar characteristics or function, it

constitutes a violation of Article 36(6)(ii).

The following examples constitute violation of Article 36(6)(ii).

Example 1: "Specific parts or an apparatus including the said parts."

Example 2: "A transmitter or a receiver which has a specific power supply."

Example 3: In a claim, an intermediate and a final product of a chemical compound are stated in an alternative form. It is not a violation of the requirements, however, if the intermediate per se is a final product in one sense and the intermediate and other final products meet requirements for statements of a Markush-type formula. (See ③ below.)

③ Where the statement of the claim includes alternatives such as a Markush-type formula relating to chemical substances, they are considered to have a similar characteristics or function if the following criteria are fulfilled:

- (i) all alternatives have a common property or activity; and either
- (ii) (a) a common chemical structure is present, i.e., a significant structural element is shared by all of the alternatives, or
 - (b) if the common chemical structure cannot be the unifying criteria, all alternatives belong to the same class of chemical substances which is recognized as one class in the technical field to which the invention pertains.

That "significant structural element is shared by all of the alternatives" in (ii)(a) above refers to cases where the compounds share a common chemical structure which occupies a large portion of their structures, or if the compounds have in common only a small portion of their structures, the commonly shared structure constitutes a structurally distinctive portion in view of existing prior art. The chemical structural element may be a single component or a combination of individual components linked together.

Further, "the same class of chemical compounds which is recognized as one class" in (ii)(b) above means that there is an expectation from the knowledge in the technical field that members of the class will behave in the same way in the context of the claimed invention. In other words, each member could be substituted one for the other, with the expectation that the same intended result would be achieved.

(5) The scope of the invention is unclear as a result of the following expression:

① Negative expressions such as "except..." or "not..." in claims, and as a result, the scope of the invention is unclear.

2 Expressions using a numerical limitation which only indicates either a minimum or a maximum such as "more than..." or "less than...," and as a result, the scope of the invention is unclear.

③ Expressions where the standard or degree of comparison is unclear (e.g. "with slightly greater specific gravity," "much bigger," "high temperature," "low temperature," "hard to slip," "easy to slip") or where the meaning of the term is ambiguous, and as a result, the scope of the invention is unclear.

(4) 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."

Such expressions 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.

(5) A numerical limitation which includes zero (0) such as "from 0% to 10%," and as a result, the scope of the invention is unclear.

When it is clearly stated in the detailed explanation of the invention that the component defined by the numerical limitation is an essential component in the above-mentioned example, such statement is inconsistent with the statement of the claim, "from 0 to 10%" which would be interpreted as the component being an optional component and also interpreted in many ways, and the scope of the invention is deemed unclear. On the other hand, if it is clearly stated in the detailed explanation of the invention that the component defined by the numerical limitation is an optional component, the numerical limitation including zero (0) is permissible.

6 The statement of a claim is made by a reference to the detailed explanation of the invention or drawings, and as a result, the scope of the invention is unclear.

- Example 1: A claim which includes such statement made by a reference as "an automatic drill machine as shown in Figure 1." (It is inadequate to refer to drawings because drawings generally have ambiguous meanings and could be interpreted in many ways.)
- Example 2: A claim includes statements made by a reference but the portion to be referred to is not clear

Note that, even by referring to the detailed explanation of the invention or drawings, an invention can be stated clearly in a claim as in the following case.

Example: In an invention related to an alloy, there is a specific relation among components of the alloy and the relation can be defined by reference to the drawings as clearly as by a numerical or other literal expression.
"Heat-resisting Fe·Cr·Al alloy for electric-heating composed of Fe, Cr, Al within the second advantage allow prints A(x) = P(x) = Q(x) = and P(x) = bases and the second advantage advantage

scope circumscribed by points A(), B(), C(), and D() shown in the Figure 1 and impurities less than X%."

2.2.2.4 A Claim Includes an Expression Defining an Invention by a Function or Characteristics, etc. or Defining a Product by Its Manufacturing Process

This section explains the points that require special note when a claim includes an expression defining an invention by a function or characteristics, etc. (action, function, property or

characteristics, hereinafter collectively referred to as "function or characteristics, etc."), or defining a product by its manufacturing process, and shows the typical examples where such claim is regarded as violating Article 36(6)(ii).

These types of claim shall also be examined in accordance with the basic rules for the examination on the requirement of Article 36(6)(ii). (Refer to 2.2.2.1.) If a claim falls under any of the typical examples of violation of Article 36(6)(ii) (refer to 2.2.2.3), it constitutes a violation of this provision.

(1) A claim includes an expression defining an invention by a function or characteristics, etc.

① The points to note

(i) A matter to define an invention may be expressed by means of the operation, function, property or characteristics. (Refer to 2.2.2.2(1).) However, ambiguous or unclear terms should not be used even though it is easy to clearly state the claim.

(ii) It is possible to use expressions defining the invention by a function or characteristics, etc. so as to state an expanded or generalized form of one or more specific examples stated in the detailed explanation of the invention. If, by using these forms of expression, the claimed invention exceeds the scope stated in the detailed explanation of the invention of the invention 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 relevant claim constitutes a violation of Article 36(6)(i) (Refer to 2.2.1).

Where a claim includes an expression defining the invention by a function or characteristics, etc., and it is difficult to compare the claimed invention and a cited invention, if the examiner has reason to suspect that the claimed product would be prima facie identical to the product of the cited invention without making a strict comparison of the claimed product with the product of the cited invention, the examiner may send the notice of reasons for refusal suggesting the lack of novelty as far as there is no other difference. (Refer to Part II, Chapter 2, 1.5.5(3).) Similarly, if the examiner has reason to suspect that the claimed product would be prima facie similar to the product of the cited invention and that the claimed invention would prima facie involve no inventive step, the examiner may send the notice of reasons for refusal suggesting the lack of inventive step. (Refer to Part II, Chapter 2, 2.6.)

2 Typical examples where the claimed invention is considered to be unclear

(i) The claimed invention is unclear because the meanings of the function or characteristics, etc. (e.g. definition, test/measurement method) stated in the claim cannot be understood even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing (Refer to 2.2.2.3(1)⁽²⁾).

Example: "A composition for adhesion including component Y, of which the viscosity measured in accordance with the test method of X laboratory is a – b pascal seconds."

(The meaning of the function or characteristics, etc., namely, "viscosity measured in accordance with the test method of X laboratory is a - b pascal seconds," cannot be understood because the definition or the concrete method of "the test method of X laboratory" is not shown in the detailed explanation of the invention, nor is it included in the

common general knowledge as of the filing.)

(Note) In principle, a function or characteristic, etc., to be stated as a matter to define an invention, shall be a standard one. Namely, it should be either one which is defined by the JIS (Japan Industrial Standard), ISO (International Standardization Organization) -standard or IEC (International Electrical Committee) -standard, or one which can be determined by a method for testing or measuring provided in these standards (e.g. "specific gravity" or "boiling-point.").

When a function or characteristics, etc., defining a product is not a standard one, the definition or method for testing or measuring thereof should be explicitly stated in the detailed explanation of the invention and it should be made clear that such function or characteristics, etc., stated in a claim is to be defined and tested by such definition or method except where it is either one which is commonly used by a person skilled in the art or one which a person skilled in the art can understand the definition or method for testing or measuring thereof.

(ii) It is evident, in light of the common general knowledge as of the filing, that the matter defined by a function or characteristics, etc. is not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of the claim even by taking into account the statements of the description and drawings.

When the scope of the claimed invention (refer to 2.2.2.1(1)) is clear, normally, the invention can be clearly identified from the statement of the claim.

However, if a claim includes an expression defining the invention by a function or characteristics, etc., there may be cases where, although the scope of the invention is clear, it is evident, in light of the common general knowledge as of the filing, that 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, such as novelty or inventive step, etc., based on the statement of the claim, even by taking into account the statements of the description and drawings. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is in violation of Article 36(6)(ii).

Determination as to whether or not it is evident that the matter defined by a function or characteristics, etc. is not sufficiently specified from a technical perspective should be made based on the common general knowledge as of the filing in the technical field to which the invention pertains. Accordingly, this type of violation shall not apply when the content of the common general knowledge that is the ground for such determination cannot be specified.

The application does not constitute this type of violation if the invention can be clearly identified based on the statement of the claim by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing. (Refer to Case 11.)

Example 1: "Compounds having the R receptor activating action"

While the description states that the applicant was the first to discover "R receptor," it is common general knowledge as of the filing that it is difficult to understand the specific compounds

defined only by their action of activating the newly discovered receptor. In light of such common general knowledge, it is evident that the "compounds" defined only by said action, with no chemical structure, etc. required to have said action, are not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of the claim even by taking into account the statements of the description and drawings. (Refer to Case 1.)

- (Note) Even where an invention of a product pertains to a technical field where it is difficult to predict the structure of the product from the function or characteristics, etc. thereof, if a product that has the relevant function or characteristics, etc. can easily be understood by taking into account the common general knowledge as of the filing, the matter defined by said function or characteristics, etc. is deemed to be sufficiently specified from a technical perspective. (Refer to Case 4.)
- Example 2: "A hybrid car of which energy efficiency during running on electricity is a b%, as measured by X test method"

In the technical field of the hybrid car, it is common general knowledge as of the filing that the energy efficiency during running on electricity is normally about x%, far lower than a%, and it is difficult to realize a higher energy efficiency such as a - b%. In light of this, it is difficult to understand the specific hybrid car defined only by such high energy efficiency. Accordingly, it is evident that a "hybrid car" defined only by said energy efficiency, with no means to realize it being defined, is not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of the claim even by taking into account the statements of the description and drawings. (Refer to Case 2.)

- (2) A claim includes an expression defining a product by its manufacturing process.
- ① The points to note

(i) The claimed product itself may be defined by the manufacturing process (product-byprocess claim) when it is impossible, difficult or inappropriate for the product structure of the invention to be directly defined by the characteristics or others independently of the manufacturing process. (For example, it would be considered an inappropriate case if, although it would not be impossible or difficult to define the product directly by the characteristics, it would increase the degree of difficulty to understand.)

(See: Tokyo High Court Decision dated June. 11, 2002 (Hei 11 (Gyo-Ke), No. 437.)

(ii) Where the claim includes an expression defining a product by its manufacturing process, normally, such expression shall be construed to refer to the final product itself. (Refer to Part II, Chapter 2, 1.5.2(3).) When it is extremely difficult to determine the structure of the product itself defined by such expression, if the examiner has reason to suspect that the claimed product would be prima facie identical to the product of the cited invention without making a strict comparison of the claimed product with the product of the cited invention, the examiner may send the notice of reasons for refusal suggesting the lack of novelty as far as there is no other difference.(Refer to Part II, Chapter 2, 1.5.5(4).) Similarly, if the examiner has reason to suspect that the claimed product would be prima facie similar to the product of the cited invention and that the claimed invention would prima facie involve no inventive step, the examiner may send the notice of reasons

for refusal suggesting the lack of inventive step. (Refer to Part II, Chapter 2, 2.7.)

2 Typical examples where the claimed invention is considered to be unclear

(i) The claimed invention is unclear because the manufacturing process (e.g. the starting materials or manufacturing steps) cannot be understood based on what is stated in the claim even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

Where a claim does not state the starting material or the conditions set for each manufacturing step, but these matters can be understood by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, such claim does not constitute this type of violation.

(ii) The claimed invention is unclear because the characteristics of the product (e.g. the structure or property) cannot be understood even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

Where a claim includes an expression defining a product by its manufacturing process, normally, the claimed invention shall be examined on the patentability requirements, such as novelty or inventive step, etc., while considering that such expression refers to the final product itself. A precise examination on the patentability requirements may not be made if the structure or property, etc. of the product cannot be understood. In such case, the function of the claim (2.2.2.1(1)), that is, that it is necessary that an invention can be clearly identified from one claim, is not maintained, and therefore the application is in violation of Article 36(6)(ii).

For example, it constitutes a violation of Article 36(6)(ii) if, in the case where the claimed invention of a product is defined only by its manufacturing process, the description and drawings only state the characteristics of the invention that are not reflected in the claimed product (e.g. high yield or high manufacturing efficiency), and the characteristics of the product (e.g. the structure or property) cannot be understood even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

Example 1: "Wash-free rice, manufactured by a wash-free rice manufacturing process which comprises the step of receiving a feed of rice within a tank and removing bran by washing the rice in water, the step of opening the drop valve situated at the bottom of the tank and dropping the bran-removed rice into the container waiting down below, and the step of drying the rice dropped into the container, and which includes the step of spraying oily ingredient X onto the inner wall of the tank before feeding rice, and the step of blowing air into the tank immediately before opening the drop valve."

The description states that the step of spaying oily ingredient X onto the inner wall of the tank before feeding rice makes the inner wall of the tank lubricious so as to prevent the rice from adhering to the wall, and that the step of blowing air into the tank immediately before opening the drop valve prevents the rice from remaining within the tank after being washed so as to completely discharge the rice. Even when taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, it is uncertain how the step of spraying oily ingredient X onto the inner wall of the rice washing tank could affect the wash-free rice to be

obtained, and the characteristics of the claimed invention (wash-free rice) cannot be understood. (Refer to Case 19.)

2.2.2.5 Notice of Reasons for Refusal due to Violation of Article 36(6)(ii)

(1) When an examiner determines that the invention for which a patent is sought is unclear, the examiner shall explain the reason why he/she determines so, for example, while pointing out the term(s) used in the claim that he/she has found to be incomprehensible, and showing the grounds for such determination (e.g. the part of the statement of the detailed explanation of the invention and the content of the common general knowledge as of the filing that he/she has taken into account when making the determination).

It is not appropriate for the examiner to merely state, "The claimed invention is unclear," without specifying the reason for such determination, because this would make it difficult for the applicant to make an effective argument or understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

(2) The reasons for refusal shall be deemed overcome if the examiner finds the applicant's argument or clarification (Refer to 2.2.2.6) to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the violation of Article 36(6)(ii) or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the ground earlier notified by the notice of reasons for refusal. (Refer to 2.2.5(2).)

2.2.2.6 Applicant's Response to the Notice of Reasons for Refusal due to Violation of Article 36(6)(ii)

Upon receiving a notice of reasons for refusal due to violation of Article 36(6)(ii), the applicant may make an argument or clarification by submitting a written opinion and the like.

The applicant may argue in a written opinion, for example, that the meaning of the term(s) used in the claim that the examiner has found to be incomprehensible can be understood from the common general knowledge as of the filing, or that the claimed invention is clear, by pointing out the part of the statement of the detailed explanation of the invention or the common general knowledge other than that taken into account by the examiner when making determination.

2.2.3 Article 36(6)(iii)

2.2.3.1 Purpose of Article 36(6)(iii)

A claim is to be used for the basis of identifying the claimed invention which is a subject of examination of the patentability requirements such as novelty or inventive step, etc., and the description requirements. The statement of a claim also serves as a document of title defining the technical scope of a patented invention accurately. Therefore, it is adequate that the statement of the claim is concise as well as complying with Article 36(6)(ii) in order for the third parties to understand the claimed invention as easily as possible. This is the purpose of Article 36(6)(ii).

Article 36(6)(iii) does not deal with the inventive concept defined by the statement of the claim but deals with the conciseness of the statement itself. Also, it does not require plural claims

as a whole be concise when an application contains two or more claims. Rather, it requires each claim be stated concisely.

2.2.3.2 Typical Examples of Violation of Article 36(6)(iii)

The typical examples of the statement of the claims violating Article 36(6)(iii) are shown below.

(1) A claim includes statements with same contents in such a duplicated manner that it is unduly redundant.

