Preliminary Study on Determination of Equivalent Infringement in China

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The infringement of invention and utility model patents (hereinafter referred to as patents) in China includes literal infringement and equivalent infringement. The main difference between the two types of infringement lies in that, for literal infringement, the scope of protection of the patent is determined by the literal meaning of the patent claims; while for equivalent infringement, the scope of protection of the patent is always a challenge in patent infringement cases to determine the scope of the extension in the infringement under the doctrine of equivalents. It is intended in the following paragraphs to study equivalent infringement from the aspects of: the legal basis, the factors for determination, comparison with the counterpart in other countries, and case studies.

I. Legal Basis of Equivalent Infringement

The legal basis for determining equivalent infringement in China includes the Chinese Patent Law, the Implementation Regulations of the Chinese Patent Law, and the related judicial interpretations issued by the Supreme People's Court. It does not include judicial precedents. The source of the legal basis for determining equivalent infringement can be found in the following articles of judicial interpretation:

Article 17 of the Several Provisions of the Supreme People's Court on Issues Concerning Applicable Laws to the Trial of Patent Controversies enacted on July 1, 2001 (hereinafter shortened to the "Provisions (2001)");

Articles 4, 6, and 7 of the Interpretations (I) of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Cases Involving Patent Infringement Disputes enacted on January 1, 2010 (hereinafter shortened to the "Interpretations I"); Article 17 of the Several Provisions of the Supreme People's Court on Issues Concerning Applicable Laws to the Trial of Patent Controversies enacted on February 1, 2015 (hereinafter shortened to the "Provisions (2015)"); and

Articles 6, 8, 10, and 12 of the Interpretations (II) of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Cases Involving Patent Infringement Disputes enacted on April 1, 2016 (hereinafter shortened to the "Interpretations II").

The Provisions (2001) stipulates in Article 17 that "An equivalent feature is a feature that, as compared to the feature described in a claim, performs substantially the same function by substantially the same means, produces substantially the same effect, and can be associated by an ordinary person skilled in the art without any inventive work."

This article is replaced subsequently by Article 17 of the Provisions (2015) which further stipulates that the time for determining whether equivalent infringement is constituted is "the time when the alleged infringing act occurs."

Articles 4, 6, and 7 of the Interpretations I and Articles 6, 8, 10, and 12 of the Interpretations II stipulate other aspects for determining what is an equivalent feature, such as prosecution history estoppel and the public dedication rule.

II. Doctrine of Equivalents

The doctrine of equivalents of China is based on the above-mentioned judicial interpretations. It is briefly explained in the subsequent paragraphs based on the understanding and practical experience of the author.

1. Four Factors of Equivalent Infringement

According to Article 17 of the Provisions (2015), the following four factors are taken in consideration in the determination of equivalent infringement:

- (1) substantially the same means;
- (2) substantially the same function;
- (3) substantially the same effect; and
- (4) possibility of being associated by an ordinary person skilled in the art without any inventive work.

The above four factors are not explained further in the judicial interpretations. For the ease of understanding, herein the *Guidelines for Patent Infringement Determination* issued by the Beijing Higher People's Court on April 20, 2017 (hereinafter shortened to the "*Guidelines of the Beijing Higher People's Court*") is cited to illustrate the concept of the four factors.

It should be noted that the *Guidelines of the Beijing Higher People's Court* is not a judicial interpretation and, therefore, is not binding to courts of which the location is other than Beijing; it is more like a non-mandatory guide for the practice of the Beijing local courts. The reason why the *Guidelines of the Beijing Higher People's Court* is cited herein is that the articles are crafted based on the rich experiences of Beijing local courts in trials of patent infringement disputes; thus, the *Guidelines of the Beijing Higher People's Court* not only reflects the relatively high level of Beijing local courts in making judgments, but, to some extent, represents the common standards of Chinese courts used for determining equivalent infringement and indicates a future trend.

(1) substantially the same means

The *Guidelines of the Beijing Higher People's Court* provides in Article 46 that "The term 'substantially the same means' indicates that the technical solution of the allegedly infringing technical solution is not essentially different from the corresponding technical feature recited by the claims in technical provisions."

