

Part II Substantive Examination for Invention Patent

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Chapter 1. Written Description, Claim, Abstract and Drawing

An Applicant who wishes to apply for an invention patent with the Specific Patent Authority shall provide an application form, a written description, claim(s), an abstract, and the necessary drawing(s), among which the description, claim(s), and the necessary drawing(s) are documents required for acquiring a filing date. The mandatory contents of a description are stipulated in Paragraph 1, Article 17 of the Enforcement Rules of the Patent Act. The contents of a description shall include title of invention, technical field, prior art, summary of invention, brief description of the drawing(s), description of embodiments, and reference signs list. The rules regarding the claims are stipulated in Articles 18, 19, and 20 of the Enforcement Rules. The rules regarding the drawings are stipulated in Article 23 of the Enforcement Rules. In addition, the rules regarding the abstract, whose purpose is to provide the public with a quick and proper summary of the patent technology and to ensure the information retrieval functionality of the abstract, are stipulated in Article 21 of the Enforcement Rules.

The aim of the patent system is to encourage, protect and utilize the creation of inventions, utility models, and designs to promote industrial development. Through the application and examination processes of an invention, an applicant may be granted the exclusive patent rights as an encouragement and protection for the inventive efforts. On the other hand, upon the granting of patent rights, the scope of protection for the invention patent is ascertained, and the essence of the invention can be passed on to the public through the disclosure of the description, thereby allowing utilization of the invention for creating new inventions to facilitate development of the industry. In order to achieve the aforementioned legislative purpose, it is necessary to clearly and fully disclose an invention in the description to enable a person ordinarily skilled in the art to understand the content of the invention and practice it accordingly (refer to section 1.3 "Requirements for Written Description" of this chapter), so as to serve as a technical document for public use. In addition, the claims should clearly and precisely define the metes and bounds of a claimed invention, so as to serve as a legal document of patent rights protection.

The drafting format and principle of the description, claims, abstract, and drawings shall conform to all the requirements stipulated in Article 26 of

the Patent Act, referred to as the written description requirements, which include the enablement requirement, the requirements of clarity, conciseness, and supported by the description for the claims, as well as the rules of claim formats set forth in Paragraph 4, Article 26 of the Patent Act.

1. Written Description

1.1 Introduction

R.17-I The description shall recite the title of invention, technical field, prior art, summary of the invention, brief description of the drawing(s), description of embodiments, and reference signs list.

A.26-I The description should clearly and fully disclose the claimed invention, so that a person ordinarily skilled in the art can understand its content and practice it accordingly. The description should be sufficient to support the claims. The claimed invention refers to the subject matter recited in the claims for which protection is sought.

A.26-II

1.2 Drafting Order and Manner of the Description

R.17-I The content of the description includes the title of invention, technical field, prior art, summary of invention, brief description of drawing(s),
R.17-II description of embodiments, and reference signs list, etc., which should be recited in sequential order and each of the parts shall be preceded by a heading. For those who fail to comply, the applicant shall be notified to file a response or amendment; for those who fail to respond or amend within a specified time period, the application shall be rejected for failure to comply with Paragraph 4, Article 26 of the Patent Act. However, if the nature of an invention may be better expressed in other manners that clearly and fully express the claimed invention and meet the enablement requirement, e.g., an claimed invention being a coincidental discovery but with technical character, or a pioneering invention, or an invention of simple technology, the drafting order or manner thereof may differ from the order or manner set forth above.

R.17-II

1.2.1 Title of Invention

The title of invention should concisely state the contents of the claimed

inventions; irrelevant wording is not allowed. It should recite the subject matter of the application and reflect the category thereof, such as product or method; it should adopt the technical terminology used in the International Patent Classification if possible to facilitate patent classification and retrieval. The title of invention need not be exactly identical to the designation of the subject matter of the patent application, but it should cover the categories of the claimed inventions. For example, if the claims recite "a method of making mixed juice" and "a mixed juice," the title of invention shall recite "mixed juice and the method of making the same" or a similar name that reflect the two claimed categories, instead of just merely reciting "mixed juice" or "method of making mixed juice."

R.17-IV

The title of invention shall not contain non-technical terms, such as names of people, places, code names, etc.; it shall not contain ambiguous and generic terms, such as "and its analogues", or only recite "a product," "a method," or "a device," etc.

The title of description and the title of invention recited in the application form should be consistent. When the category of subject matter is altered due to amendments of the claims, attention should be paid to whether the title of invention is consistent with the categories of the claimed inventions; however, verbatim resemblance is not required between the two.

1.2.2 Technical Field

The technical field shall be the specific technical field to which the claimed invention belongs or is directly applied, not the field of higher hierarchical level or the invention per se, nor the adjacent technical field. The specific technical field is usually related to the lowest level of classification that an invention may be assigned in the International Patent Classification, such as the improvement invention of a bicycle steering device. Since the steering device is only applicable to the field of bicycle, "bicycle steering device" is the specific technical field, whose field of higher hierarchical level is "bicycle." This technical field in this case should recite "the present invention pertains to the field of bicycle, and more particularly to a bicycle steering device..." or "the present invention pertains to a bicycle steering device...."

However, if the claimed invention is a pioneering invention and does not belong to an existing technical field, only the new technology field of which the invention explores shall be recited.

1.2.3 Prior Art

R. 17.I(3)

The description shall recite the prior art known to the applicant, and objectively point out the problems to be solved or deficiencies in the prior art that the technical solution used in the invention to solve the problem. The recitation shall contain the title of the prior art document(s) if available, and the applicant may submit the relevant materials of the prior art to facilitate understanding of the relationship between the claimed invention and the prior art, so as to provide a basis for prior art search and examination. If an independent claim is written in Jepson type two-part format, the prior art recorded in the description shall include the technical features recited in the preamble portion of the independent claim.

The prior art documents cited in the description or submitted by the applicant may be patent documents or non-patent literatures; the applicant may be notified to provide Chinese translation thereof when necessary. When citing patent documents, one should try to indicate the country of origin, publication, or issue number and date of the patent document; when citing non-patent literatures, one should indicate the title, publication date, and detailed source thereof in its original language if available. The prior art documents cited or submitted should be public publications, including paper or electronic forms.

The content of the description shall include the essential technical features of the claimed invention, so that a person ordinarily skilled in the art can understand the content and practice it without referring to any documents. Therefore, when citing a prior art document, one should consider whether the content in the document would affect the determination of enablement. If, without referencing the content of the document, a person ordinarily skilled in the art cannot understand and practice the claimed invention, the description shall recite the content of document in detail, rather than merely citing the title of the document.

Because a person ordinarily skilled in the art is deemed to possess common knowledge at the time of application, the applicant shall not be required to recite information known or commonly used in documents such as textbooks or reference books during examination; and unless necessary, the applicant shall not be required to recite the details of the cited documents. For the same technical feature, there is no need to repeatedly recite different prior arts. However, if there exists repeated recitations or the recited prior

art is unrelated to the claimed invention, unless absolutely irrelevant, deletion is not required.

It should be particularly noted that, the recitation of prior art may not be required for pioneering inventions.

1.2.4 Summary of invention

The summary of the invention includes three parts: the technical problem to be solved by the invention, the technical solution used in the invention to solve the problem, and the effects of the invention as compared with the prior art. When preparing the summary of the invention, the content and the relationship among the three parts should be recited in a comprehensive manner. There is no need to recite the technical problem, technical solution, and technical effects separately.

R.17-I(4)

1.2.4.1 Problem to be Solved

The problem to be solved by an invention refers to an existing problem in the prior art that the claimed invention intends to solve. Except for inventions of coincidental discovery yet with technicality, the summary of the invention should recite one or more problems to be solved by the claimed invention.

When reciting the problem to be solved, one should describe the problem existing in the prior art, objectively point out the problem that is obviously present or is overlooked in the prior art, or the cause of problem, or the difficulty of solving the problem. The content of the recitation should be limited to the problem intended to be solved by the claimed invention; there shall not be subjective slander, derogation, nor shall there be commercial advertisement wording.

However, if the associated technical problem to be solved of a claimed invention can be understood without explicit recitation in the description, and the enablement requirement can be met, the applicant need not be required to nominally recite the problem to be solved.

1.2.4.2 Technical Solution for Solving the Problem

Technical solution, which refers to the technical contents that an

applicant adopts for solving technical problems and obtaining technical effects, is constituted of technical features. The technical solution is the heart of the description and also the meat of enablement for the claimed invention. In order to meet the enablement requirement, the technical features of the technical solution should be recited in a manner clear and sufficient, that is, the recitation of technical solution should at least cover all the essential technical features of the independent claims, and the additional technical features in the dependent claims. In order to avoid confusion and disagreement in comprehension, consistency of the technical terminology and symbols in the description, the claims, and the abstract shall be maintained.

1.2.4.3 Effects as Compared with Prior Art

Effects as compared with prior art refers to the effects directly produced by practicing the technical solution of the invention, i.e., the effects directly produced by all the technical features that constitutes the technical solution. It is an important basis for inventive step determination of a claimed invention. When reciting the effect produced by the technical solution, one should describe clearly and objectively depict the difference between the technical solution and the prior art recited in the description, present the advantageous effect of the technical solution over the prior art, and depict how the technical solution resolves the recited problem to attain the purpose of the invention; but one shall not disparage any specific article or method.

The effects of an invention may be reflected by the improvement in production output, quality, precision, efficiency, and yield rate, the conservation of energy, material, and manufacturing process, the convenience in processing, operation, and usage, the prevention and control of environmental pollution, and the discovery of useful properties, etc. The efficacy of an invention in the electrical or mechanical filed may be reflected by the structural features and the mode of operation of the invention. If the efficacy of an invention in the field of chemistry is expressive by experimental data, the associated experimental conditions and methodology should be disclosed.

1.2.5 Brief Description of Drawing(s)

Where the description is accompanied by drawing(s), description of the drawing(s) shall be made concisely according to the drawing sequence; where there are multiple drawings, all drawings shall be depicted. R.17-I(5)

1.2.6 Description of Embodiments

Description of embodiments is the detailed depiction of the claimed invention. Description of embodiments is an important part of the written description because it is imperative to the clarity and fullness of disclosure, the comprehension and enablement of the invention, and the support and interpretation of the claims. Therefore, the description should describe more than one embodiment of the invention, which may utilize examples for depiction when necessary; where there is accompanied drawing(s), the explanation shall be provided with reference to the drawing(s).

When describing the embodiments, one should describe what the applicant considers to be the preferred mode or specific examples for the enablement of the invention, so as to illustrate the technical solution adopted to solve the problem. In order to support the claims, the embodiments should include detailed depiction of the essential technical features recited in the claims, and should enable a person ordinarily skilled in the art to understand and to practice the claimed invention without undue experiments. When reciting the essential technical features, the content thereof shall be recited in detail rather than merely incorporating prior art documents or other portion of the description by reference. The technical features distinguishable from the prior art and the additional technical features of the dependent claims shall also be recited in detail.

The content of the embodiments or examples shall be determined by the nature of the claimed invention. For a product invention, the mechanical structure, circuit structure, or the chemical composition thereof should be depicted, and the relationship of combination between the elements that constitute the product shall be explained. For operating objects, if the mere description of its structure is still insufficient for a person ordinarily skilled in the art to understand and practice the invention, the actuation process or operation steps thereof should be described. For a method invention, the method steps thereof should be described, and the technical conditions thereof may be expressed by different parameters or parameter ranges.

When depicting specific embodiments of an invention with reference to the drawings, the recited reference signs shall be consistent with those annotated in the drawings, and shall be placed behind the corresponding elements.

In certain technical fields, e.g., the field of computers, when an invention is defined by function, unless the recitation in the description meets the enablement requirement, the specific manner for practicing the function should be recited. For a use invention that utilizes the properties of an article, e.g., the field of pharmaceuticals, it is often necessary to recite examples supporting the medical use. For product inventions whose make and use cannot be determined solely from the structure thereof, e.g., the field of chemical substances, one or more example shall be described to meet the enablement requirement.

For inventions with simple technical solutions or whose disclosure of technical solution already meet the enablement requirement, there is no further need for providing embodiments.

Examples are illustration of the preferred specific embodiments of an invention. The number of the examples mainly depends on the level of generalization of the technical features recited in the claims, e.g., the level of generalization of the parallel elements or the value range of data. As for whether a number of examples is appropriate, one shall also consider the nature of the invention, the technical field to which it belongs, and the state of the prior art. In principle, determination shall be made based on whether it can meet the enablement requirement and whether it is sufficient to support the scope of the claims.