In light of the purpose of Article 36(5) that a claim shall state the matters an applicant himself/herself deems necessary to define the invention, however, it should be deemed "unduly redundant" only if the duplication is excessive, even where matters having the same contents are included in a claim. It should not be deemed "unduly redundant" merely because a matter to define a claimed invention is an obvious limitation to a person skilled in the art or is a dispensable limitation for meeting the patentability requirements or the description requirements (excluding Article 36(6)(iii)).

When the statement of a claim is made by a reference to the statement in the detailed explanation of the invention or drawings, the statement of the claim and the corresponding statement in the detailed explanation of the invention or the drawings should not be redundant as a whole.

(2) A claim is expressed in alternatives (e.g., a Markush-type claim for chemical compounds) and the number of alternatives is so large that the conciseness is extremely damaged.

Determining whether the conciseness is extremely damaged or not, the following matters should be taken into account.

① In a case where a significant structural element is not shared by the alternatives, less number of alternatives should be deemed so large that the conciseness is extremely damaged than in a case where a significant structural element is shared by the alternatives.

② In a case where the alternatives are expressed in a complicated way, such as the conditional options, less number of alternatives should be deemed so large that the conciseness is extremely damaged than otherwise.

Even in this case, the examiner should choose at least one group of chemical compounds which is expressed as alternatives in the claim and which involves a chemical compound indicated as a working example ("a group of chemical compounds expressed as specific alternatives corresponding to a working example"), and should examine the patentability of those chemical compounds. Regardless of existence or nonexistence of reason for refusal under patentability requirements, the examiner should point out in the notice of reasons for refusal, the group of chemical compounds which is examined on patentability.

2.2.4 Article 36(6)(iv)

This provision refers the legal requirements regarding technical rules of claim drafting to an ordinance of the Ministry of Economy, Trade and Industry.

Regulations under the Patent Act Article 24ter.

The statement of the scope of claims under Article 36(6)(iv) of the Patent Act which are to be in accordance with an ordinance of the Ministry of Economy, Trade and Industry shall be as provided in each of the following items:

- (i) for each claim, the statement shall start on a new line with one number being assigned thereto;
- (ii) claims shall be numbered consecutively;
- (iii) in the statement in a claim, reference to a statement of other claims shall be made by the numbers assigned thereto;
- (iv) when a claim refers to a statement of another claim, the claim shall not precede the other claim to which it refers.

Claims are classified into independent form claims and dependent form claims roughly. Independent form claims are those defined without referring to a statement of other claims, while dependent form claims are those which refer to a statement of other preceding claims. The two types of claims differ only in the form of the statement, and are treated in the same manner.

2.2.4.1 Typical Examples of Violation of Article 36(6)(iv)

(1) Reference in a dependent form claim is not made to a preceding claim or claims.

(2) Reference to other claim or claims is not made by the number assigned to the claim(s) referred to.

Example 1:

- 1. A ball bearing as defined in claim 2 that is provided with an annular cushion around the outer race.
- 2. A ball bearing having a specific structure.
- 3. A process for producing the aforementioned ball bearing by use of a specific method.

2.2.4.2 Descriptive Form of Claims - Independent Form or Dependent Form -

(1) Independent form claims

It is permissible to define an invention by using an independent form claim regardless of whether or not the invention defined in the independent form claim is identical to the invention defined in any other claim.

(2) Dependent form claims

Typical dependent form claims

Dependent form claims may be utilized to simplify the statements of the claims by avoiding repetition of the same expressions and phrases. It is permissible to define an invention by use of a dependent form claim regardless of whether or not the invention defined in the dependent form claim is identical to the invention defined in the claims referred to.

In a typical case, a dependent form claim can be used when a claim includes all the features of another preceding claim.

By using the dependent form claims in such cases, repetition of the same expressions can

be avoided, while enabling clearer distinction between the dependent form claim and the claim referred to, thus there would be advantageous that of reducing the applicant's workload and at the same time facilitating understanding of the claim by third parties.

Example 1: Typical dependent form claims

- 1. A building wall material incorporating heat insulator.
- 2. A building wall material as defined in Claim 1 wherein the heat insulator consists of polystyrene foam.

②Dependent form claims other than described above

Claims may be written in dependent form to simplify the statements of the claims by making reference to a statement of other claims, when writing claims which substitute a part of the matters used to specify the invention of other preceding claims or when writing claims in a different category from that of other preceding claims, as far as the statements of the claims do not become unclear.

- Example 2: Dependent form claim substituting a part of matters used to specify the invention of the claim referred to
 - 1. A transmission of specific construction provided with a gear drive mechanism.
 - 2. A transmission as defined in claim 1 provided with a belt drive mechanism in place of said gear drive mechanism.
- Example 3: Dependent form claim referring to a statement of another claim expressed in a different category
 - 1. A ball bearing with specific construction.
 - 2. A process for producing the ball bearing as defined in claim 1 by use of a specific method.
- Example 4: Dependent form claim referring to a statement of sub-combination claim.
 - 1. A bolt with a male thread of specific configuration.
 - 2. A nut with a female thread of specific configuration that matches the bolt as defined in claim 1.
- (Note) A "sub-combination" refers to an invention of each device or step of the "combination" thereof while an invention of a "combination" refers to an invention of a whole device combining two or more devices or of a manufacturing process combining two or more steps.

③Multiple dependent form claims

Multiple dependent form claims are claims defined by making reference to statements of two or more claims (regardless of independent or dependent), and are utilized in simplifying the statements of the claims.

Claims of this form have advantage over the case claiming separately plural simple dependent form claims, in terms of the workload and fees, but also have such disadvantages as being subject to abandonment or invalidation collectively as a package. The choice between the simple dependent form claims and the multiple dependent form claims should therefore be made by weighing the merits and demerits of the respective claiming practice, and is left to the applicant's

discretion.

In light of conciseness and clearness, multiple dependent form claims preferably refer to statements of two or more claims in alternative form, and impose an identical technical limitation on the respective claims referred to. (See Note 14d of Form 29bis, Regulations under the Patent Act.)

Example 5: Multiple dependent form claims

- 1. An air conditioner with specific construction.
- 2. An air conditioner as defined in claim 1 provided with a wind direction regulating means.
- 3. An air conditioner as defined in claim 1 or 2 provided with a flow regulating means.

Claiming using a multiple dependent form is permissible in the following case because the statement of the claim is concise and the claimed invention is clear, even though reference is made to statements of two or more claims in non-alternative form, and an identical technical limitation is not imposed on the respective claims referred to.

Example 6:

- 1. A bolt provided with a male thread of specific configuration.
- 2. A nut provided with a female thread of specific configuration.
- 3. A fastening apparatus comprising the bolt as defined in claim 1 and the nut as defined in claim 2.

(3) Relation between the Note of Form, Regulations under the Patent Act on descriptive form of claims and the reason for refusal.

If a multiple dependent form claim refers to statements of two or more claims in nonalternative form or if it does not impose an identical technical limitation on the respective claims referred to, it does not comply with the instruction on claiming practice which is provided in Note 14d of Form 29 of Regulations under Patent Act. This instruction, however, is not one of the legal requirements provided in the Act as a basis of a decision of refusal. Therefore, mere noncompliance with the instruction does not constitute a reason for refusal of an application. (See Example 3.) On the other hand, such a case as Example 1 or 2 should be determined as violating Article 36(6)(ii) because it makes a claimed invention unclear.

- Example 1: The claimed invention becomes unclear due to the unclear statement caused by nonalternative reference to statements of other claims. (Violation of 2.2.2.3(1))
 - 1. An air conditioner with specific construction.
 - 2. An air conditioner as defined in claim 1 provided with a wind direction regulating means.
 - 3. An air conditioner as defined in claims 1 and 2 provided with a flow regulating means.
- Example 2: The category of the claimed invention becomes unclear due to the reference being made to claims of different categories, although an identical technical limitation is imposed on the claims referred to. (Violation of 2.2.2.3(3))
 - 1. An artificial heart with specific structure.
 - 2. A process for producing an artificial heart of specific construction, comprising specific

methods.

- 3. An artificial heart as defined in claim 1 provided with a safety device, or a process for producing the artificial heart as defined in claim 2 provided with a safety device.
- Example 3: Although not complying with the instructions in the Note of Form, Regulations under the Patent Act in that an identical technical limitation is not imposed on the respective claims referred to, the alternatives in the claim have a similar characteristics or function and it does not violate 2.2.2.3(4).
 - 1. An air conditioner with specific structure.
 - 2. An air conditioner as defined in claim 1 provided with a wind direction regulating means.
 - 3. An air conditioner as defined in claim 1 provided with a flow regulating means, or air conditioner as defined in claim 2 provided with a timer means.

2.2.5 Notice of Reasons for Refusal due to Violation of Article 36(6)

(1) When notifying the reason for refusal due to violation of Article 36(6), the examiner should identify the claim violating the provision and the Item (i.e., any of (i) to (iv) of Article 36(6)) constituting the ground of a decision of refusal, and should state the reason thereof along with pointing out the particular portion of the description, etc. which he/she deems as the basis of the judgment (Refer to 2.2.1.4 and 2.2.2.5).

(2) The reasons for refusal shall be deemed overcome if the examiner finds the applicant's argument or clarification to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the violation of Article 36(6) or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the ground earlier notified by the notice of reasons for refusal. (Refer to 2.2.1.4 and 2.2.2.5).

3. Requirements for the Detailed Explanation of the Invention

3.1 Article 36(4)(i)

Patent Act Article 36(4)(i)

The statement of the detailed explanation of the invention as provided in item (iii) of the preceding Paragraph shall comply with each of the following items:

(i) in accordance with Ordinance of the Ministry of Economy, Trade and Industry, the statement shall be clear and sufficient as to enable any person ordinarily skilled in the art to which the invention pertains to work the invention

Regulations under the Patent Act Article 24bis (Ministerial Ordinance)

The statement of the detailed explanation of the invention which is to be in accordance with Ordinance of the Ministry of Economy, Trade and Industry under the Patent Act, Article 36(4)(i) shall be made by stating the problem to be solved by the invention and its solution, and other matters necessary for a person ordinarily skilled in the art to which the invention pertains to understand the technical significance of the invention.

3.2 Enablement Requirement

"The statement of the detailed explanation of the invention as provided in item (iii) of the preceding Paragraph shall comply with each of the following items:

(i) ...the statement shall be clear and sufficient as to enable any person ordinarily skilled in the art to which the invention pertains to work the invention" (Article 36(4)(i)).

[The provisions applied to applications filed on or before August 31, 2002]

"The detailed explanation of the invention ...shall be stated in a manner to be clear and sufficient as to enable any person ordinarily skilled in the art to which the invention pertains to work the invention" (Article 36(4)).

(1) This provision means that the detailed explanation of the invention shall be stated in such a manner that a person who has ability to use ordinary technical means for research and development (including comprehension of document, experimentation, analysis and manufacture) and to exercise ordinary creativity in the art (a person skilled in the art) to which the invention pertains can carry out the claimed invention on the basis of statements of the description and drawings, as well as the common general knowledge as of the filing (hereinafter referred to as "enablement requirement").

(2) Therefore, 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.

(3) "To work the invention" in Article 36(4)(i) is interpreted as meaning that "the claimed invention can be carried out." Therefore, the detailed explanation of the invention must be stated in such a manner sufficiently clear and complete for a person skilled in the art to carry out the claimed invention i.e., "an invention identified based on the statement of the claim according to the handling shown in Part II Chapter 2, 1.5.1 and 1.5.2."

However, it is not a violation of Article 36(4)(i) that inventions, which are not claimed, are not stated sufficiently to meet the enablement requirement, or those extra matters, which are unnecessary for carrying out the claimed invention, are stated.

Where the statements supporting two or more claimed inventions would overlap, such overlapped statements may be omitted, provided that their relation to the claims remains clear.

(4) "To enable ...to work the invention" in the provision implies being able to make and use the product in the case of an invention of a product, being able to use the process in the case of an invention of a process and being able to make a product by the process in the case of an invention of a process for producing a product.

3.2.1 Practices in Enablement Requirement

(1)Mode for carrying out the invention

It is necessary to state in the detailed explanation of the invention at least one mode that an applicant considers to be the best (see, Note) among the "modes for carrying out the invention" showing how to carry out the claimed invention in compliance with the requirement in Article 36(4)(i).

(Note) The "mode for carrying out the invention" referred to in this Guideline is the same as prescribed in the Regulation 5.1-(a)(v) under PCT (Patent Cooperation Treaty). Hereinafter it is accordingly referred to as the "mode for carrying out" as well. It would be noted that regarding a point to state what the applicant considers to be the best, it is not required as a requirement base on Article 36(4)(i). Therefore it does not constitute reasons for refusal even if it is clear that what an applicant considers to be the best has not been stated.

(2)"Mode for carrying out the invention" in the case of an invention of a product

For an invention of a product, the definition of carrying out the invention is to make and use the product as mentioned above. Therefore, the "mode for carrying out the invention" also needs to be stated so as to enable a person skilled in the art to make and use the product.

①"Invention of a product" is clearly explained

To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the detailed explanation of the invention.

In the case of an invention of a chemical compound, for instance, the invention should be deemed as clearly explained if the chemical compound is expressed either by name or by chemical structural formula.

A matter to define an invention of a product stated in a claim and a corresponding statement of the detailed explanation of the invention should be consistent with each other in such a manner that the claimed invention can be understood as a whole from the detailed explanation of the invention.

2"Can be made"

For an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to make the product. For that purpose, the manufacturing method must be concretely stated, except the case where a person skilled in the art can manufacture the product based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

Where a claim includes statements defining a product by its function or characteristics, etc. and where such function or characteristics, etc. are neither standard nor commonly used by a person skilled in the art, the detailed explanation of the invention shall state the definition of such function or characteristics, etc. or the method for testing or measuring such function or characteristics, etc. in order for the claimed invention to satisfy the enablement requirement for the claimed invention.

In the technical field where it is difficult to predict the structure, etc. of a product from the function or characteristic, etc. of the product (e.g. chemical compounds), 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.)

Example violating the enablement requirement:

R receptor activating compounds obtained by a specific screening method.

There are no statements as to chemical structures or manufacturing methods of R receptor activating compounds other than the newly obtained X, Y, and Z disclosed as working examples, and there is no other clue to infer the chemical structure, etc. (Refer to Case 1.)

Also, it is required to state how each matter to define the invention of the product works (role of each matter) (namely, "operation" of each matter) if a person skilled in the art needs it for manufacturing the product of an invention.

On the other hand, when a person skilled in the art can manufacture the product from the statements on the structure shown as a working example or from the common general knowledge as of the filing, it does not constitute violation of the enablement requirement even though there is no statement as to manufacturing method thereof.

③"Can be used"

For an invention of a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to use the product. To meet this, the way of using the product shall be concretely stated except where the product could be used by a person skilled in the art without such explicit statement based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

For example, in the case of the invention of a chemical compound, it is necessary to state more than one specific use with technical significance in order to show that the chemical compound concerned can be used.

Also, it is required to state how each matter to define the invention of the product works (role of each matter) (namely, "operation" of each matter) if a person skilled in the art needs it for using the product of an invention.

On the other hand, the use of the product need not be explicitly stated in the detailed explanation of the invention where a person skilled in the art can use it by taking into account, for example, statement of the structure of the invention disclosed as a working example or the common general knowledge as of the filing.

(3)"Mode for carrying out the invention" in the case of an invention of a process

For an invention of a process, the definition of carrying out the invention is to use the process as mentioned above. Therefore, a "mode for carrying out the invention" for an invention of a process also needs to be stated so as to enable a person skilled in the art to use the process.

1 "Invention of a process" is clearly explained

To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the

detailed explanation of the invention.