The *Guidelines of the Beijing Higher People's Court* does not specify further the concept of "not essentially different in technical provisions", which is consistent with the current determination of equivalent infringement. Among the four factors, the court does not have objective standards for determining "substantially the same means", which leaves a relatively high degree of discretion to the judge.

Generally, if the technical means recited in the claims (hereinafter referred to as the patented means) and the technical means of the alleged infringing solution (hereinafter referred to as the alleged means) are substantially the same in working principles and are conventional alternatives for one another, the two means will be determined to be not essentially different in technical provisions, and thus, are determined to be "substantially the same means". Again, in practice, whether the two means are substantially the same in working principles is determined largely based on the judge's discretion.

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Can technical means of which the working principles are not substantially the same be excluded from "substantially the same means"? The answer to this question is uncertain. In fact, the judge can determine that two technical means having significant difference between their working principles are "substantially the same means" for the reason that they are conventional alternatives for one another.

(2) substantially the same function

Among the four factors, "performing substantially the same function" is relatively easy to determine and has objective standards for the determination. Usually, the functions of the patented means and the alleged means and the difference therebetween can be determined by analysis.

The *Guidelines of the Beijing Higher People's Court* provides in Article 47 that "the term 'substantially the same function' indicates that the technical feature of the allegedly infringing technical solution and the corresponding technical feature of the claim play the same role in the respective technical solution. Where a technical feature of the allegedly infringing technical solution serves for other purposes as compared to the corresponding technical feature in the claim, such other purposes shall be excluded from consideration."

The concept of the "other purposes" excluded from consideration is illustrated by the following table.

Claim		Allegedly infringing technical solution	
Feature A	Feature A Effect a1 Feature A'	Feature A'	Effect a2
			Effect b (not considered)
			Effect c (not considered)

As shown in the above table, when the feature A is compared to the feature A', only the effect a1 and a2 are compared, with no issue with the effects b and c. If the effect a1 and the effect a2 are substantially the same, it falls into the category of "performing substantially the same function". Otherwise, it does not fall in the category of "performing substantially the same function"

There may be disputes on whether all kinds of "other purposes" are excluded from consideration. However, since the provisions for this factor are easily applicable, the courts are very likely to consider



this factor in actual court reviews.

(3) substantially the same effect

The *Guidelines of the Beijing Higher People's Court* provides in Article 48 that "the term 'substantially the same effect' indicates that the technical effect attained by each of the technical feature of the allegedly infringing technical solution and the corresponding technical feature of the claim are substantially the same in the respective technical solutions. Where a technical feature of the allegedly infringing technical solution produces an additional effect as compared to the corresponding technical feature in the claim, such additional technical effect shall be excluded from consideration."

Among the four factors, "substantially the same effect" can be an easy breakthrough point for the determination of equivalent infringement. In other words, the remaining three factors are considered after it has been determined whether the two technical means have "substantially the same effect".

Article 48 also provides that any "additional effect" shall be excluded from consideration, which is similar to the treatment of "other purposes".

(4) possibility of being associated by an ordinary person skilled in the art without any inventive work

The *Guidelines of the Beijing Higher People's Court* provides in Article 49 that "the term 'can be associated without any inventive work' indicates that an ordinary person skilled in the art can easily conceive the idea that the technical feature of the allegedly infringing technical solution and the corresponding technical feature of the claim are substituted with one another", and that

"the following factors can be taken in consideration for determining equivalent infringement:

whether the two technical features belong to the same or similar technology category;

whether the two technical features utilize the same working principles;

whether the two technical features have a simple direct relation of substitutability, which is whether the substitution of the two technical features with one another involves re-design, excluding simple adjustments in dimensions and position of connection, of other parts."

As shown above, the determination of "can be associated without any inventive work" is similar to the determination of direct replacement by routine skill in the assessment of novelty or the determination of common general knowledge in the assessment of inventiveness.

2. Legal application of Equivalent Infringement

The principle of full coverage is applicable for equivalent infringement. Specifically, the Interpretations I provides in Article 7 that:

"The courts, in determining whether the allegedly infringing technical solution falls into the scope of protection of the patent right, shall examine all the technical features recited in the claim claimed by the patent holder.