When one example is sufficient to support the technical solution covered by the claims, the description may recite only a single example. If the scope of the claims is too broad, and the mere recitation of a single example cannot meet the enablement requirement, more than one distinctive examples or alternative embodiments of comparable nature shall be provided, so as to support the full scope covered by the claims.

1.2.7 Reference signs List

R. 17.I(7)

Where the description is accompanied by drawing(s), major reference signs of the drawing(s) shall be listed and illustrated according to the drawing sequence or reference signs sequence.

1.3 Requirements for Written Description

As a technical document, the description shall fully disclose the invention in a manner clear and sufficient, so that the public can make use of the invention, and the applicant may claim the invention accordingly. Therefore, the format of the description shall include title of invention, technical field, prior art, summary of invention, brief description of drawing(s), description of embodiments, and reference signs list, etc. The content of the description shall fully disclose the invention in a manner clear and sufficient, so as to enable a person ordinarily skilled in the art to understand and practice the invention, which is referred to as the enablement requirement. Whether the recitation in the description has fully disclosed the invention in a manner clear and sufficient shall be determined in view of the description, the claims, and the drawings as a whole, while taking into account the common general knowledge at the time of application. During examination, if the recitation in the description does not clearly or sufficiently disclose the claimed invention, so that a person ordinarily skilled in the art cannot understand its content and practice it accordingly, the applicant shall be notified to file a response or amendment on the grounds of violation of Paragraph 1, Article 26 of the Patent Act.

A. 26.I

The clear and sufficient disclosure of the description solution that the recitation of the description shall enable a person ordinarily skilled in the art to understand the content of the claimed invention, whose standard of determination is based on whether a person ordinarily skilled in the art can carry out the invention. If the level of disclosure achieves enablement, the description is deemed to clearly and sufficiently disclose the claimed invention.

1.3.1 Enablement Requirement

"For it to be understood and carried out by a person ordinarily skilled in the art " stipulated in Paragraph 1, Article 26, of the Patent Act means that the description shall fully disclose the invention in a manner clear and sufficient; the terminology of recitation should also be clear, so as to enable a person ordinarily skilled in the art, upon considering the description, the claims, and the drawings as a whole with reference to the common general knowledge at the time of application, to understand the content thereof, and to make and use the claimed invention without undue experiments, so as to

solve technical problems and obtain expected effect.

The claimed invention should be clear means that the description shall disclose the problem(s) that the invention aims to solve, its technical solution adopted to solve the problem(s), and the effect of the technical solution for solving the problem. The corresponding relationships between the problem, technical solution, and the technical effect shall be recited, so as to enable a person ordinarily skilled in the art to understand the claimed invention.

R. 22.I

The terminology of recitation should be clear means that the technical terminology in the technical field to which the invention belongs shall be used. The terminology used shall be clear and comprehensible, so as to define the true meaning thereof. The terminology shall not be vague or ambiguous. The technical terminology used in the description, claim(s), and abstract shall be consistent.

R. 17.I

In addition to clearly describing the claimed invention, the description shall also sufficiently disclose the manner of practicing the claimed invention. A sufficient written description should include the following items and contents:

- (1) Materials for understanding the claimed invention. For example, the description shall disclose the technical field to which the claimed invention belongs and prior art, etc.; where there is accompanied drawing(s), brief description of the drawing(s) shall also be included.
- (2) Materials for determining whether the claimed invention possesses the patentability requirements. For example, the description shall disclose the problem(s) that the invention aims to solve and its technical solution adopted to solve the problem(s); and state any advantageous effects of the invention with reference to the prior art.
- (3) Materials for enabling practice of the patent for invention. For example, the description shall describe at least one way of carrying out the invention, use examples where appropriate.

In addition, the materials of the claimed invention that cannot be deduced directly and unambiguously by a person ordinarily skilled in the art from prior arts shall be descriptive in the description.

R. 14.I

A person ordinarily skilled in the art refers to a hypothetical person who is possessed of general knowledge and ordinary skill of the technical field to which the invention pertains at the time of filing, and is able to understand and utilize technologies known at the time of filing. "Time of filing" means the filing date. Where priority is claimed in accordance with Paragraph 1, Article 28, or Paragraph 1, Article 30 of the Patent Act, the time of

R. 14.II

application refers to the priority date. If the problem to be solved can impel a person ordinarily skilled in the art to seek technical solution for solving the problem from other technical fields, said person should also be presumed to have common general knowledge in the other technical field.

”General knowledge” refers to the known knowledge in the technical field to which the invention belongs, which includes well-known knowledge as disclosed in reference books or textbooks; it may also include information commonly used and items that which can be understood from rules of thumb. “Ordinarily skill” means the ordinary ability to perform routine works and experiments. “General knowledge” and “Ordinarily skilled” are referred to as "common general knowledge."

In general, the term “a person ordinarily skilled in the art” refers to an individual person. However, if it is certain that referring to a group of people would be more appropriate upon considering the concrete facts of the technical field to which the invention pertains, the term may be fictitiously deemed to include a group of people.

If a person ordinarily skilled in the art, upon viewing the description, claims, and drawing(s) as a whole with reference to the common general knowledge at the time of application, is unable to understand how to implement the technical solution for practicing the claimed invention, e.g., still requiring an undue amount of trial and error or complicated experiments, and exceeding a reasonable expectation of a person ordinarily skilled in the art, the recitation of description shall not be deemed to meet the enablement requirement.

The determination of undue experiments shall at least include the following factors:

- (1) The breadth of the claims.
- (2) The nature of the claimed invention.
- (3) The level of general knowledge and ordinary skill of a person ordinarily skilled in the art.
- (4) The level of predictability of the technical field to which the invention belongs.
- (5) The amount of direction provided by the description, including those recited in the prior art.
- (6) The amount of experiments required to make and use the claimed invention based on the disclosure.

The determination of whether the description meets the enablement requirement is dependent on the subject matter of the claimed invention.

Therefore, for inventions that are disclosed yet unclaimed in the description, because of their irrelevancy to the claimed invention, the lack of clear and sufficient disclosure thereof does not affect the determination of enablement requirement.

A. 27.I For inventions in the field of biotechnology, sometimes it is difficult to depict the specific characteristics of living organisms in words, or the biological materials themselves cannot be obtained even if there are written records, thus rendering a person ordinarily skilled in the art unable to carry out the invention accordingly. Therefore, the applicant should, no later than the filing date, make a deposit of the biological material at the domestic depository designated by the Specific Patent Authority. However, no deposit is required if the biological material can be easily obtained by a person ordinarily skilled in the art. The applicant shall submit a certificate of deposit within 4 months after the filing date (16 months after the earliest priority date where priority is claimed), and specify the depository, date of deposit, and deposit number. Those that do not submit within the time limit are deemed failure to deposit, thus failing to meet the enablement requirement. Those that have submitted deposit in a foreign depository institution recognized by the Specific Patent Authority before patent application, and within the period specified above, submitted the certification documents deposited in the domestic depository designated by the Specific Patent Authority and the certification documents issued by the foreign depository institution, shall not be subject to the restriction of domestic deposit at the latest on the filing date. In the event that, prior to filing the patent application for invention, the biological material concerned has been deposited in a foreign depository recognized by the Specific Patent Authority, and where the certificate of deposit issued by the designated domestic depository and the foreign depository has been provided within the time period prescribed above, the applicant is exempted from the requirement of making a deposit no later than the filing date. If an applicant has deposited the biological material in a depository designated by a foreign country in its territory with which the ROC recognizes the effects of deposits based on reciprocity, and if the applicant has submitted the certificate(s) of deposit issued by the said foreign depository within the time period prescribed above, the applicant is exempted from the requirement of making a deposit in the ROC..

A. 27.VI The purpose of biological materials deposit is to enable a person ordinarily skilled in the art to understand the content of the invention and

carry out it accordingly. Thus, those who should make deposit yet fail to do so is deemed to have failed to provide clear and full disclosure. A rejection as set forth in Paragraph 1, Article 26 of the Patent Act shall apply.

A. 46

In addition, when filing a patent application for invention involving a biological material or utilization of a biological material, those whose biological material has been deposited shall specify the depository, date of deposit, and deposit number in the description. Those who has deposited with a foreign depository before patent application shall indicate the foreign depository, date of deposit, and deposit number. If a patent application for invention comprises one or more nucleotide or amino acid sequences, the description shall include a sequence listing separately recorded in a format prescribed by the Specific Patent Authority, and may submit the corresponding electronic information.

R. 17.V

R. 17.VI

1.3.2 Examination for Failure to meet the Enablement Requirement

In order to meet the enablement requirement, the recitation of the description be made in a clear and sufficient manner. The responsibility lies with the applicant. Whether the description is clear and sufficient and whether it is enabling is not necessarily related to the manner of recitation. The determination shall be made with careful consideration, and by reasonably pointing out that the content of the description fails to materially disclose the claimed invention with clarity or sufficiency; only then a rejection of failure to meet the enablement requirement pursuant to Paragraph 1, Article 26 of the Patent Act may be issued. A determination of failure to meet the enablement requirement cannot be made merely due to non-compliance of the designated written format.

The conditions of failure to enable a person ordinarily skilled in the art understand and carry out the claimed invention due to the lack of recitation for technical solution, or unclear or insufficient of recitation may include the following:

- (1) The description only recites the purpose or concept, or only expresses the desire or result, but does not describe any technical solution. For example, the claimed invention is a fishing rod that can sustain fish weighing 500 kilograms, but the description does not recite any materials and structures related to the fishing rod, so it is impossible to understand how the fishing rod can sustain fish weighing 500 kilograms.
- (2) Although the description recites the technical solution to solve the

problem, the disclosure is not clear or sufficient, e.g., by only describing implementations in a functional or other abstract manner, such that it is impossible to understand the corresponding materials, devices or steps thereof. For example, the claimed invention is a sunglasses, which can block 99% of the ultraviolet rays in sunlight, yet the description only recites that anti-ultraviolet lenses can be used to block ultraviolet rays, but does not disclose the material, composition, or structure of the lenses, such that it is impossible to understand how the blocking of 99% of ultraviolet rays in sunlight is achieved.

- (3) Although the description recites technical solution to solve the problem, the problem cannot be solved by the technical solution. For example, the invention is a wireless transmission device that can transmit and receive signals at a horizontal distance of 1 kilometer, and the description only recites that the wireless transmission device is a Bluetooth device, but a person ordinarily skilled in the art knows that the transmission distance of a Bluetooth device at the time of application is at most 100 meters.
- (4) Although the description recites technical solution to solve the problem, the results stated in the description cannot be reproduced or can only be reproduced randomly. For example, the claimed invention is a method for producing novel *Escherichia coli* Z, characterized in that *Escherichia coli* is exposed to X-rays. However, it is found from the examples in the description that the novel *Escherichia coli* that was mutated by exposure to X-rays reappeared only randomly, and a person ordinarily skilled in the art still cannot understand how to produce the novel *Escherichia coli* Z through other technical solution.
- (5) Although the description recites specific technical solution, the verification of the technical solution is dependent on experimental data which the description fails to provide, such that it is impossible to prove that the technical solution can solve the problem. For example, the claimed invention is a new use of a known compound used to prepare a drug for treating heart disease. However, the description does not provide any experimental data to prove that the compound has a curative effect on heart disease.

During examination, upon considering the description, the claims, and the drawings as a whole with reference to the common general knowledge at the time of filing, if the description is deemed not in compliance with the enablement requirement, the applicant shall be notified to provide response(s) or amendment(s) with the provision of clear and sufficient reasons that

specifically point out the defects in the description, or with the citation published documents that support the reasoning of the non-enablement determination. In principle, the documents mentioned above are limited to patent or non-patent literatures that have been published at the time of application. However, for documents cited in order to point out the technical fact that the recitation of a description is not in agreement with what a person ordinarily skilled in the art considers to be correct fails to meet the enablement requirement. Therefore, citation of patent or non-patent literatures published after the time of filing may be included.

For the portion of the description indicated to be non-enabling by the Examiner, the applicant may use convincing information (e.g., experimental data or published documents) to explain that a person ordinarily skilled in the art may practice the claimed invention based on common general knowledge at the time of filing. It should be noted that, the information submitted after the date of filing (especially experimental data) may only be used as an auxiliary evidential document to understand whether the clarity and sufficiency of the description reaches the level of enablement. Such information cannot serve as the basis for determining whether the enablement requirement are met, nor can it be added into the description by way of amendments.