2"Process can be used"

There are various types of process inventions other than those for manufacturing a product (so-called "pure process") such as a process of using a product, a process for measuring or process for controlling, etc. 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.

(4)"Mode for carrying out the invention" in the case of an invention of a process for producing a product

Where an invention of a process is directed to "a process for producing a product," the definition of "the process can be used" means that the product can be produced by the process. Therefore, a "mode for carrying out the invention" for an invention of a process for producing a product also needs to be stated so as to enable a person skilled in the art to produce the product.

①"Invention of a process for producing a product" is clearly explained

To satisfy this requirement, it is necessary that an invention can be identified from one claim (i.e., the claimed invention can be identified) and can be understood from the statement of the detailed explanation of the invention.

②"Product can be manufactured by the process"

For an invention of a process for producing a product, various types exist including a process for producing goods, a process for assembling a product, a method for processing a material, etc. Any of these consists of such three factors as i) starting materials, ii) process steps and iii) final products. For an invention of a process for producing a product, the detailed explanation of the invention shall be stated so as to enable a person skilled in the art to produce the product by using the process. Thus, these three factors 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 final products may be understood from statement of materials and process steps. (For instance, a process for assembling a simple device where structures of parts are not subject to any change during the process steps.) In such a case, statements on the final products may be omitted.

(5) How specifically the detailed explanation of the invention must be stated.

"The mode for carrying out the invention" should be stated in terms of embodiments or working examples if they are needed in order to explain the invention in such a way that a person skilled in the art can carry out the invention. (see, Note Article 24, Form 29, Regulations under the Patent Act). The explanation should be done by citing drawings, if any. Embodiments or working examples specifically show the mode for carrying out the invention. (Regarding an invention of a product, for instance, those, which specifically show how to make it, what structure it has, how to use it, etc.)

In cases where it is possible to explain the invention so as to enable a person skilled in the art to carry out the invention based on the statements of the description and drawings, as well as

the common general knowledge as of the filing, neither embodiments nor working examples are necessary.

Where an invention of a product is not defined by such specific means as its structure but defined by its function or characteristics, etc., a specific means which is capable of performing the function or characteristics shall be explicitly stated in the detailed explanation of the invention, except where it could be understood by a person skilled in the art without such explicit statement based on the statements of the description and drawings, as well as the common general knowledge as of the filing.

In the case of inventions in technical fields where it is generally difficult to infer how to make and use a product on the basis of its structure (e.g., chemical compounds), normally one or more representative embodiments or working examples are necessary which enable a person skilled in the art to carry out the invention. Also, in the case of use inventions (e.g., medicine) using the characteristics of a product etc., the working examples supporting the use are usually required.

(6) Relation between the statement of the claim and the detailed explanation of the invention

① As mentioned in (1) above, at least one mode for carrying out the invention needs to be stated in terms of "claimed invention," but the mode for carrying out the invention is not needed for all the embodiments or alternatives included within the claimed invention.

However, if the examiner can suppose the other specific example which can be included in the claimed invention and can show well-founded reasons that a person skilled in the art would be unable to carry it out even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention.

2 For example, if a claim is directed to a generic concept, whereas only a mode for carrying out a more specific concept of the generic concept is stated in the detailed explanation of the invention, and if the examiner can show well-founded reasons that a person skilled in the art would be unable to carry out specific concepts (these are limited to ones that a person skilled in the art can recognize as of the filing; the same will apply hereinafter in the part of "Enablement Requirement") which are not stated in the mode for carrying out the invention even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention.

③ If a claim is defined in an alternative way by a Markush-type formula, whereas only a mode for carrying out a part of the claimed alternatives is stated in the detailed explanation of the invention, and if the examiner can show well-founded reasons that a person skilled in the art would be unable to carry out the rest of the alternatives which are not stated in the mode for carrying out the invention even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, then, the detailed explanation of the invention cannot be deemed to be stated clearly and sufficiently as to enable a person skilled in the art to work the invention.

④ If a claim includes the product defined by a result to be achieved, it should be noted that

such a claim may be so broad that a person skilled in the art would be unable to carry out the parts of the claim which are not stated in the mode for carrying out the invention.

3.2.2 Types of Violation of Enablement Requirement

3.2.2.1 Improper Statement of Modes for Carrying Out the Invention

(1) A person skilled in the art cannot carry out the claimed invention because a technical means corresponding to a matter to define the claimed invention is stated in a merely functional or abstract way in the mode for carrying out the invention and in such a manner that it is unclear and incomprehensible how the technical means should be embodied into a material, apparatus or process, even taking into account the common general knowledge as of the filing.

(2) A person skilled in the art cannot carry out the claimed invention because the relation between each technical means corresponding to a matter to define the claimed invention is unclear and incomprehensible in the mode for carrying out the invention, even taking into account the common general knowledge as of the filing.

(3) A person skilled in the art cannot carry out the claimed invention because specific numerical values such as manufacturing conditions are neither stated in the mode for carrying out the invention nor can be understood by a person skilled in the art when taking into account the common general knowledge as of the filing.

3.2.2.2 Part of Claim Not Supported by Mode for Carrying Out the Invention

(1) A claim is directed to a generic concept, whereas only a mode for carrying out a more specific concept of the generic concept is stated in the detailed explanation of the invention in a manner which enables a person skilled in the art to carry out the invention, and there is a well-founded reason that a person skilled in the art would be unable to carry out specific concepts which are not stated in the mode for carrying out the invention even by taking into account the common general knowledge as of the filing. (Note that methods of experimentation and analysis may be among the common general knowledge as of the filing.)

Example: A claim is directed to "a process for manufacturing a molded plastics consisting of the first step to form the plastics and the second step to correct strain of the formed plastics." The detailed explanation of the invention states, as a working example, only a process wherein the plastics being thermoplastic resin is formed by an extrusion molding and then the strain is corrected by heat-softening the molded plastics. The process for the strain correction by heat softening deems inappropriate for the case where the plastics being thermosetting resin. (A rational reasoning can be made that the strain-correction of the working example is inappropriate for thermosetting resin in view of the fact that thermosetting resin can not be soften by heating which is generally accepted as scientifically or technically correct.)

(2) A claim is defined by a Markush-type formula, whereas only a mode for carrying out a part of the claimed alternatives is stated in the detailed explanation of the invention in a manner which

enables a person skilled in the art to carry out the invention, and there are well-founded reasons that a person skilled in the art would be unable to carry out the rest of the alternatives which are not stated in the mode for carrying out the invention even by taking into account the common general knowledge as of the filing. (Note that methods of experimentation and analysis may be among the common general knowledge as of the filing.)

Example: A claim is directed to a process for manufacturing para-nitro substituted benzene by nitrating the substituted benzene where the substituent group (X) is CH3, OH, or COOH. The detailed explanation of the invention states, as a working example, only a case where the starting material is toluene (i.e., a case where X is CH3). A rational reasoning can be made that such a process is inappropriate when the starting material is benzoic acid (i.e., when X is COOH) in view of very large difference in the orientation between CH3 and COOH.

(3) A particular mode for carrying out the invention is stated in the detailed explanation of the invention in a manner which enables a person skilled in the art to carry out the invention. For example, however, the particular mode is idiosyncratic within the claimed invention, and therefore, there is a well-founded reason that a person skilled in the art would be unable to carry out the parts of the claim which are not stated in the mode for carrying out the invention even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.)

Example: A claim is directed to "a lens system for a single-lens reflex camera consisting of three lenses, wherein the lenses are placed in order of a positive, a negative and a positive lens from the object side to the film side, wherein optical aberration of the lens system is corrected so as to be less than X % in image height H." The detailed explanation of the invention states, as a mode for carrying out the invention, an example of specific combination of refractive indices of three lenses, or in addition, a specific conditional formula for them so that the particular optical aberration can be done.

In the field of optical lenses, it is generally accepted as scientifically or technically correct that an example of specific combination of refractive indices which can embody a particular optical aberration is of idiosyncratic nature. In addition, that particular statement such as the example of refractive indices or conditional formula does not teach any generalized conditions for manufacturing the corrected lens system. Thus, a rational reasoning can be made that a person skilled in the art would be unable to understand how to carry out the parts of the claim which are not stated in the mode for carrying out the invention even by taking into account the methods of experimentation, analysis and manufacture which are generally known to a person skilled in the art as of the filing.

(4) A claim includes the product defined by the result to be achieved, whereas only the specific working mode is stated in the detailed explanation of the invention in a manner which enables a person skilled in the art to carry out the invention, and therefore, there is a well-founded reason that a person skilled in the art would be unable to carry out the parts of the claim which are not stated in the mode for carrying out the invention even by taking into account the statements of the

description and drawings, as well as the common general knowledge as of the filing. (Note that methods of experimentation and analysis may be among the common general knowledge as of the filing.)

Example: "A hybrid car of which energy efficiency during running on electricity is a – b%, as measured by X test method" is stated in the claims. And only the specific mode for carrying out, that is the hybrid car equipped with specific control means to obtain the energy efficiency concerned, is stated in the detailed explanation of the invention in a manner which enables the invention to be carried out.

In the technical field of the hybrid car, the fact that the aforesaid energy efficiency is normally about x%, which is far lower than a% and it is difficult to realize higher energy efficiency such as a - b%, is common general knowledge as of the filing. In addition, the statement on the hybrid car equipped with aforesaid specific control means do not show the common solving means for realizing the aforesaid high energy efficiency. Accordingly, the rational reason can be made that a person skilled in the art would not be able to understand another hybrid car which brings the aforesaid result included in the claim even though taking into account the common art in the relevant technical field. (Refer to Case 2.)

3.2.3 Notice of Reasons for Refusal due to Violation of Enablement Requirement

(1) Where the examiner makes a notice of reasons for refusal due to violation of enablement requirement under Article 36(4)(i), he/she shall identify the claim which violates the requirement, make clear that the ground of refusal is not a violation of the Ministerial Ordinance requirement but a violation of enablement requirement under Article 36(4)(i), and point out particular statements, if any, which mainly constitute the violation. The examiner shall explain the reason why he/she determines that the claimed invention fails to meet the enablement requirement, while showing the grounds for such determination (e.g. the part of the statement of the detailed explanation of the invention and the content of the common general knowledge as of the filing that he/she has taken into account when making the determination). The examiner is also required to set forth in the notice, to the extent possible, a clue for the applicant to understand the direction of an amendment that should be made in order to avoid the reasons for refusal (e.g. the required level of enablement).

It is not appropriate for the examiner to merely state, "Even by taking into account the common general knowledge as of the filing, the detailed explanation of the invention cannot be regarded as stating the invention clearly and sufficiently as to enable any person skilled in the art to work the invention," without specifying the reasons for such determination, because this would make it difficult for the applicant to make an effective argument or understand the direction of an amendment that should be made in order to avoid the reasons for refusal.

It is recommended that the reason above should be supported by reference document. Such documents are, in principle, limited to those that are known to a person skilled in the art as of the filing. However, descriptions of later applications, certificates of experimental result, written oppositions to the grant of a patent, and written opinions submitted by the applicant for another application etc. can be referred to for the purpose of pointing out that the violation stems from the statements of the description or drawings being inconsistent with a fact generally accepted as scientifically or technically correct by a person skilled in the art. (2) The reasons for refusal shall be deemed overcome if the examiner finds the applicant's argument or clarification (refer to 3.2.4) to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the failure to meet the enablement requirement, which means that the detailed explanation of the invention cannot be regarded as stating the invention clearly and sufficiently as to enable a person skilled in the art to work the invention, or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the ground earlier notified by the notice of reasons for refusal.

3.2.4 Applicant's Response to the Notice of Reasons for Refusal due to Violation of the Enablement Requirement

Upon receiving a notice of reasons for refusal due to violation of the enablement requirement, the applicant may make an argument or clarification by submitting a written opinion, certificate of experimental results, and the like.

The applicant may, in a written opinion, point out the common general knowledge as of the filing other than those taken into account by the examiner when making such determination, and argue that in light of such common general knowledge, the statement of the detailed explanation of the invention can be deemed to be clear and sufficient as to enable a person skilled in the art to work the claimed invention. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion. (Refer to Case 6, 7, and 21.)

However, if, due to a deficiency of the matters stated in the detailed explanation of the invention, the statement of the detailed explanation of the invention cannot be deemed to be clear and sufficient as to enable a person skilled in the art to work the claimed invention even in light of the common general knowledge as of the filing, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that the statement is clear and sufficient. (Refer to Cases 4, 5, 8, and 9.) (See: Tokyo High Court Decision dated October 31, 2001 (Hei 12 (Gyo-Ke), No. 354, a case to seek rescission of the JPO decision.)

3.3 Ministerial Ordinance Requirement

3.3.1 Ministerial Ordinance under Article 36(4)(i)

"The statement of the detailed explanation of the invention as provided in item (iii) of the preceding Paragraph shall comply with each of the following items:

(i) in accordance with Ordinance of the Ministry of Economy, Trade and Industry, the statement shall be ..." (Article 36(4)(i)).

"The statement of the detailed explanation of the invention which is to be in accordance with Ordinance of the Ministry of Economy, Trade and Industry under the Patent Act, Article 36(4)(i) shall be made by stating the problem to be solved by the invention and its solution, and other matters necessary for a person ordinarily skilled in the art to which the invention pertains to understand the technical significance of the invention" (Regulations under the Patent Act Article 24bis).

[The provisions applied to applications filed on or before August 31, 2002]

"The detailed explanation of the invention as provided in item (iii) of the preceding Paragraph shall be stated, in accordance with Ordinance of the Ministry of Economy, Trade and Industry...." (Article 36(4)).

"The statement of the detailed explanation of the invention which is to be in accordance with Ordinance of the Ministry of Economy, Trade and Industry under the Patent Act, Article 36(4) shall be made by stating the problem to be solved by the invention and its solution, and other matters necessary for a person ordinarily skilled in the art to which the invention pertains to understand the technical significance of the invention." (Regulations under the Patent Act Article 24bis)

3.3.2 Purpose of the Ministerial Ordinance

Since an invention is a creation of new technical idea, it is important that a patent application is stated so as to make a person skilled in the art understand the technical significance of the invention (i.e., the technical contribution which the invention brought up) in light of the state of the art as of the filing. The statement relating to what is an unsolved problem, in which technical field such a problem resides, and how such a problem has been solved by the invention are useful in the detailed explanation of the invention. This way of statement is a conventional way.

One who wishes to obtain a hint for research and development from patent documents or to utilize useful patented invention can easily conduct a search of patent documents by paying attention to the problem to be solved by the invention.

In determining inventive step of an invention under Article 29(2), a prior art document showing a problem to be solved which is common to the claimed invention can be a ground for a decision of refusal. Therefore, judgment of inventive step is easier for applicants and third parties if both a patent application under examination and a prior art document contain the statements of problems to be solved.

For these reasons, Ministerial Ordinance requires stating in the detailed explanation of the invention "matters necessary for a person ordinarily skilled in the art to which the invention pertains to understand the technical significance of the invention," and exemplifies such matters as the problem to be solved and its solution.

3.3.3 Practical Application of Ministerial Ordinance Requirement

(1) In light of above-mentioned purposes, matters required under the Ministerial Ordinance shall be deemed as the following.

① Technical field to which an invention pertains

As "technical field to which an invention pertains," an application shall state at least one technical field to which a claimed invention pertains

However, the "technical field to which an invention pertains" is not required to be explicitly stated if a person skilled in the art can understand it without such explicit statements when taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

Further, in cases where an invention is deemed not to pertain to existing technical fields like
an invention developed based on an entirely new conception which is completely different from prior art, an application for such an invention need not to state existing technical fields, and statements of the new technical field developed by the invention suffices the requirement.