Where a allegedly infringing technical solution comprises technical features identical or equivalent to all the technical features recited in the claim, the courts shall determine that said technical solution falls into the scope of protection of the patent right; where by comparison with all the technical features recited in the claim, the allegedly infringing technical solution lacks more than one technical features, or more than one technical features of the claim are neither identical nor equivalent, the courts shall determine that the allegedly infringing technical solution does not fall within the scope of protection of the patent right."

Based on the above provision, it is required in the determination of equivalent infringement that a comparison is conducted between each technical feature recited in the claim and each technical feature of the allegedly infringing technical solution. The existence of any feature that is neither identical nor equivalent should fail the infringement test. It should be noted that the term "each technical feature" refers to a technical content for realizing a certain function or a combination thereof. For example, a technical feature of machinery can be a single part for performing a function or a combination of multiple parts for performing a function.

3. Equivalence of Functional Features

The Interpretations I provides in Article 4 that "For a technical feature in a claim represented by function or effect, the courts shall determine the content of such technical feature by reference to the specific embodiment and its equivalent embodiment(s) of the function or effect as depicted in the description and the appended drawings."

The Interpretations II provides in Article 8 that "Functional features are technical features that serve to define structures, compositions, steps, conditions or the relations thereof in terms of their functions or effects in the relevant invention, unless ordinary technical personnel in this field are able to directly and

clearly determine the specific exploitation methods for achieving such functions or effects by reading the claims alone. Where, as compared to the technical features that are recorded in the written descriptions and the attached drawings and are indispensable for achieving the aforesaid functions or effects, the corresponding technical features of a allegedly infringing technical solution adopt substantially the same means to achieve substantially the same functions and effects, and can be associated by an ordinary person skilled in the art without inventive work at the time of the occurrence of the alleged infringement, the people's court shall determine that such corresponding technical features are identical or equivalent to the functional features."

According to the above provisions, in the determination of infringement of functional features, equivalent embodiments are determined based on whether they "perform identical functions and produce identical effects", which is different from the standard of "substantially the same" for determining general equivalent technical features. It is intended by such a difference to avoid obtaining exactly the same result for the two different types of determination.

In actual infringement cases, it is easy to satisfy the condition that two technical means perform the same function, but it seems difficult to meet the requirement that the two technical means produce the same effect. Usually, a difference between the technical means will lead to a divergence in their effects. In actual trials of infringements involving functional technical features, the courts may deem very close effects to be identical effects.

4. Exceptions from Infringement

Exceptions are provided in the circumstances described below.

- (1) Prosecution History Estoppel
- The Interpretations I provides in Article 6 that

"In the procedure leading to a grant or an invalidation of a patent right, where the patent applicant or the patentee abandons a technical solution by amendments to the claims, the description or via the observations, the incorporation of the abandoned technical solution into the scope of protection of the patent right by the patent holder in a patent infringement lawsuit shall not be supported by the courts."

The Interpretations II provides in Article 6 that

"The people's court may employ another patent which is related to the patent involved in the case in respect of divisional application, and its patent examination files and binding judgments/rulings on patent licensing affirmation to interpret the rights claimed for the patent involved in the case.

Patent examination files shall include the written materials submitted by patent applicants or patentees during the process of patent examination, re-examination and declaration of invalidity, as well as the notices on examination opinions, meeting minutes, oral hearing records, binding written examination decisions on patent re-examination requests, written examination decisions on the requests for declaring patents invalid, etc. issued by the patent administrative department of the State Council and its Patent Re-examination Board."

The Interpretations II further provides in Article 13 that

"Where the right holder proves that the narrowed revision or statement made by the patent applicant or the patentee in respect of the claims of rights, written descriptions and attached drawings in the patent licensing affirmation procedure is negated, the people's court shall determine that such revision or statement has not led to the waiver of the technical solution."

(2) Public Dedication

The Interpretations I provides in Article 5 that

"For a technical solution which is only depicted in the description or the appended drawings but not recited in the claims, the incorporation of such technical solution by the patent holder in a patent infringement lawsuit into the scope of protection of the patent right shall not be supported by the courts."