The purpose of referring to the claims during examination is to determine the claimed invention, and the purpose of referring to the drawings is to supplement the limitations of text narrative in the description. Therefore, determination shall be made in view of the description, the claims, and the drawings as a whole during examination. If a description lacks clarity and sufficiency in its written recitation, yet the enablement requirement may be met from the reference to the drawings or the claims, the description should be supplemented with the relevant contents through amendments. However, whether the description meets the enablement requirement after amendment shall be determined substantially on a case by case basis.

Based on the applicant's explanation, when the examiner determines the level of clarity and sufficiency in the description is capable of meeting the enablement requirement, the initial reasons for failure to meet the enablement requirement has been overcome. However, if the enablement requirement cannot be met even with reference to the applicant's explanation, a decision of rejection should be issued with specific reasoning.

In addition, for inventions in the field of biotechnology, sometimes it is

difficult to depict the specific characteristics of living organisms in words, or the biological materials themselves cannot be obtained even if there are written records. Therefore, the deposit of biological material is allowed. However, enablement requirement shall still be met upon combining the recitation in the description and the deposit of biological material. That is, the deposit of biological material-related inventions can only prove their existence, but the description should still recite the corresponding technical contents.

1.4 Notes for Examination

- (1) The recitation in the description must be clear, comprehensive, and non-contradictory. In principle, technical terminology that are publically known or commonly used in the technical field to which the invention belongs should be used, and difficult and unnecessary technical terminology should be avoided. For technical terminology that are newly created or not known to a person ordinarily skilled in the art, the applicant may clearly provide definition; which, only when determined to carry no other equivalent meanings, the term may be recognized. If a technical terminology already possesses a basic meaning in its technical field, it shall not be used to express a different meaning other than its basic meaning, so as to avoid confusion.
- R. 3.II (2) The description shall be written in the Chinese language; provided that there is no confusion, special technical terminology that are well-known to a person ordinarily skilled in the art in languages other than Chinese, e.g., CPU, PVC, Fe, RC structure, etc., may be used. Translations of technical terminology that have been compiled by the National Institute of Education shall be adopted in principle; when a term is not compiled by the National Institute of Education or is deemed necessary by the Specific Patent Authority, the applicant may be notified to provide annotation of the term in foreign language. For mathematical formulas, chemical formulas, or chemical equations, commonly used symbols and expressions must be adopted. The technical terminology and symbols in the description, the claims, and the abstract should be consistent.
- R. 3.I
- R. 22.I
- (3) The units of measurement in the description shall adopt the national legal units of measurement (refer to the Weights and Measures Act) or the International System of Units when appropriate. Other units of measurement commonly known in the field may be used when necessary.

In addition, one should avoid the use of registered trademarks, trade names, or other similar words to describe materials or articles; if such use is necessary, one shall indicate its model, specification, performance, and manufacturer, so as to meet the enablement requirement.

(4) The description may be arranged sequentially with four-digit Arabic numerals placed in square brackets before each paragraph, such as [0001], [0002], [0003], etc., to clearly identify each paragraph.

R. 17.III

(5) If the publication date of a prior art recited in the description is not specified or ascertainable, on the basis of good faith or estoppel principle, the applicant admitted citation shall be regarded as prior art in principle, and is thus applicable as a basis for the determination of patentability requirements. However, if the applicant responds with evidence, and the applicant proves that the technology recited in the description is in fact the applicant's own prior self-developed and undisclosed in-house technology, then such prior art may not be used as a basis of unpatentability determination for the claimed invention.

2. Claims

2.1 Introduction

The scope of a patent rights for an invention is determined by the claims; the appropriateness of the recitation in the claims is imperative to both the protection of patent rights of a patentee and the restriction on the public use. Therefore, the invention for which an applicant specifically seeks protection shall be recited in the claims, that is, the claims shall define the claimed invention. The claims may comprise one or more claims, each claim shall be recited with clarity and conciseness, and be supported by the description. A claim is used for reciting the essential features of what the applicant regards as the claimed invention, and is the basic unit for the determination of enablement requirement, invalidation request, or patent rights assertion, etc. This section depicts the categories, recitation formats, recitation principles, and the interpretation of the claims.

A. 58.IV

A. 26.II

2.2 Categories of Claims

Claims can be divided into two categories: product claims and method claims. Product claims may recite subject matters including substances,

compositions, articles, equipment, devices, or system, etc. Method claims may recite subject matters that include methods of manufacturing or methods of processing (e.g., insecticide methods, disinfection methods, or detection methods, etc.).

A claim of use, e.g., "a use of substance X as pesticide," shall be regarded as equivalent to a method claim "method of using substance X as pesticide," whose subject matter is not the pesticide; while "a use of substance X in preparation of a pharmaceutical composition for treating disease Y" shall be regarded as a "method of using substance X to prepare a pharmaceutical composition for treating disease Y," whose subject matter is not a pharmaceutical composition.

2.3 Claim Formats

The format requirements of the claims is stipulated in Article 18 and Article 19 of the Enforcement Rules of the Patent Act. In case of violation, the applicant shall be notified to file a response or amendment. If a response or amendment is not submitted within allotted time, the application may be rejected on the grounds of violation of Paragraph 4, Article 26 of the Patent Act.

The recitation of a claim includes the preamble, the body and the transitional phrase connecting the preamble and the body. For example, "a toy, comprising: element A and element B." The preamble recites the subject matter of the claim (toy); the body recites relationship between the technical features (element A and element B); the transitional phrase (comprising) connects the preamble and the body.

R. 18.VI

The scope of the claims is defined by all the technical features recited in a claim, thus each claim shall be written in a single sentence, with only a period used at the end of the sentence. If technical features are numerous, and the contents and interrelationships thereof are complicated, such that their relationship is difficult to make clear even with the use of punctuations, they may be recited in separate paragraphs in a claim.

R. 18.I

The claim(s) of an invention may be presented in more than one independent claim; the number thereof shall correspond to the disclosure of the invention; when necessary, the claim(s) may contain more than one dependent claim. The independent claim(s) and the dependent claim(s) shall be consecutively arranged in Arabic numerical sequence according to their dependent relations.

The scope of patent rights is determined by the claims. The technical features recited in the claims are what the applicant regarded as the essential technical features of the claimed invention. Non-essential technical features may not be recited, and the essential technical features shall not be omitted. Commercial benefits or other non-technical matters shall not be recited. The technical terminology and reference signs in the description, the claims, and the abstract shall be consistent. R. 22.I

The claims may recite chemical formulas or mathematical formulas, and may contain tables if necessary. However, the claims may not contain drawings. In addition, unless absolutely necessary, the technical features of the claims shall not be defined by the page number, column number of the description, nor by the drawings and the reference signs thereof. That is, recitations such as "as described in ... part of the description" or "as illustrated by FIG..." shall be forbidden. Nevertheless, a claim may recite languages such as "as shown in FIG..." only if the particular shape associated with an invention can only be defined graphically and cannot be expressed in words, or when an invention of chemical product can only be defined by graphical plots or schematic diagrams. R. 19.III
R. 19. I

The technical features recited in the claims may reference the corresponding reference signs in the drawings. The reference signs shall be added behind the corresponding technical feature, and placed in parenthesis. The reference signs shall not be used as limitations for the interpretation of the claims. If there exist multiple embodiments, the independent claims should only reference the reference signs of the most important embodiment. R. 19. II

In principle, the technical features recited in the claims shall be expressed in structures or process steps as limitations. If the claimed subject matter is a pure substance, it should be defined by chemical name, molecular formula, or structural formula. If a subject matter cannot be defined by chemical name, molecular formula, or structural formula, it may be defined by the associated physical or chemical property. If a subject matter is yet unable to be defined by physical or chemical properties, it may be defined by its process of manufacturing. However, the claims shall recite the technical features of the claimed subject matter, so that a person ordinarily skilled in the art can identify the difference between the claimed subject matter and the prior art. In addition, for a subject matter that

possesses a special function or use that is sufficient to reflect the technical features thereof, a recitation of the function or the use may be added to the claims to define the claimed subject matter.

If the scope of the claims can be supported by the description, the claimed invention may be defined through generalization. The types of generalization for the claims generally include the following:

(1) Generalization through Generic Concept.

For example, "C1-C4 alkyl" comprises a generalization of methyl, ethyl, propyl, and butyl groups; "fixing means" comprises a generalization of screws, bolts, and nails.

(2) Generalization through alternative format.

Alternative format refers to the format where a claim recites a group of inventions, and each invention in the invention group is respectively defined by individual options in the alternative format recited in the claim, with parallel listing of the particular features of the multiple options by "and" and "or," e.g., "feature A, B, C, or D" and "a substance selected from the group of substance consisting of A, B, C, and D," etc.

When generalizing through alternative format, each of the parallel option shall possess analogous nature. A generalization by a technical feature comprising a generic concept shall not be recited in parallel with a technical feature comprising a specific concept, and each of the parallel inventions recited in the claims shall conform to the unity of invention. In addition, the concept of generalization in an alternative format should be clear, e.g., for "A, B, C or the analogous (or substances, equipment, methods)," if the analogous is not clearly defined, it shall not be parallel recited with the specific A, B, and C. During examination, attention shall be paid to whether the scope of generalization is too broad to be supported by the description. If there are specific reasons to determine that the scope of generalization is inappropriate and cannot be supported by the description, or the disclosure of a prior art has fallen within the generalization of the claims, the applicant shall be notified to provide response or amendment.

When defining a compound invention in an alternative format, to determine whether the parallel options (i.e., alternative compounds) sharing a

common nature (for details, please refer to section 6.1.1 of Chapter 13, Pharmaceutical-related Inventions), one shall consider whether the following requirements are simultaneously met:

- (i) All the options possess a common property or activity.
- (ii) All the options possess a common structure, i.e., all the options share an important chemical structural element; or although there is no unified determination standard for the common structure, all the options can be considered to belong to a "commonly recognized compound group" by a person ordinarily skilled in the art.

2.3.1 Types of Claims

The claims are classified into two types: independent claims and dependent claims. The difference between the two types of claims rests only in the form of recitation; there is no difference in the determination of the substantive contents thereof.

2.3.1.1 Independent Claims

The claim(s) of an invention patent may be presented in more than one independent claims; the number of claim(s) shall correspond to the disclosure of the invention. An independent claim shall state the designation of the subject matter as claimed and the essential technical features of the invention that the applicant regards as his/her invention, so as to reflect the technical means of the claimed invention as a whole. Essential technical features refer to the technical features that are indispensable for solving the problem of the claimed invention, which as a whole constitute the technical means of the invention, and is the basis of comparison between the claimed invention and the prior art. Technical means in a product invention refers to the structural features, elements, or composition, etc. In a method invention, technical means refers to features in the conditions or process steps, etc.

R. 18. I

R. 18. II

The independent claims may be written in two-part form or in other formats. Where an independent claim is written in two-part form, the preamble portion should contain the designation of the subject matter as

R. 20. I

claimed and the essential technical features that are in common with the prior art; the characterizing portion shall state the essential technical features distinguishable from the prior art in language such as “characterized in that,” “wherein the improvement comprises,” or other similar expressions.

- (1) Preamble portion: should include the designation of the subject matter as claimed and the essential technical features that are in common with the prior art.
- (2) Characterizing portion: should state the essential technical features distinguishable from the prior art using language such as "characterized in that," "wherein the improvement comprises," or other similar expressions such as "improved in" or "characterized in."

The designation of the subject matter as claimed in the preamble refers to the title of the device, composition, method, etc. corresponding to the invention, and should belong to the technical field of the invention recited in the description. The essential technical feature recited in the preamble is only required to contain the common parts that are closely related to the claimed subject matter. For example, for an invention of a watch whose improved feature rests in the date display window, the preamble of the claim should only recite "a watch that comprises a date display window..." without the need for mentioning other common features that share resemblance with known watches, e.g., watch fingers, power sources, etc.

R. 20. II

The characterizing portion shall recite the essential technical features of the claimed subject matter that are distinguishable from the prior art; the technical features in the characterizing portion and the preamble portion shall be considered in combination during the interpretation of the claims.

The two-part form is only applicable for independent claims but not dependent claims. If the nature of an invention is not suitable for the two-part form, the claim may be written in other formats, such as reciting more than one technical features as limitations in a single part for the defining a claim. The applicable inventions for this situation are as follows:

- (1) Pioneering inventions.