2 Problem to be solved by the invention and its solution

(i) As "problem to be solved by the invention," an application shall state at least one technical problem to be solved by a claimed invention.

As "its solution," an application shall explain how the problem has been solved by the claimed invention.

(ii) However, the "problem to be solved by the invention" is not required to be explicitly stated if a person skilled in the art can understand it without such an explicit statement, when taking into account the statements of the description and drawings, which include statements of prior art or advantageous effects of the invention, as well as the common general knowledge as of the filing. (Note that a person skilled in the art could comprehend the problem when considering prior art which falls within the common general knowledge as of the filing.) Also, in cases where a person skilled in the art would understand how the problem has been solved by a claimed invention by examining the claimed invention in light of the problem which has been found in the abovementioned way, and taking into account the statement of a working example, an application for such an invention is not required an explicit statement of problem-solution form.

(iii) Further, in cases where an invention is deemed not based upon recognition of a problem to be solved like an invention developed based on an entirely new conception which is completely different from prior art or an invention which is based on a discovery resulting from trials and errors (e.g., chemical compounds), an application for such an invention is not required to state a problem to be solved.

It is in connection with "a problem to be solved by the invention" that "its solution" is meaningful. In another word, if one does not recognize a problem, one cannot recognize how an invention has solved a problem. (As opposed to this, if one can once recognize a problem, one might recognize how an invention has solved the problem.) Therefore, in cases where an invention is deemed not based upon recognition of a problem to be solved as mentioned above, an application for such an invention is not required to state how the invention has solved a problem (i.e., statements of solution). (It is needless to say, however, that even such an application is required sufficient disclosure meeting the enablement requirement.)

(Remarks)

Where statements of a technical field, a problem to be solved and its solution for two or more claims would overlap, such overlapped statements may be omitted, provided that the relation of each claim remains clear.

(2) The enablement requirement ensures an applicant to disclose to the public how to carry out the invention in return for granting a patent. Therefore, to grant a patent to an application dissatisfying the requirement would lead to an extreme imbalance between a patentee and the third parties.

The Ministerial Ordinance requirement, on the other hand, aims at clarifying the technical significance of an invention, and thereby, contributes to patent examinations and searches.

Accordingly, the requirements should be treated as follows.

① Where an invention is determined the one which, if being required to state a problem to be solved, would rather result in hampering correct understanding of technical significance of the invention as mentioned in (1) above, a patent application for such an invention may omit statements of a problem to be solved and its solution. Also, where an invention is determined that it would not pertain to existing technical fields, a patent application for such an invention is deemed to meet the requirement by stating the new technical field to which the claimed invention pertains.

② A patent application for an invention not falling in (1) is deemed to violate the requirement when a person skilled in the art cannot understand the technical field to which the invention pertains, the problem to be solved by the invention and its solution even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing.

For example, the technical significance of the invention is unclear and this constitutes a violation of the Ministerial Ordinance requirement where the matters used to specify the invention include a numerical formula or numerical value, but a person skilled in the art is unable to understand the substantial relationship between the problem to be solved by the invention and the definition by such numerical formula or numerical value, and as a result, unable to understand the solution of the problem to be solved by the invention,

(3) Prior art and advantageous effect

① Prior art

[The following provisions shall be applied to applications filed on or after September 1, 2002.] (Refer to Chapter 3 about requirements for disclosure of information on prior art document in an application on or after September 1, 2002.)

Statements of prior art are not required under the Ministerial Ordinance requirement. However, an applicant should state background prior art, as far as he/she knows, which is deemed to contribute to understanding the technical significance of the claimed invention and examination of patentability of the claimed invention because such statements of prior art could teach the problem to be solved and could substitute the statements of the problems.

[The following provisions shall be applied to applications filed on or before August 31, 2002]

Statements of prior art are not required under the Ministerial Ordinance requirement. However, an applicant should state background prior art, as far as he/she knows, which is deemed to contribute to understanding the technical significance of the claimed invention and examination of patentability of the claimed invention because such statements of prior art could teach the problem to be solved and could substitute the statements of the problems.

Also, documents related to prior art are one of the important means for evaluating the patentability of the claimed invention. Therefore, when any documents relevant to the claimed invention exist, it is strongly recommended to cite such documents.

2 Advantageous effects over prior art

It is not required under the Ministerial ordinance requirement to state an advantageous effect of a claimed invention over the relevant prior art. However, it is an applicant's advantage to

state an advantageous effect of a claimed invention over the relevant prior art because such advantageous effect, if any, is taken into account as a fact to support to affirmatively infer the existence of inventive step (Refer to Part II, Chapter 2. 2.5(3)). Also, statements of advantageous effects could teach the problem to be solved and could substitute the statements of the problems to be solved. Therefore, an applicant should state an advantageous effect of a claimed invention over the relevant prior art, if any, as far as he/she knows.

(4) Industrial applicability

To state industrial applicability is not treated as a Ministerial Ordinance requirement. Industrial applicability is stated in case only it is unclear even if taking into account the characteristics of the invention or the description. Industrial applicability is obvious in many cases from the characteristics of the invention or the description, and in such a case, industrial applicability is not required to be explicitly stated.

3.3.4 Notice of Reasons for Refusal due to Violation of the Ministerial Ordinance Requirement

(1) Where the examiner is convinced that an application constitutes a violation of the Ministerial Ordinance requirement, he/she shall make a notice of reasons for refusal stating to the effect that the ground of a decision of refusal is a violation of the Ministerial Ordinance requirement under Article 36(4)(i), while pointing out which of the matters necessary to understand the technical significance of the invention is defective.

(2) The reasons for refusal shall be deemed overcome if the examiner finds the applicant's argument or clarification (refer to 3.3.5) to be acceptable. Where the applicant's argument or clarification does not change the examiner's conviction at all regarding the failure to meet the Ministerial Ordinance requirement, which means that the detailed explanation of the invention does not state any matters necessary for a person skilled in the art to understand the technical significance of the invention, or where it succeeds in denying the examiner's conviction only to the extent that truth or falsity becomes unclear, the examiner makes a decision of refusal on the ground earlier notified by the notice of reasons for refusal.

3.3.5 Applicant's Response to the Notice of Reasons for Refusal due to Violation of the Ministerial Ordinance Requirement

Upon receiving a notice of reasons for refusal due to the violation of the Ministerial Ordinance requirement, the applicant may argue that a person skilled in the art could have understood the technical field of the claimed invention, the problem to be solved, and its solution, by referring to the description and drawings, as well as the common general knowledge as of the filing. This argument can be made, for example, by means of submission of a written opinion, etc. or written amendment introducing no new matter aiming at clarifying the relevant prior art as of the filing which the examiner would not have recognized. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion.

However, if, due to the deficiency of the matters stated in the detailed explanation of the invention, a person skilled in the art could not have recognized the problem to be solved by the invention or its solution by making reference to the statements of the description and drawings, as well as the common general knowledge as of the filing, the reasons for refusal cannot be overcome

even when the applicant submits a certificate of experimental results after the filing to make up for such deficiency, thereby arguing that a person skilled in the art could have recognized the problem and solution.

4. Improper Statements of the Description, etc. in General

The requirements under Article 36(4)(i) or (6) are not satisfied in the following cases if the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention. or if an invention for which a patent is sought is unclear because the matters stated in the claim cannot be accurately understood by such a person. (Whether or not an application violates the requirements is determined on a case-by-case basis by above-mentioned handling.)

(1) Contents of the detailed explanation of the invention or of the claim are unclear because they are not accurately stated in the Japanese language (including improper translation).

This includes the followings: unclear relation between the subject and the predicate, unclear relation between the modifier and the modified word, errors in punctuation, errors in characters (wrong character, omitted character, false substitute character), and errors in sign.

(2) Terms are not used consistently throughout the whole description, etc.

(3) A term is neither an academic term nor a technical term that is commonly used in academic or technical documents and has no definition in the detailed explanation of the invention.

(4) Trademarks are used for what can be indicated otherwise.

(5) The amount or extent of a state of things or phenomena is not stated in a description, etc. by use of units provided for by the Measurement Act.

(6) The brief description of the drawings (explanation of the drawings and marks) is defective in relation to the detailed explanation of the invention, claims, or drawings.

5. Case Examples

In order to make clear the examination practice in relation to this chapter, the outline of the determination as to the requirements for the description and claims, as well as the applicant's response are explained below, based on specific examples.

(Points to note)

If a case example involves reasons for refusal due to violation of two or more description requirements (e.g. the claimed invention is unclear and fails to meet the enablement requirement), the applicant shall basically be notified of all of these reasons by the first notice.

Nevertheless, notification of several reasons for refusal do not always have to be made redundantly, where it is obvious that if one of the reasons is overcome, the other(s) will also be overcome (e.g. the direction of an amendment that could resolve the violation of both items (i) and (ii) of Article 36(6) is obvious) (refer to Part IX, Section 2, 4.3.1(2)).

The case examples shown below do not mean that there is no reason for refusal other than those relating to the description requirements.

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Casa	Title	Article	Article	Enchloment	Ministerial	
Case No.		36(6)	36(6) Crdina		Ordinance	Notes
		(i)	(ii)	Requirement Requirement		
		(•)	()			for a financia
Case 1	R receptor activating compounds	х	х	х		function or
						characteristics,
						etc.
						function or
Case 2	Hvbrid car	Х	Х	х		characteristics.
						etc
						function or
Case 3	DNA	х	x	Х		
						characteristics,
						etc.
	Anti-allergic drug	х		x		function or
Case 4						characteristics,
						etc.
Case 5	Compounds	Х		X		Markush
00000	pontidaça 7 inhibiting	~		~~~~		Markdon
Case 6		X		Х		Markush
	agent					
Case 7	olefin polymerization	x		Х		Markush
	catalyst	Λ				
0	a star setter da se	X		X		pharmacological
Case 8	antiemetic drug	~		X		result
Case 9	vaccine	х		х		pharmacological
						result
						result
Case 10	agent for preventing					pharmacological
	arteriosclerosis					result
Case 11	polypropylene film					parameter
Casa 10	stretched packaging film	х		х	х	
Case 12						parameter
Case 13	pencil lead			Х		parameter
	manufacturing					[
Coop 14	mathad for a	V				
Case 14		^				
	semiconductor device					
Case 15	information provision	х	х			
	system	~				
Case 16	disposable diaper	Х				
Case 17	machining center	Х	Х			
Case 18	image encoding chip	Х	Х			
	- 3					product-by
Case 19	wash-free rice		Х			process
						-process
Case 20	cell					product-by
						-process
Case 21	Microorganism	Х		Х		

A list of the case examples

("X" means existence of the notice of reasons for refusal)

Scope of claims

[Claim 1]

Compounds having the R receptor activating action.

[Claim 2]

An anti-obesity drug containing a compound of Claim 1, having the R receptor activating action as an active ingredient.

Outline of the detailed explanation of the invention

The applicant was the first person who discovered R receptor and also the first person who found the method of screening compounds having the R receptor activating action.

The detailed explanation of the invention indicates the series of steps, including the screening conducted to determine the existence of the R receptor activating action, and specifically defines the judgment method for making such determination (the level of activation where a particular compound is determined to be an R receptor activating compound).

Examples show the chemical structures and manufacturing methods of novel compounds X, Y, and Z having the R receptor activating action, which have significantly different backbone structures to one another, and confirm that these compounds have the R receptor activating action.

In addition, the description provides a theoretical statement of the pharmacological mechanism in which activation of the R receptor suppresses obesity, and it also states that compound X has such pharmacological action, indicating the pharmacological test method and results.

(With regard to R receptor activating compounds other than X, Y, and Z, there is no statement of the chemical structures or manufacturing methods.)

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement): Claims 1 and 2

Claim 1 comprehensively describes compounds having the R receptor activating action, whereas the detailed explanation of the invention only describes, as specific examples, the chemical structures and manufacturing methods of novel compounds X, Y, and Z having the R receptor activating action, without indicating any chemical structures or manufacturing methods of other R receptor activating compounds. It is common general knowledge as of the filing that it is difficult to understand the specific compound that can activate the newly discovered receptor. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which is defined only by the R receptor activating action.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, it is impossible to understand the specific features of R receptor activating compounds other than X, Y, and Z. For this reason, a person skilled in the art who intends to work the invention of Claim 1 would have to make trials and errors, beyond the reasonably-expected extent, in manufacturing, screening and confirming an innumerable number of compounds.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to

enable a person skilled in the art to work the invention of Claim 1.

The same applies to the invention of Claim 2, which is defined as containing the compound mentioned in Claim 1 as an active ingredient.

- Article 36(6)(ii): Claims 1 and 2

It is common general knowledge as of the filing that it is difficult to understand the specific compounds defined only by their action of activating the newly discovered receptor. Therefore, in light of such common general knowledge, it is evident that the "compounds" defined only by said action, with no chemical structure, etc. required to have said action, are not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of Claim 1 even by taking into account the statements of the description and drawings.

The same applies to the invention of Claim 2, which is defined as containing the compound mentioned in Claim 1 as an active ingredient.

Applicant's response

The applicant can overcome the reasons for refusal by amending claims so as to ensure that the compounds are defined by the specific chemical structure, that the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the invention of claims and that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of claims.

For example, claims could be amended as follows:

[Claim 1]

Compounds X, Y, or Z, which have the R receptor activating action.

[Claim 2]

An anti-obesity drug containing a compound of Claim 1, having the R receptor activating action as an active ingredient.

(Supplementary explanation)

(1) Refer to Case 4, which satisfies the requirement of Article 36(6)(ii) even though the active ingredient is defined only by a function or characteristics, etc.

(2) Agonist, antagonist

Even in cases where the invention of Claim 1 is described with the expressions such as "R receptor agonists" or "R receptor antagonists," it shall be regarded as an invention relating to "R receptor activating compounds" or "R receptor inhibiting compounds," respectively, according to the meanings of the respective terms.

(3) An invention relating to "R receptor activating agent having an R receptor agonist as an active ingredient"

Supposing an invention relating to "R receptor activating agent having an R receptor agonist as an active ingredient," which is not discussed above, the phrase "R receptor activating agent" is nothing more than another phrase used to represent the "R receptor activating action" of the compound contained as an active ingredient. In the examination on the description requirement, the claim stated with such phrase shall be treated in the same manner as the aforementioned claim of "R receptor activating compounds (agonist)."

Scope of claim

[Claim 1]

A hybrid car of which energy efficiency during running on electricity is a - b%, as measured by X test method.

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a hybrid car which achieves high energy efficiency during running on electricity.

Examples show a hybrid car equipped with a control means to perform Y control for a belttype continuously-variable transmission, and it is indicated that energy efficiency of this hybrid car during running on electricity is a - b%, as measured by X test method. A belt-type continuouslyvariable transmission is a limitative concept subordinate to the generic concept of continuouslyvariable transmission. The detailed explanation of the invention further states that a control means to perform Y control for a continuously-variable transmission other than the belt-type one can be adopted.

The detailed explanation of the invention also provides for the definition of the X test method.