(3) Limitation to Equivalence by Expressions "at least", "no more than", etc.

The Interpretations II provides in Article 12 that

"Where phrases such as "at least" or "not more than" are adopted in a claims to define numerical features, and ordinary technical personnel in the relevant field are of the opinion that the patented technical solution concerned places special emphasis on the role of such phrase to define technical features after reading the claim of rights, written descriptions and attached drawings, the people's court shall not uphold the claim by the right holder that technical features different from such numerical



features are equivalent features."

III. Comparison of Equivalent Infringement Determination in China, the United States, and Japan

For the ease of understanding, the doctrines of equivalents applied in China, the United States and Japan are compared in the following tables.

Firstly, the four factors for determining equivalent infringement in China are compared to their counterparts in the United States and Japan as below.

The United States was the first to create the doctrine of equivalents - one and a half centuries ago. The principles adopted by other countries for determining equivalent infringements are mostly borrowed from the system of the United States. China is not an exception. As shown in the above table, for each of the four factors for determining equivalent infringement in China, there are corresponding judicial precedents in the United States. It can also be seen from the table that the principles of Japan for determining equivalent infringement do not include "substantially the same means", which is different from the other two countries.

Secondly, the other principles applied in China are compared to their counterparts in the United States and Japan in the table below.

	Doctrine of Equivalents			
China	Substantially the same means	Substantially the same function	Substantially the same effect	Possibility of being associated at the time of infringement
U.S.	in substantially the same way ^{1,3}	performs substantially the same function ^{1,3}	to achieve substantially the same result ^{1,3}	known at the time of infringement ^{2,3}
Japan		(2) Possibility of Interchangeability⁴		(3) Ease of Interchangeability ⁴



	Doctrine of Equivalents				
China	Full coverage principle	Prosecution History Estoppel	Public Dedication	Functional features Having <u>identical</u> functions and effects	
U.S.	Element-by-element comparison 5.3	Prosecution History Estoppel ^{3,6}	Dedication Rule ⁷	need not have identical functions but only substantially the same function ^s	
Japan	Element by Element [®]	(5) Special circumstances: "intentionally excluded" ⁴ (estoppel)			

	Doctrine of Equivalents		
China		Defense of prior art ¹¹	
U.S.		Not Encompass the Prior Art ¹²	
Japan	(1) Non-essential part ^{4,10}	(4) Non-obviousness⁴	

As shown in the above table, China, just like the United States and Japan, has the full coverage principle, the Prosecution History Estoppel, the rule of public dedication, and the defense of prior art in the determination of equivalent infringement. Moreover, China and the United States have counterparts of the rule of public dedication and the determination of equivalent functional features.

Unlike China and the United States, the doctrine of equivalents of Japan is only applicable to non-essential parts. In determining equivalent infringement, Chinese courts in some regions are more inclined to provide a lower-level protection from infringement for the technical features of non-invention points as compared to the technical features of invention points. For example, as provided in Article 60 of the *Guidelines* of Beijing High People's Court, "for a technical feature of non-invention point, a technical feature obtained by modification, or a technical feature of utility model claims, where the patentee knows or sufficiently foresees the existence of an alternative technical

feature at the time of the patent application or modification and fails to include the foresaid alternative technical feature in the scope of protection of the patent right, the court shall not uphold, in determining infringement, the claim by the right holder that the alternative technical feature is in the scope of protection of the patent right for the reason that the alternative technical feature constitutes an equivalent technical feature."

IV. Case Study

For further understanding, the application of doctrine of equivalents in China is described with judicial precedents in the following paragraphs.

In recent years, Chinese courts start to encourage both involved parties of lawsuits to provide similar judicial precedents for the court, so as to unify the standard of judgment and to improve the justness of the judgments. Nonetheless, it should be noted that China is not a country applying case law. The judicial precedents described below only serve as a reference for similar cases. Lawsuits will still be handled case by case.

To be concise, in the following the description of technical contents is omitted to a greatest extent.