- (2) Combination inventions of known technologies whose focus rests in the combination per se.
- (3) Improvement of a known invention whose focus rests in the deletion of a certain technical feature, or the replacement of a certain technical feature, or the rearrangement of the interrelationship between technical features.

2.3.1.2 Dependent Claims

A dependent claim is a claim that depends on a preceding claim, comprises all the technical features of the claim on which it depends, and recites additional technical features to further limit the claim on which it depends. Dependent claims shall avoid repetitive recitation of identical contents, shall concisely and clearly distinguish the dependent claim and the base claim on which it depends, and facilitates the interpretation of the claims. All the technical features of a claim on which a dependent claim depends should be included into consideration during claim interpretation. Accordingly, a dependent claim comprises a particular embodiment of a claim on which it depends, and necessarily falls within the scope of the claim on which it depends. Therefore, the advantage of dependent claim categorization is that, if a claim (whether an independent claim or a dependent claim) on which a claim depends on possesses novelty and inventive step, its dependent claim is deemed to possess novelty and inventive step. However, if the priority date of a dependent claim differs from the priority date of the claim on which it depends, which usually occurs when multiple priority dates or partial priority are claimed, the principle stated above would not be applicable.

R. 18.III

A dependent claim shall recite the Arabic number(s) of the claim(s) on which it depends, the designation of the subject matter and the technical features other than those in the claim(s) on which it depends. The claim number on which it depends shall be recited in the Arabic number(s). A dependent claim may only depend on the preceding independent or dependent claim(s).

R. 18.III

R. 18.V

Each independent claim may be the basis of dependency for more than one dependent claims, and a dependent claim may depend on an independent claim or a dependent claim. In order to facilitate comprehension of the

claims' dependent relations, regardless of a direct or an indirect dependency, a dependent claim shall be grouped in a most proper manner, and listed behind the independent claim on which it depends and before another independent claim.

Any dependent claim shall be construed to include a dependency portion and a limitation portion:

- (1) Dependency portion: shall state the Arabic number(s) of the claim(s) on which it depends and the designation of the subject matter.
- (2) Limitation portion: shall state the technical features other than those in the claim(s) on which it depends.

The dependency portion of a dependent claim shall recite the claim number of the claim on which it depends, and shall reiterate the designation of subject matter of the claim on which it depends, e.g., "the camera shutter of claim 1...." The limitation portion of a dependent claim may recite limitations to further limit the technical features of the claim on which it depends. If an independent claim is of the two-part format, the dependent claim thereof may not only further limit the characterizing portion of the independent claim, but also further define the preamble portion of the independent claim.

R. 18.IV

R. 18.V

A dependent claim depending on two or more claims shall be referred to as a multiple dependent claim, and shall be presented in alternative. That is, the claim numbers of the independent claim or dependent claim on which a multiple dependent claim depend shall be expressed in terms of "or" or other comparable alternative languages. Direct or indirect dependence is not allowed among multiple dependent claims. For example, the dependency portion of claim 3 recites "... of claim 1 or 2," which is dependent on claims 1 and 2, and is recited in the alternative format of "or." Meanwhile, claim 4 recites "... of claim 1, 2, or 3." The dependency of claim 4 on claim 3 is not allowed, as claim 3 and 4 are both multiple dependent claims.

A dependent claim that alternatively depends on two or more claims is a multiple dependent claim. The recitation format of multiple dependent claims is exemplified as follows in claim 3 and claim 7:

[Claims]

1. An air-conditioning device, comprising a wind direction adjustment mechanism and an air volume adjustment mechanism....

(Independent claim)

2. The air-conditioning device according to Claim 1, wherein the wind direction adjusting mechanism is....

(Dependent claim of single dependent format)

3. The air-conditioning device according to claims 1 or 2, wherein the air volume adjustment mechanism is....

(Dependent claim of multiple dependent format)

4. The air-conditioning device according to claim 2, wherein...

(Dependent claim of single dependent format)

5. The air-conditioning device according to claim 4, wherein....

(Dependent claim of single dependent format)

6. The air-conditioning device according to claim 5, wherein....

(Dependent claim of single dependent format)

7. The air-conditioning device according to claims 4, 5 or 6, wherein....

(Dependent claim of multiple dependent format, wherein "Claims 4, 5 or 6" can also be recited as "any one of claims 4 to 6.")

2.3.1.3 Claim Containing Reference to Another Claim

In order to avoid duplication of identical recitations, so as to maintain recitation clarity and conciseness of the claims, a claim may be recited with reference to a preceding claim. However, if the format of a claim containing reference to another claim is rendered indefinite, e.g., the subject matter or technical feature of a referenced claim is contradictory or inconsistent, the applicant shall still be notified to file a response or amendment.

Claims containing reference to another claim are usually dependent claims. However, if the claimed category or designation of subject matter are different, or if a claim does not recite all the technical features of a referenced claim, the claim containing reference to another claim shall be substantially interpreted as an independent claim. The determination thereof shall not be different merely because of its recitation format. The following are five common scenarios:

(1) Reference is made to a claim of different category.

[Claims]

1. A compound A,
2. A method of making compound A as recited in claim 1,

(2) Reference is made to a co-operating part of another claim.

[Claims]

1. A bolt having a specific form of male thread,
2. A nut having a female thread that matches the specific form of the bolt as recited in claim 1,

[Remark]

Bolts and nuts are co-operating members, and are usually used together to generate function.

(3) Reference is made to all the technical features of another claim, and the designation of subject matter of the two claims are different yet belong to the same category.

[Claims]

1. A backlight panel, comprising a glass substrate....
2. A liquid crystal display unit, comprising the backlight panel as recited in claim 1.

[Remark]

The designation of subject matter of claim 1 and claim 2 are different; in principle, the technical features shall be defined in full. However, in order to maintain concise recitation for the claims, claim 2 may be defined by making reference to all the technical features of the backlight panel recited in claim 1. Therefore, claim 2 shall still be interpreted as an independent claim.

(4) Partial replacement of technical features in another claim.

[Claims]

1. A conveyance device, comprising a gear driven mechanism....
2. The conveyance device as recited in claim 1, comprising a belt driven mechanism that replaces the gear driven mechanism.

[Remark]

Although claim 2 has the form of a claim containing reference to another claim, but it does not comprise all the technical features of the claim

to which reference is made (claim 1). Therefore, claim 2 shall be substantially interpreted as an independent claim. It shall be noted that, an independent claim of this type is a non-ideal form of recitation; one shall define the technical features in a manner sufficiently clear and complete for carrying out the invention thereof and avoid using recitation by reference format if possible.

(5) Reference is made to partial technical features of another claim.

[Claims]

1. An image monitoring system, comprising an infrared sensor and a camera device.

2. An infrared sensor as recited in claim 1, comprising an infrared emitting unit, a distance measurement unit, and an infrared detection unit.

[Remark]

Claim 2 only makes reference to part of the technical features recited in claim 1 (infrared sensor), and does not comprise all the technical features recited in claim 1. Therefore, claim 2 shall be substantially interpreted as an independent claim. It shall be noted that, an independent claim of this type is a non-ideal form of recitation as it may render the claim scope indefinite during interpretation. One shall define the technical features in a manner sufficiently clear and complete for carrying out the invention thereof and avoid using recitation by reference format.

2.3.2 Unacceptable Claim Formats

The following are examples of unacceptable claim formats.

(1) Not depending on a preceding claim.

[Claims]

1. The ball bearing according to claim 2, including an annular buffer arranged on an outer side of the outer wheel thereof.

2. A ball bearing, comprising a specific structure....

3. The ball bearing according to claim 3, wherein....

[Remark]

Claim 1 depends on the succeeding claim 2. Claim 3 does not depend on a preceding claim.

(2) Multiple dependent claim without using alternative format.

[Claims]

1. An air-conditioning device, comprising a wind direction adjustment mechanism and an air volume adjustment mechanism....

2. The air-conditioning device according to Claim 1, wherein the wind direction adjusting mechanism is....

3. The air-conditioning device according to claims 1 and 2, wherein the air volume adjustment mechanism is....

[Remark]

Claim 3 does not depend on claims 1 and 2 using alternative format.

(3) Multiple dependent claim referring directly or indirectly to another multiple dependent claim.

[Claims]

1. A method of making compound A ...wherein reaction temperature is 50-100°C.

2. The method according to claim 1, wherein reaction temperature is 60-80°C

3. The method according to claims 1 or 2, wherein reaction temperature is 70°C.

4. The method according to claims 2 or 3, wherein....

5. The method according to claim 4, wherein....

6. The method according to claim 5, wherein....

7. The method according to claims 5 or 6, wherein....

[Remark]

Claim 4 is a multiple dependent claim with direct reference to another multiple dependent claim.

Claim 7 is a multiple dependent claim with indirect reference to another multiple dependent claim.

2.3.3 Transitional Phrases

Transitional phrases may be categorized into open-ended type, close-ended type, partially open type, and other types of expression.

2.3.3.1 Open-ended Type

Open-ended type transitional phrases define the claimed combination of

elements, compositions, or method steps without excluding those not recited in a claim. Examples of open-ended type transitional phrase include "comprising," "containing," "including," etc.

2.3.3.2 Closed-ended Type

Closed-ended type transitional phrases define the claimed combination of elements, compositions, or method steps that are only recited in a claim. Examples of close-ended type transitional phrase include "consisting of," etc. A dependent claim of a claim using close-ended type transitional phrase may not recite additional element, composition, or method step.

2.3.3.3 Partially Open Type

The scope of partially open type transitional phrases rest between the open-ended type and the closed-ended type as mentioned above, and define the claimed combination of elements, compositions, or method steps without excluding those which are recited in the description and do not materially affect the claimed elements, compositions, or method steps. Partially open type transitional phrases include "consisting essentially of," etc. If a claim recites partially open type transitional phrase, the interpretation thereof dose not exclude those recited in the description and do not materially affect the main technical features of the claimed invention. For example, for "an article consisting essentially of composition A," if the description recites that the claimed invention may include any known additives, such as emulsifiers, and there is no evidence that the addition of emulsifier will substantially affect the main technical features of the claimed invention, the claim interpretation does not exclude emulsifier.

2.3.3.4 Other Types

If a claim recites other types of transitional phrases, such as "composed of," "having," "being," etc., whether it belongs to open-ended type, close-ended type, or partially open type interpretation shall refer to the content of the description as a whole, and be determined on a case-by-case basis. For example, for "a cDNA having a sequence encoding human PI," if it can be understood from the description that the cDNA still contains other

parts, the transitional phrase "having" should be deemed an open-ended transitional phrase.

2.4 Requirements for Claims

A. 58.IV
A. 26. II

The extent of the protection conferred by an invention patent shall be determined by the claim(s). The claims are the subject of examination for the determination of patentability of the claimed invention. Accordingly, Claim(s) shall define the claimed invention, and more than one claim may be included therein. Each claim shall be disclosed in a clear and concise manner and be supported by the description.

2.4.1 Clarity

Clarity of claims refers to the recitation of each claim should be clear, and the recitation of all the claims as a whole should also be clear, so that a person ordinarily skilled in the art can understand the meaning thereof solely from the recitations of the claims without having doubts in their scopes thereof. Specifically, the category and essential technical features recited in each claim should be clear, and the dependency relationship between each of the claims should also be clear. Reference may be made to the written description, drawings, and common general knowledge at the time of filing when interpreting the claims.

The following provides samples of unclear claim forms:

2.4.1.1 Unclear Category

The scope of each claim should be clear and consistent with the claimed subject matter. Examples of unclear claim category may include, for example: the claim recites "a method or device, comprising..." or "a method and device, comprising...;" or when it is impossible to determine whether the claim refers to a product or a method, for example: "an anti-inflammatory effect of chemical substance X;" or the claim refers to two or more categories, for example: "the artificial heart as recited in claim 1 or the method of manufacturing artificial heart as recited in claim 2."

2.4.1.2 Inconsistency between the Description and the Claims

Inconsistency between the description and the recitation of the claims may render the claims unclear. For example, based on the recitation of the written description and with reference to the common general knowledge at the time of filing, one may determine an independent claim fails to clearly recite an essential technical feature, thereby rendering the claim unclear. In addition, if during examination, an independent claim is deemed lacking essential technical feature, this may also render the claim to lack written support from the description, or render the claimed invention unable to meet the enablement requirements.