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement)

Claim 1 describes a hybrid car defined only by the high energy efficiency of a - b%, whereas the detailed explanation of the invention only describes, as specific examples, a hybrid car equipped with a control means to perform Y control for a belt-type continuously-variable transmission, as a hybrid car that achieves high energy efficiency of a - b%. In light of the common general knowledge as of the filing, it is understood that the similar high energy efficiency can also be achieved by adopting a control means to perform Y control for a continuously-variable transmission other than the belt-type one, and therefore, the content disclosed in the detailed explanation of the invention can be expanded or generalized to a hybrid car equipped with a control means to perform Y control for any type of continuously-variable transmission. However, Claim 1 defines a hybrid car only by said energy efficiency, while defining nothing about the control means. In the technical field of the hybrid car, it is normally about X%, far lower than a%, and it is difficult to realize a higher energy efficiency such as a - b%. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which is defined only by said energy efficiency.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, it is impossible for a person skilled in the art to understand cases other than the case of adopting a control means to perform Y control for continuously-variable transmission, which is included in the scope of Claim 1.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

- Article 36(6)(ii)

In the technical field of the hybrid car, it is common general knowledge as of the filing that the energy efficiency during running on electricity is normally about X%, far lower than a%, and it is difficult to realize a higher energy efficiency such as a - b%, and it is also difficult to understand the specific hybrid car defined only by such high energy efficiency. Accordingly, in light of such common general knowledge, it is evident that a "hybrid car" defined only by said energy efficiency, with no means to realize it being defined, is not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of Claim 1 even by taking into account the statements of the description and drawings.

Applicant's response

The applicant can overcome all of the reasons for refusal by amending Claim 1 so as to ensure that means to realize said energy efficiency are defined, that the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the invention of Claim 1, and that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

The applicant does not necessarily have to limit the scope of claim to a hybrid car equipped with a control means to perform Y control for a belt-type continuously-variable transmission, which is specifically disclosed in the detailed explanation of the invention. For example, Claim 1 could be amended as follows:

[Claim 1]

A hybrid car equipped with a control means to perform Y control for a belt-type continuously-variable transmission, of which energy efficiency during running on electricity is a – b%, as measured by X test method.

Scope of claim

[Claim 1]

A DNA encoding a protein having an activity A.

Outline of the detailed explanation of the invention

A DNA encoding a protein having an activity A is defined by only one nucleotide sequence of "atgc..."Examples show the experimental results and it is confirmed that a protein which is encoded by the DNA has an activity A.

It is stated that a DNA whose nucleotide sequence is different from said sequence of "atgc..." and which encodes a protein having activity A can be obtained by the point mutation method or by the hybridization method under stringent conditions, using said sequence (although there is no example of such DNA actually obtained).

The "stringent conditions" are also indicated.

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement)

While "DNA encoding a protein having an activity A" is described in Claim 1, only DNA composed of one specified nucleotide sequence is disclosed in the detailed explanation of the invention as a specific example. It is common general knowledge as of the filing that it is difficult to obtain DNA whose sequence is significantly different from, or whose sequence has low homology to, said specified nucleotide sequence, and which encodes a protein having the same activity. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which also covers DNA whose nucleotide sequence has low homology to said specified nucleotide sequence and which encodes a protein having activity A.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, if a person skilled in the art intends to obtain such DNA whose nucleotide sequence has low homology to said specified nucleotide sequence and which encodes a protein having activity A, he/she would have to make trials and errors or conduct complicated experimentation, beyond the reasonably-expected extent.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

- Article 36(6)(ii)

Claim 1 defines the DNA only by its function of "encoding a protein having an activity A." However, it is also common general knowledge as of the filing that it is difficult to understand the specific protein defined only by its activity or DNA encoding such protein. Therefore, in light of such common general knowledge, it is evident that DNA defined only by such function, with no nucleotide sequence being defined, is not sufficiently specified from a technical perspective, and the invention cannot be clearly identified from the statement of Claim 1 even by taking into account the statements of the description and drawings.

Applicant's response

The applicant can overcome all of the reasons for refusal by amending Claim 1 so that it will not include DNA whose nucleotide sequence has low homology to the nucleotide sequence of the DNA specifically disclosed in the detailed explanation of the invention.

For example, Claim 1 could be amended as follows:

DNA that meets either (a) or (b) below:

(a) DNA whose nucleotide sequence is represented by atgc...; or

(b) DNA which hybridizes under stringent conditions to DNA whose nucleotide sequence is complementary to that of the DNA defined in (a), and which encodes a protein having activity A.

Note 1:

The detailed explanation of the invention only discloses DNA whose nucleotide sequence is represented by "atgc..." as a specific example of "DNA encoding a protein having activity A."

In light of the common general knowledge as of the filing, the general approach for obtaining DNA whose sequence is different from said nucleotide sequence represented by "atgc..." and which "encodes a protein having activity A" is the point mutation method or hybridization method, using said nucleotide sequence.

However, as both of these methods are based on the nucleotide sequence actually obtained, neither method is available when obtaining DNA whose sequence is significantly different from, or whose sequence has low homology to said nucleotide sequence, and which "encodes a protein having activity A."

Note 2:

Point mutation method: A technology for artificially modifying only a desired portion of the nucleotide sequence of the original DNA

Hybridization method: A method of obtaining DNA, RNA, etc. whose nucleotide sequence is homologous with that of the original DNA, by duplex formation

Scope of claims

[Claim 1]

An anti-allergic drug containing a compound having enzyme A inhibitory activity as an active ingredient.

[Claim 2]

An anti-allergic drug of Claim 1, in which the compound having enzyme A inhibitory activity is represented by Formula (I):



wherein Y is either an oxygen atom or sulfur atom, and R_1 and R_2 are independently selected from the group consisting of hydrogen, halogen, nitro, cyano, and C1-6 alkyl.

Outline of the detailed explanation of the invention

The present invention relates to a new use of a compound having enzyme A inhibitory activity. A considerable number of compounds are known as those having enzyme A inhibitory activity, including compounds having various chemical structures such as those represented by General Formula (I) in Patent Gazette No. \circ , and those disclosed generally or specifically in JP XX-XXXXX A and Cited Reference \triangle . Among those already known, compound A and compound B are preferable.

Examples show the pharmacological test method and result by which the anti-allergic action is confirmed in several specific compounds represented by Formula (I) (including compound A and compound B).

(However, there is no theoretical explanation that compounds having enzyme A inhibitory activity have an anti-allergic action.)

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement): Claim 1

Claim 1 comprehensively describes an anti-allergic drug containing a compound defined by its property, "enzyme A inhibitory activity," as an active ingredient. However, the detailed explanation of the invention only states that it has been confirmed that the specific compound as defined in Claim 2 is useful as an active ingredient of an anti-allergic drug, and it does not show any theoretical or experimental grounds to prove the usefulness as an anti-allergic drug of any compound in general having enzyme A inhibitory activity. Furthermore, the scope of an active ingredient defined only by its property may include compounds having various chemical structures, but it is common general knowledge as of the filing that compounds whose chemical structures significantly differ from each other do not necessarily have the same pharmacological action. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention, to the scope of the invention of Claim 1, which also covers an anti-allergic drug

containing, as an active ingredient, a compound whose chemical structure significantly differs from that of the compound defined in Claim 2.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, the statement of the detailed explanation of the invention cannot be deemed to be informative enough to use an antiallergic drug containing any compound in general having enzyme A inhibitory activity as an active ingredient.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Notes

Claim 1 describes the invention of an anti-allergic drug containing a compound defined by its property, "enzyme A inhibitory activity," as an active ingredient. As it is easy to understand the compound having said property in light of the common general knowledge as of the filing, such compound as defined by the property, "enzyme A inhibitory activity," is sufficiently specified from a technical perspective, and the invention can be clearly identified from the statement of Claim 1. Thus, Claim 1 satisfies the requirement of Article 36(6)(ii).

Claim 2 satisfies both the requirements of Article 36(6)(i) and (ii), and the detailed explanation of the invention satisfies the enablement requirement with regard to Claim 2.

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

(Supplementary explanation)

The scope of an active ingredient defined only by its property may include compounds having various chemical structures. The detailed explanation of the invention only shows examples wherein an anti-allergic action is confirmed in several compounds represented by Formula (I), but it does not indicate any theoretical or experimental grounds to prove the usefulness as an anti-allergic drug of any compound in general having enzyme A inhibitory activity. Because of this, it is difficult for the applicant to indicate any information as proof of satisfying the requirement of Article 36(6)(i) and the enablement requirement (e.g. the common general knowledge as of the filing other than that taken into consideration by the examiner when making determination).

In such case, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for the deficiency of the matters stated in the detailed explanation of the invention, thereby arguing that, in light of the common general knowledge as of the filing, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention, and that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Scope of claims

[Claim 1]

Compounds represented by Formula (I) or salts thereof



wherein ring A is a nitrogen-containing aromatic ring selected from group X, which may be replaced by a substituent selected from group W, and ring B is a carbocyclic ring or heterocyclic ring selected from group Z, which may be replaced by a substituent selected from group Y:

group W: alkyl with 1 to 20 carbon atoms,...

group Z: pyridine, pyrimidine, pyridazine, pyrazine,...

group Y: alkyl with 1 to 20 carbon atoms,...

group Z: benzene,..., pyridine,..., furan,..., thiophene,...

[Claim 2]

Compounds represented by Formula (II) or salts thereof



wherein R_1 and R_3 are hydrogen, alkyl with 1 to 6 carbon atoms, or halogen, R_2 is phenoxy or cycloalkoxy with 3 to 6 carbon atoms, and R_4 is hydroxyl, alkoxy with 1 to 6 carbon atoms, or amino.

Outline of the detailed explanation of the invention

The present invention relates to the discovery of compounds represented by Formula (I) or salts thereof as novel compounds having HIV integrase inhibitory activity.

Examples show specific manufacturing methods of several compounds represented by Formula (II).

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement): Claim 1

Claim 1 describes compounds represented by Formula (I) and Claim 1 covers compounds having a variety of chemical structures, whereas the detailed explanation of the invention indicates only several compounds represented by Formula (II) among a number of compounds covered by Claim 1. Compounds represented by Formula (I) include compounds whose chemical structures significantly differ from those represented by Formula (II). It is common general knowledge as of the filing that if chemical structures of compounds significantly differ, their manufacturing methods and enzyme activities also significantly differ. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which also covers compounds whose chemical structures significantly differ from those represented by Formula (II).

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, if a person skilled in the art intends to manufacture all compounds covered by Formula (I), he/she would have to make trials and errors, beyond the reasonably-expected extent.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Note

Claim 2 satisfies the requirement of Article 36(6)(i), and the detailed explanation of the invention satisfies the enablement requirement with regard to Claim 2.

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

(Supplementary explanation)

The invention of Claim 1 covers compounds having a variety of chemical structures, whereas the detailed explanation of the invention only shows examples of several compounds represented by Formula (II). Therefore, it is difficult for the applicant to indicate any information as proof of satisfying the requirement of Article 36(6)(i) and the enablement requirement (e.g. the common general knowledge other than that taken into consideration by the examiner when making determination).

In such case, the reasons for refusal cannot be overcome even when the applicant submits a certificate of experimental results after the filing to make up for the deficiency of the matters stated in the detailed explanation of the invention, thereby arguing that, in light of the common general knowledge as of the filing, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the claimed invention, and that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Scope of claim

[Claim 1]

A peptidase Z inhibiting agent containing a compound represented by Formula (I) or salts thereof as an active ingredient:



wherein R_1 and R_2 are a hydrocarbon group with 3 to 10 carbon atoms, X is a halogen group, and L is an alkylene group with 1 to 10 carbon atoms.

Outline of the detailed explanation of the invention

Although compounds represented by Formula (I) or salts thereof are publicly known compounds, it has been unknown that they have peptidase Z inhibitory activity.

The present invention relates to the finding that the compounds represented by Formula (I) or the salts thereof have peptidase Z inhibitory activity.

Examples show formulations of a peptidase Z inhibiting agent using several compounds represented by Formula (I), and indicate the pharmacological test method and results by which peptidase Z inhibitory activity is confirmed with regard to the compound wherein both R_1 and R_2 are propyl groups, L is a butylene group, and X is chlorine group.

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Enablement Requirement)

Claim 1 comprehensively describes a peptidase Z inhibiting agent containing a compound represented by Formula (I) as an active ingredient, whereas the detailed explanation of the invention only states that peptidase Z inhibitory activity has been confirmed with regard to a specific compound wherein both R_1 and R_2 are propyl groups. The scope of compounds represented by Formula (I) include compounds with a large side chain, such as those wherein both R_1 and R_2 are naphthyl groups. However, it is common general knowledge as of the filing that the difference in the size of a side chain would, due to three-dimensional interference, change the interaction with a specific enzyme. No ground can be found for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which also covers a peptidase Z inhibiting agent containing, as an active ingredient, a compound which significantly differs from said specific compound in terms of the size of a side chain.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as

the common general knowledge as of the filing, which are mentioned above, the statement of the detailed explanation of the invention cannot be deemed to be informative enough to use a peptidase Z inhibiting agent containing any compound in general represented by Formula (I) as an active ingredient.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Applicant's response

The applicant can overcome all of the reasons for refusal by submitting a written opinion in which he/she points out the common general knowledge as of the filing, other than that taken into consideration by the examiner when making determination, to the effect that compounds having the same bone structure tend to have the same activity despite some difference in the size of a side chain, and argues that in light of the entire statement of the detailed explanation of the invention, as well as such other common general knowledge, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the invention of Claim 1. He/she should also argue that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1. In order to support such argument presented in the written opinion, the applicant should also submit a certificate of experimental results which shows, for example, that among the compounds represented by Formula (I) used in the formulations, several compounds with a large side chain (e.g. naphthyl group) actually have peptidase Z inhibitory activity.

(Supplementary explanation)

The reasons for refusal may not be overcome if both the matter of common general knowledge that the examiner has taken into consideration when making determination and the matter of common general knowledge that the applicant points out in his/her written opinion existed at the time of the filing, and which of these matters of common general knowledge is appropriate for the invention of Claim 1 cannot be determined based on the applicant's argument alone (which means that the truth or falsity of the applicant's argument is unclear) (refer to 2.2.1.4(3) and 3.2.3(2)). In such case, if the applicant, by submitting a certificate of experimental results, successfully proves that the matter that the applicant argues in his/her written opinion is appropriate as common general knowledge for the invention of Claim 1, it is established that the content disclosed in the detailed explanation of the invention of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1. In consequence, the reasons for refusal can be overcome.

Scope of claim

[Claim 1]

An olefin polymerization catalyst consisting of:

(A) metallocene component represented by a general formula $Q(C_5H_4)_2MX_2$, wherein:

 C_5H_4 is a cyclopentadienyl group; Q is a group that cross-links two C_5H_4 groups, selected from the group consisting of $-S_-$, $-NR'_-$, and $-PR'_-$; M is transition metal selected from the group consisting of titanium, zirconium, hafnium, vanadium, niobium, and tantalum; and X is selected from the group consisting of halogen, -OR'', and $-NR''_2$, with R' and R'' being aliphatic, alicyclic, or an aromatic hydrocarbon group with 6 to 12 carbon atoms; and

(B) alumoxane component.

Outline of the detailed explanation of the invention

The olefin polymerization catalyst according to the present invention is described as having a certain action of..., as a result of the selection of a specific Q, instead of an alkylene group or the ether linkage, which cross-links two cyclopentadienyl groups. It is stated that a metallocene olefin catalyst is generally produced by combining a metallocene component and an alumoxane component, and that..., which is used as an ordinary metallocene olefin catalyst, can be used as an alumoxane compound in the present invention.

Examples show a catalyst wherein the central metal of metallocene (M) is zirconium and indicate the experimental results by which their catalyst activities are confirmed.