2.4.1.3 Technical Feature that defines the invention is Unclear

2.4.1.3.1 Technical Feature that defines the invention is Incorrect

For example, for a composition defined by a close-ended type transitional phrase, the sum of the upper limit value of a certain component of the composition and the lower limit values of other components exceeds 100%, e.g., a claim recites "a compound X, consisting of 40 to 60% by weight of component A, 20 to 50% by weight of component B, and 20 to 30% by weight of component C," in which the sum of the upper limit value of component A and the lower limit values of the components B and C exceeds 100% weight percent. Another example is a composition defined by a close-ended type transitional phrase, the sum of the lower limit value of a certain component of the composition and the upper limit values of other components is less than 100%, e.g., a claim recites "a composition X, consisting of 10 to 30% by weight of component A, 20 to 60% by weight of component B, and 5 to 40% by weight of component C," in which the sum of the lower limit value of the component B and the upper limit value of the component A and component C is less than 100% weight percent..

2.4.1.3.2 Technical Feature that defines the invention is Technically Incomprehensible

The technical features recited in the claims are the primary subjects for

the determination of patentability requirements. Examination may not be carried on if the technical meanings of the technical features cannot be understood. For example, a claim recites "an adhesive composition comprising component Y, wherein a viscosity thereof is a to b obtained in accordance with a measurement method of laboratory X." However, the measurement method of X Laboratory and the technical meaning of the measured viscosity are not disclosed in the description, nor are they common general knowledge at the time of filing.

As another example, a claim recites "a product B defined by a specific value of a specific formula A," yet the specific formula A is only disclosed as an obtained result, whose technical meaning is unable to be understood even with reference to the description, drawings, and common general knowledge at the time of filing. However, if the description has recited the process of obtaining the formula or the reasons for determining the numerical limit of the formula (including the numerical value obtained from the experimental results), the technical meaning can usually be understood.

2.4.1.3.3 Technical Feature that Defines the Invention is Inconsistent

For example, a claim recites "a method for producing a final product D, comprising a first step of producing an intermediate product B from a starting material A, and a second step of producing the final product D from an intermediate product C." Because the intermediate product B produced in the first step is different from the starting material C in the second step, as far as a person ordinarily skilled in the art is concerned, it is impossible to ascertain whether that the intermediate product is B, C, or contains both, thus rendering the claim unclear.

2.4.1.3.4 Technical Features that Define the Invention Lack Technical Correlations

For example, a claim recites "an information transmission medium, used for transmitting a specific computer program." Because transmission of information is an inherent function of a transmission medium, the recitation of this claim merely points out the inherent functionality of transmitting a specific computer program on specific medium at any given

time to any given location, yet does not specify any technical correlations between the information transmission medium and the computer program.

2.4.1.4 Lack of Clarity due to Alternative Format

A claim may be rendered unclear if it defines an invention in the alternative format but each of the alternatives shares no essence in common; or if a feature of generic concept is juxtaposed with a specific concept feature. For example, a claim recites "a compound X, ... whose substituent Y is selected from the group consisting of halogen, chlorine and alkyl." As "halogen" is a superordinate concept of "chlorine," it is improper to juxtapose the two options in an alternative format.

2.4.1.5 Lack of Clarity due to Unclear Expression

(1) A claim recites negative limitation can be used to “disclaim” the part which overlaps with the prior art, such as "except for", "not..." or similar terms of disclaimer.

Such terms can be expressed only if they have clear meanings in a specific technical field, or if a person ordinarily skilled in the art can understand the scope thereof.

In addition, if it is not possible to clearly and concisely define a claim using positive recitation, e.g., to evade prior arts, the use of negative expression may be permitted to explicitly exclude the portion that belongs to the prior art.

[Example of lacking clarity]

Example 1

【Claim】

A method for manufacturing a bicycle crank, comprising the following steps:

(a)...; (b)...; (c) sealing the pedal end using any non-cutting processing technique.

【Remark】

The term "non-cutting processing technique" in the claim defines the method of sealing the pedal end of a bicycle. Although examples in the embodiment of the description specify that the cranks made by "punching method" and "rolling method" exhibit excellent characteristics, as far as common general knowledge is concerned, processing methods are too numerous to enumerate, and not all of the unlisted processing methods possess the technical effects recited in the example of the embodiments. Therefore, while the negative expression "non-cutting processing technique" in the claim specifically excludes cutting processing, a person ordinarily skilled in the art would not understand the claim scope thereof, thus rendering the claim unclear.

[Example of clarity]

Example 2.

{ Claim }

A seat cushion riser for a bicycle, comprising an insertion section and a seat cushion riser, both of which are in non-circular pipe form for facilitating mutual insertion coupling.

{ Remark }

The term "non-circular pipe form" in the claim defines the insertion section and the seat cushion riser. The description points out that in the prior art, the two abovementioned components are in the form of circular tubes, while the embodiment discloses the shape of an elliptical tube, and points out that any non-circular tube shape can achieve the special effect of non-rotation. As far as common general knowledge is concerned, there are too many forms of pipes to enumerate, and it is difficult to cover all the forms in a positive recitation. Accordingly, the claim uses a negative expression to exclude the circular pipe form. A person ordinarily skilled in the art would understand the claimed scope, thus the claim would not be rendered unclear.

Example 3.

{ Claim }

A blanket, characterized by comprising plural non-woven yarn assemblies stacked parallel to each other... two rows of yarn layers in adjacent yarn assemblies are arranged in a non-parallel manner...

{ Remark }

The term "non-woven" in the claim reflects a textile technology, which

can join fibers together to form a fiber layer without weaving (weaving, knitting, etc.); the product of which is non-woven. Therefore, the term "non-woven" has a clear meaning in its technical field and will not make the claims unclear.

The meaning of the term "non-parallel" in the claim is consistent with and more concise with the technical feature of "perpendicular or oblique but not parallel" disclosed in the description. A person ordinarily skilled in the art would understand the claimed scope, thus the claim would not be rendered unclear.

(2) Terms of numerical definitions in the claims that merely indicate an upper or lower limit, or contain the numerical value of 0 or 100%, e.g., "greater than...," "less than...," "at least...," "at most...," "above...," "below...," "0-...%," or similar expressions.

Such terms can be used only if they have clear meanings in a specific technical field, or a person ordinarily skilled in the art can understand the scope thereof.

[Example of lacking clarity]

Example 1.

[Claim]

A cleaning agent composition, comprising: component A and component B, wherein a content of component A is 80 to 90% by weight, and a content of component B is at most 10% by weight.

[Remark]

The term "at most..." in the claim defines the content of component B. If it is expressed only by an upper limit, the lower limit thereof may be as low as 0%, which means the component does not exist. However, the description recites that component B is an indispensable component. This causes contradiction between the scope of the claim and the description, thereby rendering the claim unclear. Conversely, if the description recites that the ingredient B is an optional addition, the term "at most..." will not render the claim unclear.

[Example of clarity]

Example 2.

{ Claim }

A centrifuge... wherein the length of a filter residue layer of the third cylinder is $L < 100\text{mm}$.

{ Remark }

The term " $L < 100\text{mm}$ " in the claim defines the length of the filter residue layer. Since theoretically a length cannot be 0, the claim would not be rendered unclear.

Example 3.

{ Claim }

An alloy for a golf club head, consisting of: 13-15% by weight of chromium, 2.5-3.0% by weight of molybdenum, 1.5-1.8% by weight of nickel, and less than 0.036% by weight of sulfur.

{ Remark }

The term "less than 0.036%" in the claim defines the weight percentage of sulfur. Since sulfur is an impurity that is difficult to remove in the material, the effect of the invention can be achieved as long as the sulfur content in the invention is less than 0.036%, it is impossible and is unnecessary to define the lower limit thereof. Accordingly, the claim would not be rendered unclear.

Example 4.

{ Claim }

A screw, comprising: a screw head, a screw rod and a screw tail... characterized in that the screw rod has more than two grooves.

{ Remark }

The term "more than..." in the claim defines the number of grooves on the screw rod. The term "more than..." is a common way of expression in the technical field. A person ordinarily skilled in the art would understand the claimed scope thereof, thus the claim would not be rendered unclear.

Example 5.

{ Claim }

A process for preparing tobacco, which treats a moisture-containing tobacco substance by continuous compression and decompression... characterized in that the compression is carried out at a temperature higher than 55°C .

{ Remark }

The term "higher than..." in the claim defines the operating temperature. Since the compression treatment in the tobacco preparation process must be carried out above a certain temperature before moisture can be removed, the expression "higher than..." is a common way of expression in this technical field. A person ordinarily skilled in the art would understand the claimed scope, thus the claim would not be rendered unclear.

Example 6.

[Claim]

A method for preparing a catalyst for the catalytic reaction of propylene, wherein... the catalyst is heat-treated at a temperature of at least 780°C.

[Remark]

The term "at least..." in the claim defines the temperature of the heat treatment. The final treatment in the catalyst preparation process must be calcined above a certain temperature. Therefore, the use of the expression "at least..." would be understood by a person ordinarily skilled in the art. Accordingly, the claim would not be rendered unclear.

Example 7.

[Claim]

A method for hardening rails, comprising: aligning rails, performing horizontal positioning, and performing axial alignment and fixing, thereby removing a risk of track bending, wherein a length of rail is at least 50 meters, and heating the rail to Austenite phase.

[Remark]

The term "at least..." in the claim defines the length of the rail. Since the present invention is used for long rails, it must be more than 50 meters long to function. A person ordinarily skilled in the art would understand the claimed scope, thus the claim would not be rendered unclear.

Example 8.

[Claim]

A battery cathode, consisting of any one or two or more of lithium atoms, lithium alloys, and materials capable of absorbing and desorbing lithium.

[Remark]

The term "...or more" in the claim defines the constituent materials of the battery cathode. Since the recited materials possess similar properties,

the characteristics of the battery cathode can be determined from the claimed materials. A person ordinarily skilled in the art would understand the claimed scope, thus the claim would not be rendered unclear.

(3) Use of "about," "approximately," or similar terms in the claims.

Such terms can be used as long as a person ordinarily skilled in the art can understand the claimed scope.

In addition, in the examination of novelty and inventive step of a claim, if a person ordinarily skilled in the art determines that the scope of the claim is unable to distinguish from the prior art, the claim should still be deemed unclear, and such terms of expression should not be permitted.

[Example of lacking clarity]

Example 1.

{ Claim }

A method for preparing compound A... a reaction condition being... and a temperature is approximately 80 to 90°C.

{ Remark }

The term "approximately..." in the claim defines the temperature range in the preparation method. When examining novelty and inventive step, if it is found that the same preparation method already existed in the prior art, and the known temperature is 75°C, and a person ordinarily skilled in the art considers the claimed scope to be indistinguishable from the prior art, the claim would be rendered unclear. However, if no prior art is found, and a person ordinarily skilled in the art can understand the scope of "approximately...", the claims would not be rendered unclear.

Example 2.

{ Claim }

A conductive polymer material, comprising polymers A and B, which is characterized in that a relative crystallinity ratio of polymers A and B is about 50%.

{ Remark }

The term "about..." in the claim defines the relative ratio of crystallinity between the polymers in the conductive material. The relative ratio of crystallinity between polymers is an important factor affecting the

conductivity of the material, and conductivity is one of the functions of the material invention. However, it is found from the description that when the relative ratio of crystallinity is 49-51%, the electrical conductivity of the material changes considerably. Thus, the mere recitation of "about 50%" in the claim would not allow a person ordinarily skilled in the art to understand the claimed scope. The claim is therefore rendered unclear.

[Example of clarity]

Example 3.

[Claim]

A composition capable of removing etching residue, consisting of about 35 parts by weight of hydroxylamine aqueous solution, about 65 parts by weight of alkanolamine, and about 5 parts by weight of dihydroxybenzene compound.

[Remark]

The term "about..." in the claim defines the weight ratio of each component in the composition. The claim has clearly recited the components and weight ratios of the composition, a person ordinarily skilled in the art can understand the claimed scope. And when examining novelty and inventive step, this term will not render the claim scope indistinguishable from the prior art, therefore would not render the claim unclear.

Example 4.

[Claim]

A pallet for loading and unloading... a length of wooden fragments thereof being about 20 to 30 mm, a width being about 3 to 5 mm, and a height being about 3 to 4 mm.

[Remark]

The term "about..." in the claim defines the size of the wood fragments. A person ordinarily skilled in the art would understand the claimed scope, and when examining novelty and inventive step, this term will not render the claim scope indistinguishable from prior art. Thus, the claim would not be rendered unclear.