Example	1	2	3	4
Q	S	N(Me)	P(Ph)	N(C ₆ H ₁₁)
М	Zr	Zr	Zr	Zr
Х	CI	Obu	N(Me) ₂	OPh

Outline of the reasons for refusal

- Article 36(4)(i) (Enablement Requirement), Article 36(6)(i)

The detailed explanation of the invention shows, as a specific example, only an olefin polymerization catalyst wherein the central metal of metallocene component (M) is zirconium. In the field of catalysts in general, it is common general knowledge that If catalyst activity is obtained by using zirconium as the central metal, it is also obtained by using titanium and hafnium, which are transition metals of the same group as zirconium, whereas if a transition metal of a different group is used, no catalyst activity is obtained or the catalyst activity to be obtained is too low to be used. Accordingly, titanium and hafnium are usable as a catalyst instead of zirconium, which is used in the example, whereas other kinds of metal (vanadium, niobium, and tantalum) are not usable as a catalyst.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1, which also covers an olefin polymerization catalyst wherein the central metal (M) is vanadium, niobium, or tantalum.

Furthermore, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, the content disclosed in the detailed explanation of the invention cannot be expanded or generalized to the scope of the

claimed invention.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Applicant's response

The applicant may submit a written opinion in which he/she indicates the technical document, etc. showing that it is common general knowledge as of the filing that if catalyst activity is obtained by using zirconium as the central metal of a metallocene catalyst, it is also obtained by using vanadium, niobium, or tantalum, and argues that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1, and that in light of the common general knowledge as of the filing, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the scope of the invention of Claim 1. The applicant may also submit a certificate of experimental results to support such argument presented in the written opinion.

If it is confirmed that the applicant's argument is appropriate, all of the reasons for refusal can be overcome.

(Supplementary explanation)

The matter of common general knowledge that the examiner has taken into consideration when making determination relates to the field of catalysts in general, whereas the matter of common general knowledge that the applicant points out in his/her written opinion relates to a specific field of metallocene catalyst within the field of catalysts. As the invention of Claim 1 pertains to the field of metallocene catalysts, if the applicant, by indicating the relevant technical document, etc., successfully proves that such matter that he/she points out in the written opinion existed as common general knowledge at the time of the filing, it is established that the matter that the examiner has taken into consideration when making determination is inappropriate as common general knowledge for the invention of Claim 1.

The reasons for refusal can be overcome because, in light of the common general knowledge pointed out by the applicant in the written opinion, the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1, and also in light of such common general knowledge, the content disclosed in the detailed explanation of the invention can be expanded and generalized to the scope of the invention of Claim 1.

In such case, the applicant does not necessarily have to submit a certificate of experimental results, but is possible to submit it as a means to support his/her argument in the written opinion.

Scope of claim

[Claim 1]

An antiemetic drug containing ingredient A as an active ingredient.

Outline of the detailed explanation of the invention

The present invention relates to a new use of ingredient A (this substance itself is publicly known).

The detailed explanation of the invention states the effective dose of ingredient A, the mode of administration, and the method of formulation.

(However, it does not contain any statement of the pharmacological test method or results. Furthermore, the use of ingredient A in an antiemetic drug cannot be presumed from the common general knowledge as of the filing.)

Outline of the reasons for refusal

- Article 36(4)(i) (Enablement Requirement), Article 36(6)(i)

The detailed explanation of the invention does not contain any statement of the pharmacological test method or results which show the use of ingredient A as an antiemetic drug. Furthermore, as the use of ingredient A in an antiemetic drug cannot be presumed from the common general knowledge as of the filing, the statement of the detailed explanation of the invention cannot be deemed to be informative enough to use an antiemetic drug containing ingredient A as an active ingredient.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1, which relates to an antiemetic drug containing ingredient A as an active ingredient.

In addition, Claim 1 describes an invention relating to an antiemetic drug containing ingredient A as an active ingredient, whereas the detailed explanation of the invention, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, cannot be regarded as disclosing the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention of Claim 1, which is providing an antiemetic drug containing ingredient A as an active ingredient, would be actually solved.

Thus, the invention of Claim 1 is not stated in the detailed explanation of the invention.

Applicant's response

The reasons for refusal cannot be overcome even when the applicant argues that ingredient A functions as an antiemetic drug by submitting a certificate of experimental results which shows the pharmacological test method and results.

(Supplementary explanation)

The description initially attached to the application does not contain any statement of the pharmacological test method or results which show the use of ingredient A as an antiemetic drug. Furthermore, the use of ingredient A in an antiemetic drug cannot be presumed from the common general knowledge as of the filing. Therefore, the reasons for refusal cannot be overcome even when the applicant argues that the detailed explanation of the invention is stated clearly and

sufficiently as to enable a person skilled in the art to work the invention of Claim 1, and that the invention of Claim 1 is stated in the detailed explanation of the invention on the basis of only a certificate of experimental results which is submitted after the filing.

(See: Tokyo High Court Decision dated October 30, 1998 (Hei 8 (Gyo-Ke), No.201, a case to seek rescission of the JPO decision.)

Scope of claim

[Claim 1]

- A vaccine consisting of:
- (a) a protein consisting of an amino acid sequence of "Met-Ala-Ala-..."; and
- (b) a pharmaceutically acceptable carrier of (a).

Outline of the detailed explanation of the invention

The detailed explanation of the invention specifically states as follows: (1) the DNA which encodes a protein consisting of an HIV-derived amino acid sequence of "Met–Ala–Ala–..." (hereinafter referred to as "protein A") has been identified and obtained; (2) protein A which is encoded by said DNA has been expressed and obtained; (3) a mouse which is given protein A has produced an antibody to protein A.

(However, it is not stated that a neutralizing antibody exists in said antibody to protein A. There is no prior art disclosing that a protein consisting of an amino acid sequence that is highly homologous with said amino acid sequence functions as a vaccine.)

Outline of the reasons for refusal

- Article 36(4)(i) (Enablement Requirement), Article 36(6)(i)

The detailed explanation of the invention does not contain any statement of the pharmacological test method or results which show the use of protein A as a vaccine, nor does it contain any specific statement that an antibody to protein A neutralizes HIV activity. Furthermore, there is no protein publicly known prior to the filing which is highly homologous with protein A and functions as a vaccine against HIV, nor can the use of protein A as a vaccine be presumed from the common general knowledge as of the filing. Accordingly, the statement of the detailed explanation of the invention cannot be deemed to be informative enough to use a vaccine containing protein A.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1 which relates to a vaccine containing protein A.

In addition, Claim 1 describes an invention relating to a vaccine containing protein A, whereas the detailed explanation of the invention, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, cannot be regarded as disclosing the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention of Claim 1, which is providing a vaccine containing protein A, would be actually solved.

Thus, the invention of Claim 1 is not stated in the detailed explanation of the invention.

Applicant's response

The reasons for refusal cannot be overcome even when the applicant argues that protein A functions as a vaccine by submitting a certificate of experimental results which shows the pharmacological test method and results about the function of the invention as a vaccine.

(Supplementary explanation)

The description initially attached to the application does not contain any statement of the pharmacological test method or results which show the use of protein A as a vaccine. Furthermore,

the use of protein A as a vaccine cannot be presumed from the common general knowledge as of the filing. Therefore, the reasons for refusal cannot be overcome even when the applicant argues that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1, and that the invention of Claim 1 is stated in the detailed explanation of the invention on the basis of only a certificate of experimental results which is submitted after the filing.

(Notes)

In order for protein A consisting of an amino acid sequence of "Met–Ala–Ala–..." to function as a vaccine, it is insufficient that "the animal (i.e. a mouse) which is given protein A recognizes protein A as a foreign substance and produces an antibody to protein A in its body,"—in other words, that said antibody is "immunogenic"—, but it is necessary that "the antibody affects the active portion of protein A and thereby inhibits HIV activity."

However, an antibody which inhibits the activity of a certain substance, i.e. a neutralizing antibody, needs to recognize a neutralizing epitope which, in general, rarely exists in said substance, and such antibody is normally unlikely to be prepared. Consequently, it may be extremely unlikely for an antibody that recognizes a "neutralizing epitope," which may or may not exist in protein A, to be produced in the body of an animal that is given protein A.

Scope of claim

[Claim 1]

An agent for preventing arteriosclerosis that contains substance X as an active ingredient.

Outline of the detailed explanation of the invention

The present invention relates to the finding that substance X has a strong hydroxy radical scavenging activity and it is extremely effective in preventing arteriosclerosis that is induced by active oxygen.

Example 1 shows the method of producing substance X, and Example 2 shows the experimental results by which it is confirmed that substance X has hydroxy radical scavenging activity. Example 3 specifically describes the method of preparing an agent for preventing arteriosclerosis which contains substance X as an active ingredient.

Outline of the reasons for refusal

No reason for refusal

Notes

The detailed explanation of the invention shows the experimental results by which it is confirmed that substance X has a high hydroxy radical scavenging activity. It is common general knowledge as of the filing that a substance having hydroxy radical scavenging activity is effective in preventing arteriosclerosis. Accordingly, even without any pharmacological test method or results which directly show that substance X is effective for the prevention of arteriosclerosis, the statement of the detailed explanation of the invention can be deemed to be informative enough to use an agent for preventing arteriosclerosis that contains substance X as an active ingredient.

Thus, the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1, which relates to an agent for preventing arteriosclerosis that contains substance X as an active ingredient, and the detailed explanation of the invention satisfies the enablement requirement with regard to Claim 1.

In addition, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, the detailed explanation of the invention can be regarded as disclosing the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention of Claim 1, which is providing an agent for preventing arteriosclerosis that contains substance X, would be actually solved.

Thus, the invention of Claim 1 is stated in the detailed explanation of the invention, and Claim 1 satisfies the requirement of Article 36(6)(i).

Scope of claim

[Claim 1]

A stretched polypropylene film consisting of a mixed composition of (i) 60 to 90 weight percentage of crystalline polypropylene, in which the relationship between the percentage of isotactic content (P) and the fluidity index (Q) measured by a measuring device A is represented as $1.00 \ge P \ge 0.025\log Q + 0.940$, and (ii) 10 to 40 weight percent of resin X.

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a stretched polypropylene film that is highly moisture proof and stiff.

The crystalline polypropylene used in the present invention meets the condition of $1.00 \ge P \ge 0.025\log Q+0.940$. By using such specific type of crystalline polypropylene, a more moisture-proof and stiffer film can be obtained as compared to a stretched film obtained by adding resin X to a general type of crystalline polypropylene in which the percentage of isotactic content (P) is outside that range. In order to obtain a film that is more moisture proof by using a general type of crystalline polypropylene, it is necessary to increase the quantity of resin X to be added. However, the addition of a large quantity of resin X would significantly reduce the processability of the composition to be obtained and would also increase costs.

In the context of the present invention, the "percentage of isotactic content (P)" refers to the percentage of propylene monomer units wherein five units are isotactically bonded (all methyl groups in the propylene side chain are identically oriented and the propylene units are joined in a head-to-tail arrangement) in succession, among the total propylene monomer units that constitute polypropylene.

The detailed explanation of the invention indicates the calculation method of P and the measurement method of Q using measuring device A.

Examples 1 to 7 and Comparative Examples 1 to 7 show that various types of crystalline polypropylene with P and Q having different values have been manufactured, and that a stretched film has been manufactured using a mixed composition of 60 to 90 weight percent of such crystalline polypropylene and 10 to 40 weight percent of resin X, accompanied by the measurement results of the moisture permeability and stiffness modulus of the film. More specifically, it is shown that the stretched film in Examples 1 to 7, made using crystalline polypropylene with P and Q meeting said formula, is more moisture proof and stiff as compared to the stretched film in Comparative Examples 1 to 7, made using crystalline polypropylene with P and Q meeting said formula. It is also shown that even when using crystalline polypropylene with P and Q meeting said formula, a film that is highly moisture proof cannot be obtained if the quantity of resin X to be added is small (Comparative Example 8), whereas it is impossible to make a film if the quantity is too large (Comparative Example 9).

Outline of the reasons for refusal

No reason for refusal

Notes

- Article 36(6)(i), Article 36(4)(i) (Ministerial Ordinance Requirement)

The detailed explanation of the invention states that the problem to be solved by the

present invention is to provide a stretched polypropylene film that is highly moisture proof and stiff, and that this problem can be solved by using crystalline polypropylene that meets the formula mentioned in Claim 1. Examples 1 to 7 and Comparative Examples 1 to 7 show that various types of crystalline polypropylene with P and Q having different values have been manufactured, and it is shown that the stretched film in Examples 1 to 7, made using crystalline polypropylene with P and Q meeting said formula, is more moisture proof and stiff as compared to the stretched film in Comparative Examples 1 to 7, made using crystalline polypropylene with P and Q meeting said formula, is more moisture proof and stiff as compared to the stretched film in Comparative Examples 1 to 7, made using crystalline polypropylene with P and Q not meeting said formula. Therefore, a person skilled in the art can recognize that a stretched polypropylene film that is highly moisture proof and stiff can be obtained by using crystalline polypropylene that meets said formula.

Thus, Claim 1 can be deemed to describe the invention within the scope described in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention would be actually solved, and accordingly, Claim 1 satisfies the requirement of Article 36(6)(i).

Furthermore, the substantial relationship between the problem to be solved by the invention and said formula can be understood and the technical significance of the invention of Claim 1 can also be understood. In this respect, the detailed explanation of the invention satisfies the ministerial ordinance requirement with regard to Claim 1.

- Article 36(6)(ii)

Since it is not always easy to define a macromolecular compound by its chemical structure, a macromolecular compound is sometimes defined by a formula containing characteristic values. In such case, if specific characteristic values provided by the formula can be understood quantitatively by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, it is often possible, in the case of an invention to be identified by a macromolecular compound defined by the formula, to clearly identify the invention based on which the patentability requirements such as novelty and inventive step are to be determined.

With regard to the invention of Claim 1, while taking into account the statements of the description, it is possible to understand that a stretched polypropylene film with a specified range of moisture permeability and stiffness can be obtained by using crystalline polypropylene that meets the aforementioned formula. Therefore, by taking into account the statement of the description, the invention can be clearly indentified from the statement of Claim 1, and accordingly, Claim 1 satisfies the requirement of Article 36(6)(ii).

Scope of claims

[Claim 1]

A stretched packaging film made of resin that contains biodegradable polymer, which satisfies Formula (1)

Formula (1): 1.61na–1.78≧NS≧1.61na–2.43,

wherein NS refers to the plane orientation coefficient and na refers to the average refraction index.

[Claim 2]

A stretched packaging film described in Claim 1, consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, which is stretched to 2.5 to 3.5 times its length and 1.5 to 2.5 times its width.

Outline of the detailed explanation of the invention

The problem to be solved by the present invention is to provide a stretched packaging film which is made of resin that contains biodegradable polymer and which is highly stretchable and easy to open. As biodegradable polymer is generally fragile and less stretchable, it is difficult to use it to make a packaging film that needs to stretch well. The invention can solve this problem by using a film that satisfies Formula (1).

In order to obtain a stretched packaging film that is highly stretchable and easy to open, it is important to use a resin consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, and to stretch the film to 2.5 to 3.5 times its length and to 1.5 to 2.5 times its width. Such film was not known in the past.

The detailed explanation of the invention indicates the measurement methods of the plane orientation coefficient and the average refraction index.

Examples 1 to 5 show that a film that satisfies Formula (1) has been manufactured by the following process: (i) mixing a mixture of a resin consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, with inorganic particle Y, and making the mixture into a film by extrusion; (ii) biaxially stretching the film at 70°C and at a predetermined stretch ratio within the range of 2.5 to 3.5 times its length and 1.5 to 2.5 times its width; and (iii) heating the film at a predetermined temperature for a predetermined period of time. Comparative Examples 1 and 2 show the manufacturing of a film in the same process as in Examples 1 and 2, except that the ratio of the mixture of polylactic resin and resin X is different. Comparative Examples 3 and 4 show the manufacturing of a film with a mix of polylactic resin and resin X at the same ratio as that in Examples 3 and 4 but the film is stretched at a ratio outside the range of 2.5 to 3.5 times its length and 1.5 to 2.5 times its width. The films manufactured in these comparative examples do not satisfy Formula (1). The detailed explanation of the invention further indicates the measurement results as to the stretchability and ease of opening of the films in Examples 1 to 5 are more stretchable and easier to open than those in Comparative Examples 1 to 4.