Example 5.

[Claim]

A solar cell, comprising... a donor/acceptor composite, the composite includes carbon particles having an average diameter of from about 5mm to

about 100mm for acting as electron acceptors.

{ Remark }

The term "about...about..." in the claim defines the average diameter of carbon particles. The scope of the term "about..." for defining the average diameter of carbon particles is understandable by a person ordinarily skilled in the art, and when examining novelty and inventive step, this term will not render the claim scope indistinguishable from prior art. Thus, the claim would not be rendered unclear.

Example 6.

{ Claim }

An electrode... comprising particles having an average diameter of less than about 100 nm, the electrode having a root mean square surface roughness of less than about 5 microns.

{ Remark }

The term "less than about..." in the claim defines the average diameter and root mean square surface roughness of the particles. The scope of the term "about..." for defining the diameter and thickness of the particles is understandable by a person ordinarily skilled in the art, and when examining novelty and inventive step, this term will not render the claim scope indistinguishable from prior art. Thus, the claim would not be rendered unclear.

Example 7.

{ Claim }

A method for enhancing fillability of tobacco, comprising: treating tobacco material having an original moisture content of up to about 15% by weight....

{ Remark }

The phrase "up to about..." in the claim defines the moisture content of tobacco. The scope of the term "about..." for defining the moisture content of tobacco is understandable by a person ordinarily skilled in the art, and when examining novelty and inventive step, this term will not render the claim scope indistinguishable from prior art. Thus, the claim would not be rendered unclear.

(4) Use of terms of relative standard or unclear degree, e.g., "far

**greater," "low temperature," "high pressure," "difficult," "easy,"
"thick," "thin," "strong," "weak," or similar terms in the claims.**

Such terms can be used only if they possess clear meanings in a specific technical field, or if the scope thereof is comprehensible by a person ordinarily skilled in the art.

[Example of lacking clarity]

Example 1.

[Claim]

A method of manufacturing H-beam, comprising: heating steel bloom to 1050 -1350°C... a deformation rate of each pass is 5-10%; cooling to room temperature after a total deformation rate reaches more than 20%; and heating to a high temperature for a period of time until completion.

[Remark]

The terms "high temperature" and "a period of time" in the claim define the technical features of the claimed invention. How high is "high temperature?" How long does "a period of time" refer to? A person ordinarily skilled in the art would not be able to understand the scope of the two terms, thus rendering the claim unclear.

[Example of clarity]

Example 2.

[Claim]

A high-frequency wireless peripheral device, comprising....

[Remark]

The term "high frequency" in the claim defines the frequency band of the radio. Because the term "high frequency" in the field of telecommunication refers to the frequency band of 3-30MHz, the use of this term would not render the claim unclear.

Example 3.

[Claim]

A method for hardening rails, comprising: ...from a first temperature above Ac3 point to a second temperature lower than Ac3 point; after forced cooling, loosening the rail and maintaining a high temperature, thereby transforming the Austenite structure into this different microstructure.

[Remark]

The term "high temperature" in the claim defines a specific temperature range below the Ac3 point. Since Austenite can transform into this different microstructure at a specific temperature range below the Ac3 point, a person ordinarily skilled in the art will be able to understand the claim scope. Thus, the claim will not be rendered unclear.

Example 4.

{ Claim }

A styling scarf, consisting essentially of a styling scarf that is L-shaped, slightly longer than ordinary scarves, and with a folded pocket and a circular arc-shaped part....

{ Remark }

The term "slightly longer" in the claim defines the length of the styling scarf. Since the present invention can only function by utilizing a styling scarf having relatively long shape, a person ordinarily skilled in the art may understand the claimed scope, and thus the claim will not be rendered unclear.

Example 5.

{ Claim }

An incense stand, comprising: a base body and a supporting frame rod, the base body having substantial weight, and a relatively large bottom area....

{ Remark }

The wording "substantial weight... relatively large..." in the claim defines the base body. Since the base of the present invention needs to be quite heavy and have a relatively large bottom area to be effective, a person ordinarily skilled in the art will be able to understand the claimed scope, and thus the claim will not be rendered unclear.

Example 6.

{ Claim }

A hanger, consisting of a first and a second positioning plates embedded in a light steel frame and a fixture member... a center of the first positioning plate being provided with a through hole of non-fixed size....

{ Remark }

The term "non-fixed..." in the claim defines the size of the through hole. The hole size of the positioning plate does not need to be consistent, thus the term "non-fixed..." is a common way of expression in this technical field. A

person ordinarily skilled in the art would be able to understand the claimed scope, and thus the claim will not be rendered unclear.

Example 7.

[Claim]

A baby carriage backrest frame, comprising... a horizontal bar of a proper length extending toward a same side from bottom ends of both sides of a vertical frame... and one side of the vertical frame being capable of retaining a cushion of a proper height through a screw member.

[Remark]

The term "proper length" in the claim defines the horizontal bar. According to the stated technical effect of the horizontal bar in the description, its length must be capable of retaining a \cap -shaped seat on the rear seat. A person ordinarily skilled in the art would be able to understand the claimed scope, and thus the claim will not be rendered unclear.

The term "proper height" in the claim defines the back cushion. As far as the technical effect of the back cushion is concerned, its height must be sufficient to support the back of an occupant. A person ordinarily skilled in the art would be able to understand the claimed scope, and thus the claim will not be rendered unclear.

(5) Use of "if necessary," "when necessary," "if any," "especially," "particularly," "mainly," "better," "preferably," "such as," "etc.," "or comparable," or similar expressions in the claims.

Such expressions can be used as long as a person ordinarily skilled in the art can understand the claimed scope.

[Example of lacking clarity]

Example 1.

[Claim]

A method for preparing compound A... wherein a reaction temperature is 20-100°C, preferably 50-80°C, best being 70°C.

[Remark]

The terms "better" and "best" in a claim will define different ranges in the same claim, making the claim unclear. During examination, the applicant shall be notified to amend the claim to recite a single range, or to

amend other claimed ranges into dependent claims.

Example 2.

{ Claim }

A compound of formula I... wherein the substituent R is halogen, such as chlorine.

{ Remark }

The conceptually superordinate and subordinate terms "halogen" and "chlorine" are recited in the claim at the same time, which will define different scopes in the same claim, thus rendering the claim unclear. During examination, the applicant should be notified to amend the claim to recite either "halogen" or "chlorine," or to amend "chlorine" into a dependent claim.

Example 3.

{ Claim }

A grinding device, comprising a motor, a grinding head, a grinding platform... the motor driving the grinding head to perform grinding over the grinding platform... wherein the grinding head comprises a shape of three petals, four petals, five petals, etc.

{ Remark }

The term "etc." in the claim defines the shape of the grinding head. Since the number of shapes defined by the term "etc." is uncertain, a person ordinarily skilled in the art would not be able to understand the claimed scope, thus rendering the claim unclear.

However, if "etc." in this example is changed to "one of the three types, etc.," that is, the shape of the grinding head is limited to one of the three possibilities: three petals, four petals, or five petals, etc., and the word "etc." becomes superfluous, the claim will not rendered unclear.

Example 4.

{ Claim }

A slipper, consisting of components such as sole, vamp, and buttons....

{ Remark }

The term "such as" in the claim defines the number of components of the slippers. Since the closed transitional term "consisting of" recited therein allows the claim to include only soles, vamps, and buttons, yet the number of components defined by the term "such as" conveys uncertainty,

there is a contradiction between the two terms, thus rendering the claim unclear.

[Example of clarity]

Example 5.

[Claim]

A slipper, comprising components such as soles, vamps and buttons...

[Remark]

The term "such as" in the claim defines the number of components of the slippers. Since the open transitional term "comprising" recited therein allows the claim to include components other than soles, uppers and buttons, while the number of components defined by the term "etc." conveys uncertainty, there is no contradiction between the two terms. Thus, the claim is not rendered unclear.

**2.4.1.6 Lack of Clarity due to Claiming a Product or Method by
Parameter**

Only when certain technical features in the claim cannot be clearly defined by structure or steps may they be defined by parameters, or by mathematical formula(s) composed of multiple parameters as variables. A parameter is a numerical value that describes the property of a product, which is obtainable by direct measurement, such as melting point, molecular weight, spectrum, pH value, elastic coefficient, electrical conductivity, etc. Chemical substances are generally defined by chemical names, molecular formulas, or structural formulas. If a claimed subject cannot be defined by structural features such as chemical names, molecular formulas, or structural formulas, it may be defined through physical or chemical parameters.

When a claim defines a technical feature with a parameter, the measurement method of the parameter must be a commonly used and well defined method in the technical field to which the invention belongs. If it is not a well-known parameter and its measurement method is not recited in the description, or the recited device cannot measure the parameter, the claim should be deemed unclear due to inability to compare the claimed invention with the prior art.

When a claim defines a technical feature with parameters, in principle, the measurement method of the parameter should be recited in the claim. However, exceptions are provided in the following situations:

- (1) The measurement method is the only method or a commonly used method, and is a measurement method known to a person ordinarily skilled in the art.
- (2) All known measurement methods yield the same result.
- (3) If the recitation of the measurement method is too lengthy, and the lack of brevity or incomprehensiveness may render a claim unclear, the recitation of the claim may refer to the measurement method recited in the description.

2.4.1.7 Lack of Clarity due to Claiming a Product by Function, Property, Process, or Use

The technical feature of a product invention should be defined by its structure. Only when clear structural definition is not possible may it be defined by function, property, manufacturing method, or use. For a product invention defined by function, property, manufacturing method, or use, if a person ordinarily skilled in the art can, based on the recited function, property, manufacturing method or use with reference to common general knowledge at the time of filing, conceive a specific product, the claim should be deemed clear because the technical feature is comprehensible for the determination of patentability requirements such as novelty, inventive step, and for defining the scope of invention. Conversely, when a person ordinarily skilled in the art is still unable to conceive of a specific product based on the recited function, property, manufacturing method or use with reference to common general knowledge at the time of filing, the claim may be unclear, however, if a claimed invention cannot be properly defined without being claimed by function, property, manufacturing method or use, and if a relationship or difference between a known product and the product invention defined by function, property, manufacturing method or use is comprehensible, the claim should still be considered clear.

It should be noted that, claims of pure functional or pure intended use limitations may be rendered unclear. A claim of purely functional limitation is, for example, a claim that only recites "a fishing rod, which can suspend a fish weighting 500 kilograms;" a claim of pure intended use is, for example, a claim that only recites "a pharmaceutical composition, which is used for treating headaches" without reciting other technical features.

When interpreting claims expressed in means-plus-function or step-plus-function language, the structure, material, or action recited in the

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description that corresponds to the function and its equivalent scope shall be included. However, if the description does not recite the structure, material, or action that corresponds to the function and its scope of equivalence, or if the recited structure, material, or action in the description is overly generic, so that a person ordinarily skilled in the art is unable to determine the structure, material, or action corresponding to the function from the description, the claim may be rendered unclear.

2.4.2 Conciseness

Claims should be concise refers to that the recitation of each claim should be concise, and the recitation of the claims as a whole should also be concise.

The recitation of the claims should be concise. Except for the necessary technical features, there should be no unnecessary recitation for the efficacy, purpose, cause or reason of use, or background description of a technical solution, and there should be no recitation of commercial advertisement wording. An example of a single claim lacking conciseness is, e.g., the repetitive recitation of identical text in a claim, which results in an overly lengthy claim; or a claim using alternative format to define an invention, yet the recited options are unreasonably numerous.

The recitation of the claims as a whole should be concise. Specifically, the number of claims should closely correspond to the essence of the claimed invention, so as to avoid unreasonably numerous claim numbers and repetitive recitation of identical text in different claims, which makes Applicant's claimed invention incomprehensible. Therefore, dependent claims or independent claims containing a reference to another claim should be used whenever possible, or reciting a plurality of options in a single claim using alternative format, thereby reducing the number of claims and unnecessary repetitive recitation. The following is an example where the recitation of the claims as a whole lacks conciseness, e.g., the scope of multiple claims is substantially the same and belongs to the same category.

{ Claims }

1. A reinforced concrete using a concrete strengthening admixture A.
2. A concrete comprising a concrete strengthening admixture A.
3. A concrete, comprising a concrete strengthening admixture A.

{ Remark }

The three claims above all belong to the same category of product, and the scope of the claims is also substantially the same, which clearly violates the requirement of conciseness.

The reasonable number of claims should be determined according to the nature of the invention and the facts of each case, and with the interests of the public being taken into consideration. During examination, if it is determined that the claim number or the options in alternative format is overly numerous, thus causing difficulty or undue burden in the prior art search, the Examiner should choose at least one group of invention for examination (e.g., selecting a group of invention based on the embodiments or examples provided in the description), and notify the applicant to file a response or amendment for the remaining unselected portions due to lack of conciseness.

2.4.3 Supported by the Description

The purpose of this provision is to ensure that the determination of the claimed invention in the claims must be based on what's recited in the description and recognized by the Applicant at the time of filing. Because a claim is a basic unit of patent right assertion, if the scope of a claim exceeds the content disclosed in the description, the exclusive rights from the portion of undisclosed invention will deprives the public of the benefits of free use, thereby hindering industrial development.

The claims must be supported by the description means that the subject matter recited in each claim must be based on the content disclosed in the description, and the scope of the claim must not exceed the content disclosed in the description.

A claim should be deemed supported by the description when a person ordinarily skilled in the art can reasonably predict or extend the full scope of the claim from the content disclosed in the description, through referencing the common general knowledge at the time of filing, using routine experimentation or analytical methods. If the description alone cannot support the claim, yet the description and drawings as a whole can provide support, the Applicant should be notified to file a response or amendment to incorporate the content disclosed by the drawings into the description, pursuant to Paragraph 2, Article 26 of the Patent Act.

It should be noted that the claims should be supported by the description not only in form but also in substance, so that a person ordinarily skilled in

the art can directly obtain or conclude the claimed invention based on the content disclosed by the description. The claims must be supported by the description, e.g., support solely from the drawings is still insufficient, and thus one must incorporate the portion supported by the drawings into the description. However, because drawings in general only disclose relevant content in appearance and cannot display the substantial technical material thereof, when Applicant amends the description to incorporate the content disclosed by the drawings, the Examiner should still make reference to the common general knowledge at the time of filing to determine whether the incorporated material can substantially support the claims.

Claims are usually generalized from one or more embodiment(s) or example(s). The generalized scope of the claims should be appropriate so that the scope of the claims is equivalent to the content disclosed in the description. During examination, the general knowledge at the time of application, including relevant prior art, should be considered to determine whether the generalized scope of the claims is appropriate, so that the scope of the claims does not exceed the content disclosed in the description, nor does it detract from the rights and interests an applicant deserves. In the absence of relevant prior art, a pioneering invention may generally warrant a wider coverage than an improvement invention of the prior art.

Where an invention recited in the claims is not described in the description, and a person ordinarily skilled in the art, despite referencing the common general knowledge at the time of filing, still cannot extend the disclosed content of the description to the scope of the claims, the claims should be deemed to lack support from the description. For example, the claims recite the technical solution of using inorganic acids, while the description only recites examples of using organic acids, but does not describe any technical solution corresponding to inorganic acids.

If a claim contains contents speculated by the applicant and its effect is difficult to determine, the claim should be deemed to lack support from the description. For example, a claim recites "a method for treating plant seeds by cold shock." If the description only discloses that the method is applicable to a specific plant seed, but does not disclose its applicability on other plant seeds, it would be difficult for a person ordinarily skilled in the art to ascertain whether the application of the method to other species of plant seeds would yield the same technical effect. Therefore, the claim should be deemed to lack support from the description. For generic claim, although the scope of generalization is broader, if it is supportable by the

description and is enabling, the generic claim should be accepted. However, if the content recited in the description is unclear or insufficient, e.g., when the application of routine method experiment or analysis is not enough to extend the recited content of the description to the scope of the claims, the applicant should be notified to file a response or amendment to the claims. For example, for a claim that recites "a method for processing the properties of synthetic resin moldings," if the description only discloses examples of thermoplastic resins without providing proofs that the method is also applicable to thermosetting resins, then the claim is not supported by the description. Also, if a claim recites "an improved fuel composition" without reciting any catalyst, yet the description only discloses a fuel composition obtainable through the addition of a catalyst, the claim is not supported by the description.

When a claim limitation employs functional language, if the description only recites examples of certain technical features, yet a person ordinarily skilled in the art, based on the disclosure of the description and with reference to the common general knowledge at the time of filing, is able to understand the scope covered by the function, the claim should be deemed to be supported by the description. Conversely, if the scope covered by the function is not comprehensible, the claim should be deemed to lack support from the description.

For a product claim limitation employs means-plus-function language, or a method claim limitation employs step-plus-function language, the claimed invention has to be an invention consists of a combination of multiple technical features. Means-plus-function language is used to describe the technical feature in a product claim, which is expressed in terms of "...means (or device) for...," where the structure or material corresponding to the claimed function should be recited in the description. Step-plus-function language is used to describe the technical features in a method claim, which is expressed in terms of "... step for...," where the action corresponding to the claimed function should be recited in the description. The determination of whether a claim expressed in means-plus-function or step-plus-function language is supported by the description shall include the structure, material, or action corresponding to the function described in the description and its equivalent scope. The scope of equivalence should be limited to a scope that is unambiguous to a person ordinarily skilled in the art at the time of filing. At the time of filing refers to the filing date; for those that claim priority, refers to the priority date.

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During examination, based on the content disclosed in the description with reference to the common general knowledge at the time of filing, if it is considered that the claim cannot be supported by the description, a clear and sufficient reason shall be provided, or using public available document to support such a finding, so as to notify the applicant to file a response or amendment to the claims. If the applicant provides convincing information in the response, or amends the scope of the claim in alignment with the scope disclosed in the description, the claim may be deemed to be supported by the description. In addition, if the content of the claims is not recited in the description, so that the claim cannot be formally supported by the description, the applicant may submit amendments to incorporate said material into the description. However, the common general knowledge at the time of filing shall still be considered to substantively determine whether the incorporated material is able to support the claim.

2.4.3.1 Relationship between Supported by the Description and the Enablement Requirement

When the scope of a claim is too broad to be supported by the description, it usually means that the content of the description is unclear and insufficient. If a person ordinarily skilled in the art can only practice a partial but not the full scope as claimed, the enablement requirement is not met, as exemplified by section 2.4.3 above. In such cases, the claims would fail to comply with the provisions set forth in Paragraph 2, Article 26 of the Patent Act, meanwhile the description would fail to comply with the provisions set forth in Paragraph 1, Article 26 of the Patent Act. That is, two independent and distinct patentability requirements are simultaneously violated.

A broader scope of a claim should be accepted if, during examination, there is no clear and sufficient reason to believe that the full scope as claimed cannot be enabled. A fair statement of claim is one which is not so broad that it goes beyond the invention nor yet so narrow as to deprive the applicant of a just reward for the disclosure of his/her invention.

The description must provide the public with sufficient information to enable a person ordinarily skilled in the art to practice the claimed invention. The embodiments and examples in the description serve the purpose of providing relevant information. When the scope of a claim is relatively broad, the description must provide a certain number of embodiments or

examples, so as to extend and cover the fully scope of the claims. Conversely, when the description has provided sufficient information so that a person ordinarily skilled in the art, upon referencing the common general knowledge at the time of filing, may be able to practice the claimed invention, the finite number (even a single) of embodiments or examples may also be sufficient to support a broad claim scope.

Thus, for a product claim defined by the intended result to be achieved, the claim scope thereof is generally too board, and a person ordinarily skilled in the art would not be able to practice the fully scope as claimed based only on the specific embodiments or examples recited in the description. For example, a claim recites "a gasoline-electric hybrid vehicle characterized by an energy efficiency of A to B% when driven," but the description only discloses one particular electricity power transmission control method that can achieve an energy efficiency of A to B%. However, a typical energy efficiency of a gasoline-electric hybrid vehicle at the time of filing is X%, which is far lower than A%. A person ordinarily skilled in the art, even with reference to common general knowledge at the time of filing, still won't be able to comprehend how to achieve an energy efficiency of A-B% with other technical solutions. Thus, the exemplary claim as a whole would not be supported by the description, therefore fails to meet the written support requirement. In addition, because the claimed invention cannot be practiced through any arbitrary technical solutions, the description also fails to meet the enablement requirement.

2.5 Claim interpretation

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The extent of the protection conferred by an invention patent shall be determined by the claim(s), and the description and drawing(s) may be considered as a reference when interpreting the claim(s). The scope of claims is the basis for defining the scope of patent rights for inventions, and a claim is the basic unit for interpreting the scope of patent rights and determining patentability requirements such as novelty and inventiveness. The subject matter of the application shall be defined by all the technical features recited in the claims, whether it is a dependent claim or a claim containing reference to another claim. When interpreting a claim, it shall contain all the technical features of all the claims it depends.

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The interpretation of the claims shall be based on the literal recitation in the claims, and consider the description, the drawings, and the common

general knowledge at the time of filing. When interpreting the claims, in principle, the terms used in the claims should be given their broadest, reasonable, and consistent interpretation with respect to the description. For the terms recited in the claims, if there is other clearly disclosed definition or interpretation in the description, the definition or interpretation should be taken into consideration. When there is doubt about the recitation in the claims and requires interpretation, the description, the drawings, and the common general knowledge at the time of filing should be considered together. In addition, corresponding symbol(s) shown in the drawings may be added behind a corresponding technical feature recited in a claim. However, the symbols may not be used as limitations in the claim interpretation.

2.5.1 Product –by- Property Claim

For a product invention, such as inventions of chemical substances, the claim is usually defined by its chemical names, molecular formulas, or structural formulas. If structural definition such as chemical names, molecular formulas, or structural features is not applicable for defining the claimed invention, one may use the associated physical or chemical properties (e.g., melting point, molecular weight, spectrum, pH value, etc.) for definition. For a product-by-property claim, the property must be a commonly used and well-defined characteristic in the technical field to which the invention belongs (e.g., elastic coefficient of steel from direct measurement, coefficient of conductivity for electricity, etc.); if the definition of the property requires the use of a new parameter, the parameter must be able to distinguish the product from the prior art, and the method of measurement for the parameter should be recited in the description.

2.5.2 Product- by- Process Claim

For a product invention, only when a claimed invention cannot be sufficiently defined by technical features other than its manufacturing method, one may define a product invention by the manufacturing process thereof. For a product by process claim, one shall disclose important technical features of the manufacturing process including the preparation steps and condition parameters, e.g., starting materials, dosage, reaction

conditions (such as temperature, pressure, time, etc.).

For a product-by-process claim, the claimed invention should be patented to the product *per se* whose properties are given by the process stated in the claim. That is, the determination of novelty and inventive step for a product-by-process claim is based not on the preparation process but rather the product *per se*. If the claimed product is identical to or is easily accomplished based on the prior art, even if the prior art product disclosed in the prior art is prepared by a different process, the claimed product should not be granted a patent. For example, where a claimed invention is directed to a protein prepared by process P (with steps P1, P2... and Pn), if the name of protein Z prepared by process Q (which differs from process P) is identical with that of the protein as claimed, the properties of protein Z are the same as those of the protein prepared by process P, and protein Z has been disclosed in the prior art, the claimed protein lacks novelty regardless of whether or not the process P has been known to the public at the time of filing.

2.5.3 Product or Method Claim with Functional Limitation

For product inventions, the claims should usually be defined by structural features or properties. For method inventions, the claims should usually be defined by process steps. However, if certain technical features cannot be defined by structure, property, or process steps, or may be more clearly defined by its associate function, which can be directly and certainly verified in accordance with the clear and sufficient experiment or operations recited in the description, one may define a claim by functional limitations. The interpretation of claims with functional limitations should include all the embodiments that may achieve the recited function.

For a technical feature of a product in a claim to be expressed in means-plus-function language, or a technical feature of a method to be expressed in step-plus-function language, the claimed invention has to be an invention consists of a combination of multiple technical features. Means-plus-function language is used to describe technical features in a product claim, which is expressed in terms of "...means (or device) for...", where the structure or material corresponding to the claimed function should be recited in the description. Step-plus-function language is used to describe technical features in a method claim, and its usage is expressed in terms of "...step for...", where the action corresponding to the claimed

function should be recited in the description.

The recitation of a claim is deemed to be means-plus-function or step-plus-function expression if it meets the following three conditions:

- (1) The term "means (or device) for..." or "step for..." is used to recite a technical feature.
- (2) The term "means (or device) for..." or "step for..." must recite a specific function.
- (3) The terms "means (or devices) for..." or "steps for..." shall not recite the complete structure, material or action sufficient to achieve the specified function.