Outline of the reasons for refusal

- Article 36(6)(i), Article 36(4)(i) (Ministerial Ordinance Requirement): Claim 1

The detailed explanation of the invention states that the problem to be solved by the present invention is to provide a stretched packaging film which is made of resin that contains

biodegradable polymer and which is highly stretchable and easy to open, and that this problem has been solved by making a film that satisfies Formula (1) mentioned in Claim 1.

Based on the statement, which is "in order to obtain a stretched packaging film that is highly stretchable and easy to open, it is important to use a resin consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, and to stretch the film to 2.5 to 3.5 times its length and to 1.5 to 2.5 times its width", as well as the examples and comparative examples, it is found that a film made with said specified resin composition and stretch ratio would be highly stretchable and easy to open if it satisfies Formula (1). However, it is common general knowledge as of the filing that the resin composition and stretch ratio of a stretched film significantly affect the stretchability and ease of opening the film. There is no ground for proving that any film, including a film of which the resin composition and stretch ratio are significantly different from those mentioned above, can solve the problem if only it satisfies Formula (1).

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Furthermore, the detailed explanation of the invention, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, is not stated to the extent that a person skilled in the art could substantially understand the relationship between the problem to be solved by the invention and said formula, so the technical significance of the invention of Claim 1 is unclear. In consequence, the detailed explanation of the invention does not satisfy the ministerial ordinance requirement.

- Article 36(4)(i) (Enablement Requirement), Article 36(6)(i): Claim 1

The detailed explanation of the invention only discloses, as a specific example, a stretched packaging film which is made of a resin consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, and to stretch the film to 2.5 to 3.5 times its length and to 1.5 to 2.5 times its width. However, different kinds of biodegradable polymer that have various properties are already known, and it is common general knowledge as of the filing that the plane orientation coefficient or the average refraction index of a stretched film made of biodegradable polymer significantly differs depending on the resin composition or manufacturing conditions. Accordingly, a person skilled in the art who intends to manufacture a stretched packaging film which satisfies Formula (1), while applying the resin composition or stretch ratio that is significantly different from those specified, would have to make trials and errors beyond the reasonably-expected extent.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Furthermore, Claim 1 discloses an invention of a stretched packaging film made of resin that contains biodegradable polymer, which satisfies Formula (1), but in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, there is no ground for expanding or generalizing the content disclosed in the detailed explanation of the invention to the scope of the invention of Claim 1, which also covers a film made with the resin composition or stretch ratio that is significantly different from those specified in the detailed explanation of the invention.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Notes

The detailed explanation of the invention states that the problem to be solved by the

present invention is to provide stretched packaging film which is made of resin that contains biodegradable polymer and which is highly stretchable and easy to open, and that in order to obtain such a stretched packaging film, it is important to use a resin consisting of 20 to 40 weight percent of polylactic resin and 60 to 80 weight percent of resin X, and to stretch the film to 2.5 to 3.5 times its length and to 1.5 to 2.5 times its width. It also indicates examples and comparative examples to the extent that a person skilled in the art, by making reference to these examples, can recognize that a stretched packaging film that is highly stretchable and easy to open can be obtained by using a film made with said specified resin composition and stretch ratio.

Thus, Claim 2 can be deemed to describe the invention within the scope described in the detailed explanation of the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention would be actually solved, and accordingly, Claim 2 satisfies the requirement of Article 36(6)(i).

Also, the problem to be solved by the invention and the solution thereof can be understood, and the technical significance of the invention of Claim 2 can also be understood. In this respect, the detailed explanation of the invention satisfies the ministerial ordinance requirement with regard to Claim 2.

Furthermore, the detailed explanation of the invention also satisfies the enablement requirement with regard to Claim 2 in that it is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 2.

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

Scope of claim

[Claim 1]

A pencil lead made of carbon that is obtained by mixing and baking graphite and binding agents, wherein the porosity is 15 to 35%; as compared to the total volume of pores, the relationship between (A) the percentage of volume of pores of a pore size (a) of $0.002 \le a \le 0.05$ (µm) and (B) the percentage of volume of pores of a pore size (b) of $0.05 < b \le 0.20$ (µm) is represented by 1.1 < A/B < 1.3, $A + B \ge 80\%$; and the percentage of volume of pores of a pore size (a) that exist at the central part covering 50% of the diameter of the pencil lead (A1) is $0.8 \le A1/A \le 0.9$.

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a pencil lead which has proper strength, and offers a good writing feel and blackness suitable for practical use. As a result of trials and errors made by using various raw materials for manufacturing a pencil lead, and changing manufacturing conditions including conditions for mixing, extrusion, and baking, it is found that said purpose can be achieved when the pores in the pencil lead meet certain conditions.

Examples and comparative examples indicate the measurement results of strength, writing feel, and blackness with regard to a pencil lead that meets the numerical conditions mentioned in Claim 1 and to a pencil lead that does not meet those conditions. It is shown that the pencil lead that meets said conditions is superior in strength, writing feel, and blackness, to the one that does not meet those conditions.

(However, there is no specific statement as to the raw materials and manufacturing conditions required for manufacturing a pencil lead that meets the numerical conditions mentioned in Claim 1.)

Outline of the reasons for refusal

- Article 36(4)(i) (Enablement Requirement)

It is common general knowledge as of the filing that it is difficult to control the porosity, pore size and pore distribution of a pencil lead, and that these factors are closely connected to its raw materials as well as the manufacturing conditions, including the conditions for mixing, extrusion and baking. However, the detailed explanation of the invention does not state how the raw materials and manufacturing conditions should be adjusted in order to manufacture the claimed pencil lead (in particular, the manufacturing conditions for controlling the volume of the two types of pores which have different sizes and the distribution of them), nor can this point be deemed to be included in the scope of the common general knowledge as of the filing. Accordingly, in order to make trials and manufacturing conditions, a person skilled in the art would have to make trials and errors or conduct complicated experimentation, beyond the reasonably-expected extent.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

Applicant's response

It is difficult for the applicant to overcome the reasons for refusal.

(Supplementary provisions)

The detailed explanation of the invention does not state the raw materials or manufacturing

conditions to the extent enabling a person skilled in the art to manufacture the claimed product, nor can these factors be deemed to be included in the scope of the common general knowledge as of the filing. Therefore, the reasons for refusal cannot be overcome even when the applicant submits a written opinion or certificate of experimental results after the filing to clarify the raw materials and manufacturing conditions, thereby arguing that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1.

In general, specific numerical values regarding the raw materials and manufacturing conditions required for manufacturing the claimed product must be disclosed in the description initially attached to the application.

Scope of claims

[Claim 1]

A manufacturing method for a compound semiconductor device, wherein as part of a method of manufacturing a compound semiconductor mixed crystal containing Indium (In), a step of forming a layer where the In composition is gradually changed by raising or reducing the temperature, while keeping the material supply ratio of In materials and other Group III materials, is added before and after the step of forming the compound semiconductor mixed crystal containing In.

[Claim 2]

A manufacturing method of a compound semiconductor device as described in Claim 1, wherein the compound semiconductor mixed crystal is a nitride compound semiconductor mixed crystal.

Outline of the detailed explanation of the invention

In the course of manufacturing a nitride compound semiconductor device using the Metal Organic Chemical Vapor Deposition (MOCVD) process, the growth temperature of the InGaN active layer is 800°C or lower, whereas the growth temperature of the AlGaN layers between which the InGaN active layer is inserted is approximately 1,100°C. Due to such a large difference in the crystal growth temperature, it was necessary to take steps, before and after the growth of the In-containing layer, to stop the supply of materials and reduce or raise the temperature. However, as a result of the significant temperature changes through these steps and the exposure of crystal to an extremely high temperature during the steps, the crystallization of the hetero-interface and the InGaN layer is considerably deteriorated.

The present invention makes use of the temperature dependence of the heat decomposition of the In-containing nitride layer within the range of the growth temperature between the AlGaN layers and the InGaN layer, that is, the temperature dependence of the uptake rate of In during the crystal growth. The invented method continues to supply the material gas during the steps of raising and reducing the temperature, and performs an additional step of forming a grated layer where the In composition is gradually changed by raising or reducing the temperature, while keeping the material supply ratio, before and after the growth of the InGaN layer. This additional step has made it possible to considerably prevent the deteriorated crystallization of the hetero-interface and the InGaN layer as compared with before.



Outline of the reasons for refusal

- Article 36(6)(i)

The detailed explanation of the invention states that the problem to be solved by the present invention is to prevent the deteriorated crystallization of the hetero-interface and the InGaN layer arising from the necessity of raising and reducing the temperature before and after the growth of the InGaN layer through the MOCVD process. However, it does not mention anything about the facts that also in the course of manufacturing a compound semiconductor mixed crystal containing In, other than InGaN, the steps of raising and reducing the temperature are taken before and after the growth or that problems arise in connection with these steps. There is no ground for proving that it is common general knowledge as of the filing that, with regard generally to a compound semiconductor mixed crystal containing In, not limited to a nitride one, due to the difference in the growth temperature between the layer containing In and the layer not containing In and the exposure of the base crystal during the steps of raising and reducing the temperature. Rather, it is common

general knowledge as of the filing that, when applying the MOCVD process, a non-nitride compound semiconductor crystal (e.g. GaAs) usually grows at a temperature lower than 800°C, irrespective of whether or not it contains In, and therefore no marked change is seen in relation to the uptake rate of In within the range of the temperature for the growth of a non-nitride compound semiconductor crystal.

Furthermore, the detailed explanation of the invention only indicates a nitride compound semiconductor crystal as a specific example which can solve the problem.

In light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, the content disclosed in the detailed explanation of the invention can be expanded or generalized to the case of manufacturing nitride compound semiconductor mixed crystal, but cannot be expanded or generalized to the case of manufacturing compound semiconductor mixed crystal containing In, not limited to a nitride one.

Thus, the invention of Claim 1 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.

Note

Claim 2 satisfies the requirement of Article 36(6)(i).

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

Scope of claim

[Claim 1]

An information provision system comprising several terminals, an information processing device which acquires first information from a database and transmits it to the terminals, and a storage means which stores second information corresponding to the respective terminal, wherein:

The information processing device retrieves the second information from the storage means, and processes tasks to transmit the first information to the terminal.

Outline of the detailed explanation of the invention

The detailed explanation of the invention states that the problem to be solved by the invention is to enable a server (information processing device) to provide information (first information) to any terminals that use different data formats. As a solution for this problem, it describes a system wherein, when providing information to terminals, the server retrieves, from the storage means, the data format conversion parameter (second information) corresponding to the receiving terminal, converts the data format of the information (first information) based on the retrieved data format conversion parameter, and transmits the information in the converted format to the terminal.

Examples show a system that retrieves the data format conversion parameters corresponding to the specific types of the receiving terminals (Company A type to Company D type), converts the data format based on data format conversion parameters, and transmits the information in the respective converted formats to the terminals.



Outline of the reasons for refusal

- Article 36(6)(i)

The detailed explanation of the invention states that the problem to be solved by the invention is to enable a server (information processing device) to provide information (first information) to any terminals that use different data formats. As a solution for this problem, it describes a system wherein, when providing information to terminals, the server retrieves, from the
storage means, the data format conversion parameter (second information) corresponding to the receiving terminal, converts the data format of the information (first information) based on the retrieved data format conversion parameter, and transmits the information in the converted format to the terminal.

However, Claim 1 does not state anything about converting the data format of the first information based on the second information corresponding to the receiving terminal. Therefore, the solution for the problem is not reflected in Claim 1.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

- Article 36(6)(ii)

Claim 1 defines the second information as "second information corresponding to the respective terminal," and states that "the information processing device retrieves the second information from the storage means and processes tasks to transmit the first information to the terminal." However, such statements alone are insufficient to clarify how the second information is used in the information provision system, and even taking into account the statements of the description and drawing, as well as the common general knowledge as of the filing, the technical meaning of the second information (its function or role in the invention of Claim 1) cannot be understood.

It is common general knowledge as of the filing that in the case of an invention of an information provision system, the processing contents to be processed by the system differ significantly depending on the technical meaning of the information handled, and in light of such common general knowledge, it is evident that the matters used to specify the invention of Claim 1 are deficient for understanding the role of the second information. Therefore, the invention cannot be clearly identified from the statement of Claim 1.

Applicant's response

The applicant can overcome the reasons for refusal by amending Claim 1 so as to reflect the solution for the problem as stated in the detailed explanation of the invention and to enable a person skilled in the art to understand the technical meaning of the second information.

For example, Claim 1 could be amended as follows:

An information provision system comprising several terminals, an information processing device which acquires first information from a database and transmits it to the terminals, and a storage means which stores second information corresponding to the respective terminals, wherein:

The information processing device retrieves, from the storage means, the second information corresponding to the respective receiving terminals, and processes the conversion of the data format of the first information based on the retrieved second information.

The detailed explanation of the invention discloses specific types of terminals (Company A type to Company D type) and the corresponding data format conversion parameters. It is not necessary to limit the types of terminals or parameters to any specific types, because the problem can be solved by a system which retrieves the parameter corresponding to the receiving terminal and converts the data format based on the retrieved parameter.

Scope of claims

[Claim 1]

A disposable diaper oriented in the longitudinal direction, equipped with a liquid-permeable front surface sheet (11), a liquid-impermeable back surface sheet (12), and a liquid-retaining absorber (13) made of material X that is inserted between said two sheets.

[Claim 2]

A disposable diaper as described in Claim 1, which has a pair of folding means that make it easier to fold said absorber (13) in the longitudinal direction in the middle of the width of said disposable diaper.

[Claim 3]

A disposable diaper as described in Claim 2, wherein said pair of folding means consists of the thinner parts or the smaller basis-weight parts formed on said absorber (13).

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a disposable diaper that can be folded into a compact shape.

The present invention relates to a disposable diaper oriented in the longitudinal direction, equipped with a liquid-permeable front surface sheet 11, a liquid-impermeable back surface sheet 12, and a liquid-retaining absorber 13 made of material X that is inserted between said two sheets. It is shown that by forming a pair of folding means that make it easier to fold the liquid-retaining absorber made of material X, the width of the diaper when folded along the folding means can be made shorter, thereby making it possible to fold the diaper into a compact shape.

Examples show the diaper having, as the pair of folding means, (i) the thinner parts formed on absorber 13, and (ii) the smaller basis-weight parts formed on absorber 13.

[Figure 1]

[図1]



[Figure 2]





Outline of the reasons for refusal

- Article 36(6)(i): Claim 1

The detailed explanation of the invention states that the problem to be solved by the invention is to provide a disposable diaper that can be folded into a compact shape. As a solution for this problem, it discloses to form a pair of folding means that can make it easer to fold the liquid-retaining absorber made of material X in the longitudinal direction in the middle of the width of said diaper.

However, Claim 1 does not define such folding means, that is, it does not reflect a solution for the problem.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

Notes

In order to satisfy the requirement of Article 36(6)(i), it is not necessary for a claim to directly reflect the folding means formed as the thinner parts or the smaller basis-weight parts on the absorber (as defined in Claim 3), which are specifically disclosed in the detailed explanation of the invention.

Claim 2 reflects the matters in relation to the folding means formed on the absorber, which is the solution for the problem identified from the detailed explanation of the invention. Therefore, both Claims 2 and 3 satisfy the requirement of Article 36(6)(i).