The interpretation of a claim expressed in means-plus-function or step-plus-function language shall include the structure, material, or action corresponding to the function described in the description and its equivalent scope. The scope of equivalence shall be limited to a scope that is unambiguous to a person ordinarily skilled in the art at the time of filing. For example, suppose the function of a certain technical feature in a claim is described as "...means for converting multiple images into a specific digital format." The recited structure corresponding to the function in the description is a data collector or a computer video processor, which is only capable of converting analog data into digital format. Although such a function can be fulfilled by "the completion of digital to digital conversion performed by software programs," the description fails to recite the technical content thereof. In this case, during claim interpretation, the scope of the claim does not comprise the technical content where "the completion of digital to digital conversion is performed by software programs."

R. 19.IV

2.5.4 Product Claim with Intended Use

If there is an expression specifying the product by use in a claim, one shall refer to the disclosed content of the description and the common general knowledge at the time of filing, and consider whether the special use influences the product to be protected. In other words, it depends on whether the use implies that the claimed product has a certain specific structure and/or component which is (are) particularly suitable for the use. For example, if a claim refers to a "mold for molten steel" , a plastic ice cube tray disclosed in the prior art would not deprive the claim of novelty for that the use of molten steel renders the mold having structures and/or components to produce the properties for high melting point.

If the definition of the intended use is merely a statement of purpose or method of usage of the claimed product, and brings no effect on the claimed subject matter, it will not affect the determination of novelty or inventive step of the product. For example, for "compound A for ...," "composition B for ...," or "article C for...," if the limitation of "for ..." does not imply certain specific structure and/or composition for the compound A, composition B, or article C itself, the recitation of intended usage will not affect the determination of novelty or inventive step of the claim.

2.5.5 Use Claim

The patentability of a use claim rests upon discovering an unknown property of a product and upon finding out according to the purpose of usage that the product is suitable for a specific use which was unknown. Whether it is a known product or a novel product, the properties are inherent features thereof. Therefore, the essence of use claims rests not in the product itself but the specific application of the product's properties. Therefore, a use claim is directed to a method of using a product, which belongs to method invention.

The subject matter of use claims may be "use," "application," or "utilization." The description of use in the preamble of such a claim should be treated as one technical feature of the invention, and should be given weight during both claim interpretation and patentability determination. It should be noted that during examination, the literal recitation of the claims should be used to distinguish a use claim from a product claim. For example, a claim recites "Use of compound A as an insecticide" is a use claim, and should be regarded as "a method of using compound A as an insecticide" rather than "an insecticidal compound A" (whose subject matter is a product). "A use of compound A, which is for killing insects" is a use claim, and should be regarded as "a method of killing insects, which uses compound A" (whose subject matter is a method of killing insects) rather than "a method for preparing pesticide using compound A" (whose subject matter is a preparation method). Likewise, "the use of a transistor as an amplifier circuit" is a use claim, and should be regarded as "a method of using a transistor amplifier circuit" rather than "an amplifier-circuit-transistor" (whose subject matter is a product). Nor should it be regarded as "a method of constructing a circuit using transistors" (whose subject matter is a manufacturing method).

A use claim shall not be granted on diagnostic, therapeutic and surgical

methods for the treatment of humans or animals. If the medical use of a product is defined as "for treating diseases" or "for diagnosing diseases," it is deemed to be a statutory non-patentable subject matter. For example, "a use (or utilization, application) of compound A in the treatment of disease X" should be regarded as "a method of using (or application) compound A in the treatment of disease X," and is therefore unpatentable. However, since pharmaceutical composition and its preparation method are eligible subject matters according to the Patent Law, for use claims that recite, e.g., "a use of compound A in the preparation of a drug for treating disease X" or "a use of compound A, which is used in the preparation of a drug for treating disease X" (known as Swiss-type claims), the interpretation of the claim shall be regarded as is a method for preparing a drug rather than a method of diagnosis, treatment, or surgery for humans or animals.

The manner of recitation of the abovementioned claims turns the use of "compound" or "composition" from medical purposes to the use for preparing drugs, which is a special recitation manner that avoids claiming method of diagnosis, treatment, or surgical operation involving humans or animals. Therefore, such special manner of recitation should be limited to medical use. As for non-medical uses of products, such as non-surgical cosmetic or health care methods that do not involve statutory non-patentable subject matters, there is no need for using Swiss-type claiming. Rather, conventional use claim or other manner of recitations should be applied. For example, "a use of compound A for whitening" or "a use of compound A, which is used for whitening."

Articles such as medical devices, apparatus, or equipment (such as surgical instruments) are not "compounds" or "compositions," and cannot be used for the "preparation of drugs." Therefore, it is not permissible to apply for a novel medical use in the way of a Swiss-type claim.

2.6 Notes for Examination

- (1) The independent claim should specify the subject matter of the claimed invention, which means the recitation of the title of the subject matter should be clear to reflect the subject matter of the claimed invention, and should not be overly brief or general. A claim that merely recites "an article," "an apparatus," or "a method," etc. should be deemed to have failed to specify the title of subject matter.
- (2) When an independent claim is written in two-part form, it should be expressed in "characterized in that," "wherein the improvement

comprises," or other similar terms. Nevertheless, a claim expressed in such terms is not necessarily a claim of two-part form. For example, a claim recites "an air-conditioning device, characterized in that, comprising an air direction adjustment mechanism and an air volume adjustment mechanism." Because the preamble did not recite the common essential technical features between the claimed invention and the prior art, the term "characterized in that" here is equivalent to "wherein," which does not lack clarity. In addition, since dependent claims per se do not recite all the technical features of a claimed invention, there is no need to use expressions such as "characterized in that" or "wherein the improvement comprises." Even if such terms are used, a claim is not necessarily a two-part form claim. For example, for a dependent claim that recites "the device of claim 1, characterized in that element A is a," the term "characterized in that" used herein is equivalent to "wherein," which does not lack clarity.

- (3) For a technical feature of a claim that references a symbol of a corresponding symbol in the drawings, if the symbol is appended behind the corresponding technical feature and placed in parenthesis, such inclusion will not render the claim unclear, e.g., "a substrate surface treatment device, comprising: a conveying module (10)..." However, if there are both symbols and words in the parenthesis, or if the parenthesis only contains words, a claim may be rendered unclear. For example, for a claim that recites " means for fastening (screw 13, screw 14)," it can't be ascertained that whether the "means for fastening" is only limited to screws, or it may include other types of fasteners. In another example where a claim recites "(concrete) molded bricks," it would be uncertain whether the molded brick is limited only to concrete molded bricks or bricks that comprises other type of materials. Accordingly, such expressions using parenthesis annotations would render a claim unclear. Conversely, if the parenthesis annotation carries an ordinary meaning well understood by a person ordinarily skilled in the art, the claim would not be rendered unclear. For example, it is well known that (meth)acrylate is the abbreviation of "acrylate and methacrylate." Therefore, the annotation in the above parenthesis would not render a claim unclear. In yet another example, for a claim recites a general chemical formula with a substituent, in which the recitation of the types of substituent is a further description of the general formula, then no matter if a parenthesis annotation is used, the claim would not be rendered unclear.

3. Abstract

An abstract shall concisely state the disclosure of the invention, and be limited to the technical problem(s) it intends to solve, the technical solution adopted to solve the problem(s), and the principal use of the invention; in principle, the text of abstract is not to exceed 250 words; for an invention involving chemical formula, its abstract shall disclose the formula that can best characterize the inventive feature(s). An abstract may not contain any commercial advertisement wording. The abstract shall be so drafted that it can efficiently serve as a scanning tool for purposes of searching in the particular art for the public. In order to ensure the information retrieval function of the abstract, for an abstract failing to comply with the preceding requirements, the Specific Patent Agency may notify the applicant to make an amendment within a specified time limit, or notify the applicant of the amendment being made ex officio.

R. 21. I

R. 21. II

R. 21. III

R. 21. IV

The applicant shall designate a representative drawing that can best characterize the technical feature(s) of the invention and list the primary reference sign(s) in the representative drawing accompanied by brief description(s). In case of failure to designate a representative drawing or designation of an inappropriate representative drawing, the Specific Patent Agency may notify the applicant to complete the requirements within a specified time limit, or notify the applicant of the designation or deletion being made ex officio.

R. 21. V

A. 26. III

An abstract shall clearly contain a summary of the disclosed invention; it shall not be taken into account for the purpose of determining the sufficiency of the disclosure and the patentability of the claimed invention. The abstract shall not be used for the purpose of interpreting claim(s), and shall not be used as the basis for amending or correcting the description, the claims, or the drawings.

A. 58. V

4. Drawings

The function of the drawings is to supplement the insufficient parts of the description, so as to enable a person ordinarily skilled in the art to directly understand the various technical features of the invention and the constituent technical solutions from the drawings upon reading the description. Drawings are one of the referencing source for the determination of the fulfillment of the enablement requirement. And during claim interpretation, both the description and the drawings shall be

A. 58. IV

considered.

R. 23. I

R. 23. II

In a patent application for invention, the drawing(s) shall be made clearly with ink lines based on the engineering drawing method; when scaled down to two-thirds, all the details disclosed in each drawing shall still be clearly distinguished. The drawing(s) shall be annotated with drawing designation(s) and reference sign(s), arranged according to the drawing sequence, and shall not specify descriptive words, unless otherwise indispensable. In case of violation of the above provisions, the applicant shall be notified to file a response or amendment. If a response or amendment is not filed within the time limit, the application may be rejected on the grounds of violation of Paragraph 4, Article 26 of the Patent Law.

In the case where making drawings with ink lines based on the engineering drawing method is not feasible, a replacement by photograph(s) may be permitted if the photograph can be directly reproduced and meet the other applicable requirements of the drawings, for example, metallographic diagrams, electrophoresis diagrams, cell tissue staining diagrams, computer angiography images, or effect comparison charts of animal experiments. The symbols of annotation in the description, the claims, and the drawing shall be consistent, and the same symbol should be used when reciting the same element. Symbols not labeled in the description shall generally not appear in the drawings. If the content of an entire paragraph in the description is deleted during amendment, yet it is difficult to delete the corresponding recitation in the drawings, it shall not be deemed to fail the written description requirements merely because of the recitation inconsistency. However, it should be noted that the symbols annotated in the description or the claims must also be shown in the drawings.

The drawings should primarily comprise graphics and symbols for expressing the technical content of an invention. Explanatory texts should be recited in the brief description of drawing(s), with the drawings themselves containing only graphics and symbols. But for the sake of a clear comprehension of the drawings, a single brief term may be added, such as water, steam, on, off, etc. Paragraph 2, Article 23 of the Enforcement Rules of the Patent Act stipulates that the drawing(s) shall be annotated with drawing designation(s) and reference sign(s), arranged according to the drawing sequence, and shall not specify descriptive words, unless otherwise indispensable, for example:

- (1) Coordinate diagrams: There may be annotations for vertical axis, horizontal axis, line and area.

- (2) Flow charts: There may be annotations of the blocks of the block diagram and logical flow determination.
- (3) Circuit diagrams: There may be annotations of the blocks of the block diagram, recitations of signals and power supplies, and symbols of integrated circuits, transistors, and resistors, etc.
- (4) Waveform diagrams: There may be annotations of the waveform and the waveform representation formula.
- (5) Engineering drawings: There may be a block description of the block diagram, as well as recitations of raw materials and products.
- (6) State diagrams: There may be annotations of coordinate axes, lines and areas.
- (7) Vector diagrams: There may be annotations of vectors and coordinate axes.
- (8) Light path diagrams: There may be annotations of light components, phase differences, angles and distances.

When drawing a block diagram, one should add the explanatory text in a block, or annotate the number of the block; when drawing a detailed circuit diagram, for ordinary components such as transistors, capacitors, resistors, field effect transistors, diodes, etc., one may use symbols such as Tr, C, R, FET, D instead.

In addition, "prior art" or similar terms are usually not required to be noted in the drawing(s). But if it is helpful for the understanding of the claimed invention, it may be retained and "prior art" or similar terms may be added.

If technical contents such as chemical formulas, mathematical formulas, or tables cannot be recited in the text of the description, it may be annotated with numbers such as formula 1, table 1, etc. and be included in the last portion of the description. If the above-mentioned technical contents cannot be recited in the description, it may be incorporated in the drawings. However, the drawing numbers, e.g., Figure 1, Figure 2, etc., should be indicated, and the relevant provisions of the Enforcement Rules of the Patent Law on drawings should be followed.