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claims 2 and 3.

Scope of claims

[Claim 1]

A machining center equipped with a bed made by casting, elastic body, metal plate, automatic tool changer arm, and tool magazine.

[Claim 2]

A machining center equipped with a bed made by casting, elastic body mounted on the lower part of said bed made by casting, metal plate mounted on the lower part of said elastic body, automatic tool changer arm, and tool magazine.

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a machining center with vibration damping performance so as to prevent the vibrations that occur around the machining center from affecting the processing accuracy.

Examples disclose that a machining center, with an elastic body mounted on the lower part of the bed made by casting and a metal plate mounted on the lower part of the elastic body, exhibit high vibration damping performance. It is stated that both the elastic body and the metal plate serve as damping members.

Outline of the reasons for refusal

- Article 36(6)(i): Claim 1

The detailed explanation of the invention states that the problem to be solved by the invention is to prevent the vibrations that occur around the machining center from affecting the processing accuracy. Examples show that this problem can be solved by mounting an elastic body on the lower part of the bed made by casting, and also mounting a metal plate on the lower part of the elastic body.

However, Claim 1 cannot be regarded as reflecting anything about the means to solve the problem, such as the structural relationships of the elastic body and metal plate with other components.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

- Article 36(6)(ii): Claim 1

Claim 1 does not define the structural relationships of the elastic body and metal plate with other components. Even by taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, the technical meanings of the elastic body and metal plate (the functions or roles that these components play in the invention of Claim 1) cannot be understood.

With regard to an invention relating to a machining center, it is common general knowledge as of the filing that the structural relationships of a particular component with other components greatly differ depending on the technical meaning of the relevant component, and in light of such common general knowledge, it is evident that matters used to specify the invention in Claim 1 are deficient for understanding the structural relationships of the elastic body and metal plate with other components. In conclusion, the invention cannot be clearly identified from the statement of Claim 1.

(Supplementary explanation)

In light of the common general knowledge as of the filing, the technical meanings of some components of the invention, namely, "bed made by casting," "automatic tool changer arm," and "tool magazine," are obvious. However, in order to understand the technical meanings of the "elastic body" and the "metal plate," it is insufficient that the claim only states that the invention is equipped with these components. While it is possible to understand the roles that the elastic body and the metal plate play (as damping members) in the aforementioned examples, Claim 1 does not define such structural relationships as those described in the examples, and therefore this limitative interpretation cannot be applied to the roles to be played by the elastic body and the metal plate in the invention of Claim 1. Consequently, even by taking into account the statements of the description and drawings, the technical meanings of the elastic body and metal plate in the invention of Claim 1 cannot be understood.

Notes

Claim 2 describes that an elastic body is mounted on the lower part of the bed made by casting, and that a metal plate is mounted on the lower part of the elastic body, thereby reflecting the means to solve the problem. Thus, Claim 2 satisfies the requirement of Article 36(6)(i).

Furthermore, since Claim 2 defines the structural relationships of the elastic body and metal plate with other components, in light of the matters stated in the aforementioned examples, it can be understood that the elastic body and metal plate serve as damping members in the invention of Claim 2. Thus, in light of the statements of the description and drawings, as well as the common general knowledge as of the filing, the technical meanings of the elastic body and metal plate can be understood, and the invention can be clearly identified from the statement of Claim 2. Therefore, Claim 2 satisfies the requirement of Article 36(6)(ii).

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

Scope of claims

[Claim 1]

An image encoding chip which compresses the input image data and outputs the Xencoded image data, comprising:

an A-encoding circuit which encodes the externally input image data by an A-encoding system that is reversible, thereby producing A-encoded data;

an A-decoding circuit which decodes the produced A-encoded data into the original image data by an A-decoding system; and

an X-encoding circuit which encodes the decoded image data by an X-encoding system that is irreversible, thereby producing X-encoded image data, and externally outputs the produced X-encoded image data.

[Claim 2]

An image encoding chip which compresses the input image data and outputs the Xencoded image data, comprising:

an A-encoding circuit which encodes the externally input image data by an A-encoding system that is reversible, thereby producing A-encoded data;

an A-decoding circuit which decodes the produced A-encoded data into the original image data by an A-decoding system;

an X-encoding circuit which encodes the decoded image data by an X-encoding system that is irreversible, thereby producing X-encoded image data, and externally outputs the produced X-encoded image data;

a measurement circuit that measures the encoding time on the A-encoding circuit; and

a determination circuit which determines a parameter to be used for irreversible X-encoding based on the encoding time as informed by the measurement circuit, and informs the X-encoding circuit of such parameter.

Outline of the detailed explanation of the invention

In the field of image encoding chips, it is already known that there is the technology of performing X-encoding of the externally input data based on a given parameter on a X-encoding circuit that is irreversible, and that X-encoding can be performed efficiently if said given parameter is set according to the time required for encoding the same data on a A-encoding circuit that is reversible. However, there are problems with this technology, such that users need to set the parameter for the X-encoding circuit by themselves according to the time required for encoding on the irreversible A-encoding circuit, and since this process involves manual operations, it is inefficient and likely to invite human error.

The present invention aims to provide an image encoding chip that solves these problems. The invented image encoding chip can set the parameter for the X-encoding circuit automatically, without manual operations, which is efficient and less likely to invite human errors.

Examples disclose an image encoding chip, formed as a single chip, comprising (i) an Aencoding circuit which encodes the externally input data by reversible A-encoding, (ii) an Adecoding circuit which decodes the A-encoded data by A-decoding; (iii) an X-encoding circuit which encodes the decoded data by X-encoding and externally outputs the X-encoded data, (iv) a measurement circuit that measures the encoding time on the A-encoding circuit, and (v) a determination circuit which determines a parameter for X-encoding based on the information given by the measurement circuit, and informs the X-encoding circuit of such parameter. The examples describe that on the X-encoding circuit, the data sent from the A-decoding circuit is X-encoded by the parameter informed by the determination circuit. The detailed information on the A-encoding system, A-decoding system, and X-encoding system is also provided.

Outline of the reasons for refusal

- Article 36(6)(i): Claim 1

The detailed explanation of the invention states that the problem to be solved by the present invention is to clear away the problems with the prior art (e.g. inefficiency and human errors), and examples show that this can be achieved by ensuring that the X-encoding circuit will be informed of the parameter that is determined based on the encoding time on the A-encoding circuit.

However, Claim 1 cannot be regarded as reflecting anything about the means to solve the problem, such as using the information obtained on the A-encoding circuit for X-encoding.

Thus, the invention of Claim 1 exceeds the scope stated in the detailed explanation of the invention.

- Article 36(6)(ii): Claim 1

With regard to an invention relating to an image encoding chip, it is common general knowledge as of the filing that priority is given to speeding up, downsizing, promoting efficiency, and cost reduction. It runs against such common general knowledge to provide a circuit which only decodes the encoded data into the original data, as described in Claim 1. Even in light of the statements of the description and drawings, the technical meanings of the A-encoding circuit and A-decoding circuit (the functions or roles that these components play in the invention of Claim 1) cannot be understood. It is also common general knowledge as of the filing that the processing contents to be processed by an image encoding chip greatly differ depending on the technical meanings of the circuits mounted on that chip. In light of such common general knowledge, it is evident that the matters used to specify the invention in Claim 1 are deficient for understanding the roles of the A-encoding circuit and the A-decoding circuit in the image encoding chip. In conclusion, the invention cannot be clearly identified from the statement of Claim 1.

(Supplementary explanation)

While it is possible to understand the roles that the A-encoding circuit and the A-decoding circuit play in the aforementioned examples (i.e. determine the parameter to be used for X-encoding), Claim 1 does not describe the feature of using the information obtained by the A-encoding circuit for X-encoding, and therefore this limitative interpretation cannot be applied to the roles to be played by the A-encoding circuit and the A-decoding circuit in the invention of Claim 1. Consequently, even by taking into account the statements of the description and drawings, the technical meanings of the A-encoding circuit and A-decoding circuit cannot be understood.

Notes

Claim 2 describes that the information obtained by the A-encoding circuit is to be used for X-encoding, thereby reflecting the means to solve the problem. Thus, Claim 2 satisfies the requirement of Article 36(6)(i).

Furthermore, since Claim 2 defines that the information obtained by the A-encoding circuit is to be used for X-encoding, the roles to be played by the A-encoding circuit and the A-decoding

circuit in the invention of Claim 2 can be understood. Thus, in light of the statements of the description and drawings, as well as the common general knowledge as of the filing, the technical meanings of the A-encoding circuit and the A-decoding circuit can be understood, and the invention can be clearly identified from the statement of Claim 2. Therefore, Claim 2 satisfies the requirement of Article 36(6)(ii).

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 1 and maintaining only Claim 2.

Scope of claims

[Claim 1]

A wash-free rice manufacturing process which comprises the step of receiving a feed of rice within a tank and removing bran by washing the rice in water, the step of opening the drop valve situated at the bottom of the tank and dropping the bran-removed rice into the container waiting down below, and the step of drying the rice dropped into the container, and which includes the step of spraying oily ingredient X onto the inner wall of the tank before feeding rice, and the step of blowing air into the tank immediately before opening the drop valve.

[Claim 2]

Wash-free rice manufactured by the wash-free rice manufacturing process as described in Claim 1.

Outline of the detailed explanation of the invention

The purpose of the present invention is to provide a wash-free rice manufacturing process which can prevent rice from remaining within the tank after being washed to remove bran, so as to completely discharge the rice.

It is shown that by spaying oily ingredient X onto the inner wall of the tank before feeding rice, the inner wall of the tank can be made lubricious so as to prevent the rice from adhering to the wall, and by blowing air into the tank immediately before opening the drop valve, the rice that adheres to the inner wall of the tank can be effectively dropped into the container waiting down below.

Examples show that the use of the wash-free rice manufacturing process described in Claim 1 can prevent the rice from adhering to the inner wall of the tank, thereby achieving the purpose mentioned above.

Outline of the reasons for refusal

- Article 36(6)(ii): Claim 2

Claim 2 defines the invention of wash-free rice only by the wash-free manufacturing process as described in Claim 1.

The description states that said wash-free rice manufacturing process prevents rice from remaining within the tank after being washed to remove bran, so as to completely discharge the rice. However, it does not state anything about how the step of spraying oily ingredient X onto the inner wall of the rice washing tank could affect the wash-free rice to be obtained, nor is this feature clear from the common general knowledge as of the filing.

Therefore, even taking into account the statements of the description and drawings, as well as the common general knowledge as of the filing, the characteristics of the wash-free rice to be manufactured by said wash-free rice manufacturing process cannot be understood, and the invention of Claim 2 is unclear.

Note

Claim 1 satisfies the requirement of Article 36(6)(ii).

Applicant's response

The applicant can overcome all of the reasons for refusal by deleting Claim 2 and maintaining only Claim 1.

Scope of claim

[Claim 1]

A cell obtained through the process consisting of the steps of:

(1) culturing W-cells obtained from a human body in medium A containing 0.1–0.2 weight percent of cytokine X for 5 to 10 hours and collecting them; and

(2) seeding the cells collected in step (1) on an extracellular matrix Y, culturing them in medium B containing 0.1–0.2 weight percent of cytokine Z for 24 to 48 hours, and collecting them.

Outline of the detailed explanation of the invention

Although W-cells are publicly known, it was not known that cells with the ability to produce angiogenesis inhibitor A can be obtained by culturing W-cells.

The present invention relates to the finding that a new type of cell with such ability to produce angiogenesis inhibitor A can be obtained by culturing W-cells under specified conditions.

Examples show the experimental results in which the cells obtained through steps (1) and (2) have the ability to produce angiogenesis inhibitor A.

Outline of the reasons for refusal

No reason for refusal

Notes

Claim 1 defines the invention of a cell only by its manufacturing process, but in light of the statements of the description and drawings, as well as the common general knowledge as of the filing, the manufacturing process and the characteristics of the cell obtained by the process stated in Claim 1 (the ability to produce angiogenesis inhibitor A) can be understood based on the matters stated in Claim 1, and the invention can be clearly identified from the statement of Claim 1. Thus, Claim 1 satisfies the requirement of Article 36(6)(ii).

Scope of claim

[Claim 1]

A Streptomyces griseus strain that produces antibiotic A.

Outline of the detailed explanation of the invention

The present invention relates to the finding that a Streptomyces griseus strain that produces antibiotic A has been obtained by performing an artificial mutation of Streptomyces griseus, which is generally available, by a specified method.

Examples show the details of the method of performing artificial mutation, and state that one strain of Streptomyces griseus that produces antibiotic A has been obtained.

(However, there is no statement that this strain has been deposited.)

Outline of the reasons for refusal

- Article 36(4)(i) (Enablement requirement), Article 36(6)(i)

The detailed explanation of the invention only describes that one strain of Streptomyces griseus that produces antibiotic A, a microorganism pertaining to the present invention, has been obtained, but does not describe that it has been deposited prior to the filing.

It is common general knowledge as of the filing that, even if a microorganism which has a certain property can be obtained by artificial mutation, it is generally rare that a microorganism with the same property can be obtained in a reproducible manner. Accordingly, since it is not stated that more than one strain of Streptomyces griseus that produces antibiotic A has been obtained by the process as described in the detailed explanation of the invention, a person skilled in the art, when conducting a follow-up experiment, might not be able to obtain said strain of Streptomyces griseus in a reproducible manner.

Thus, the detailed explanation of the invention is not stated clearly or sufficiently as to enable a person skilled in the art to work the invention of Claim 1, which relates to a Streptomyces griseus strain that produces antibiotic A.

In addition, Claim 1 describes an invention relating to a Streptomyces griseus strain that produces antibiotic A, whereas the detailed explanation of the invention, in light of the statement of the detailed explanation of the invention, as well as the common general knowledge as of the filing, which are mentioned above, cannot be regarded as disclosing the invention in such a way that a person skilled in the art could recognize that the problem to be solved by the invention of Claim 1, which is providing a Streptomyces griseus strain that produces antibiotic A, would be actually solved.

Thus, the invention of Claim 1 is not stated in the detailed explanation of the invention.

Applicant's response

The applicant can submit a written opinion in which he/she argues that a person skilled in the art, by conducting a follow-up experiment using the method of artificial mutation as described in the detailed explanation of the invention, will be able to obtain a Streptomyces griseus strain that produces antibiotic A in a reproducible manner, without needing to make trials and errors or conducting complicated experimentation beyond the reasonably-expected extent. The applicant can overcome all of the reasons for refusal by submitting the written opinion as above and a certificate of experimental results which supports the argument presented in the written opinion.

(Supplementary explanation)

It is common general knowledge as of the filing that, even if a microorganism which has a certain property can be obtained by artificial mutation, it is generally rare that a microorganism with the same property can be obtained in a reproducible manner. Accordingly, the applicant cannot overcome the reasons for refusal only by arguing that the invention of Claim 1 can be obtained in a reproducible manner by conducting a follow-up experiment as described in the detailed explanation of the invention, because the truth or falsity of such argument is unclear (refer to 3.2.3(2)). On the other hand, if the applicant, by submitting a certificate of experimental results, successfully proves that the invention of Claim 1 can be obtained in a reproducible manner according to the statement of the detailed explanation of the invention, it is established that the detailed explanation of the invention is stated clearly and sufficiently as to enable a person skilled in the art to work the invention of Claim 1, and that the invention of Claim 1 is stated in the detailed explanation of the invention. In consequence, the reasons for refusal can be overcome.

(Note)

Streptomyces griseus: A typical actinomycetes, which is known to produce antibiotic streptomycin.