1. Substantially the same means

Judicial precedent 1

Decision No. 4635, (2017) Civil, Appeal, Supreme People's Court (Dec. 20, 2017)

The main dispute in this case was whether the "oil seal" of the patent was equivalent to the "labyrinth seal" of the alleged infringing product. Based on the explanation of "oil seal" and "labyrinth seal" given in "Mechanical Design Manual" and "Sealing Technology", the Supreme People's Court concluded that "the working principles, the functions and the structures of the oil seal and the labyrinth seal are neither identical nor equivalent."

In this case, the Supreme People's Court did not make a decision strictly based on the four factors of equivalents. The factors considered by the Supreme People's Court include the differences in the working principles of the two technical means. With other factors being taken into further consideration, it was decided that the technical means were not equivalent.

In addition, as can be seen from this case, both parties can cite reference books and technical manuals to



actively provide proof of whether the working principles of the two technical means are substantially the same.

2. Substantially the same function

Judicial precedent 2

Decision No. 566, (2018) Civil, Appeal, Supreme People's Court (Dec. 20, 2017)

The main dispute in this case was whether or not modifying the position of the monitoring probe substantially affects the monitoring function.

During the retrial, the petitioner conducted experiments to prove that the difference in position does not have a substantial impact on the measurement results. In addition, the patent specification, the installation manual and the use of the allegedly infringing product indirectly confirmed that the measured value of the object does not change substantially. On this basis, the Supreme People's Court decided that probes disposed in different positions "have substantially the same function and effect; and the substitution of the two is an obvious equivalent substitution; thus, they should be equivalent technical features."

In general, a technical analysis of the technical means can show the function of the technical means. In this case, the parties proved to the court that the functions were substantially the same through experiments. The experiments proved not only the function, but also the effect. The proof of the function and the proof of the effect are not strictly distinct from one another.

3. Substantially the same effect

Judicial precedent 3

Decision No. 566, (2013) Civil, Certiorari, Supreme People's Court (Dec. 25, 2013)

The patent involved in this case related the manufacturing of hot water bags. The main dispute was over whether the exchange of the order of a sixth step of thermal bonding and a seventh step of trimming brings about a difference in effect.

The Supreme People's Court held that "the hot water bag after the high-frequency thermal bonding was trimmed in the fourth step. This trimming aims to obtain a good appearance of the hot water bag and to make the hot water bag close to the finished product, which has the very limited effect of reducing its

size." Thus, the Supreme People's Court decided that the interchange of the above two steps did not cause a substantial difference in the function and technical effect.

It can be seen that in some cases, it is necessary to refer to the overall technical solution to determine whether the technical features to be compared are equivalent. In this case, if the influence of the fourth step on the subsequent sixth and seventh steps is not considered, the reasons for the determination of the Supreme People's Court on the overall technical effect will at least be weakened.

Judicial precedent 4

Decision No. 69, (2017) Civil, Appeal, Supreme People's Court (Mar. 23, 2017)

The patent involved in this case used a piston intake pipe (13), while the alleged infringing product used a "through-hole (i.e., air intake hole)" provided inside the valve body. The main dispute was over whether the technical effects of the above two features are equivalent.

In this case, an important opinion of the Supreme People's Court was that "the court of second instance has determined that the "through-hole (i.e., air inlet hole)" is more compact and simpler than the "piston intake pipe" because it is provided inside the valve; therefore, the two features do not constitute equivalents. The court of second instance had taken excessive consideration of the technical effects beyond the invention point of the involved patent, which is inappropriate."

The above opinion of the Supreme People's Court recalls the provisions of Article 48 of *Guidelines of the Beijing Higher People's Court* regarding "other technical effects", which takes a position similar to the Supreme People's Court.

4. Equivalent functional features

Judicial precedent 5

Decision No. 2073, (2017) Civil, Appeal, Supreme People's Court (Dec. 27, 2017)

Claim 1 of the involved patent recites an "upper cutter mounting plate (6) capable of lifting and lowering" which is deemed to be a functional feature by the Supreme People's Court. A specific embodiment described in the specification is realized by "support link 4, and piston rod of vertical cylinder 5". The alleged infringing product, on the other hand, was realized by a driving gear, a driven gear, a rotating shaft driven eccentric wheel, a collar, a tie rod, and so on.

The main dispute was over whether the effects achieved by the above different technical means are identical.

The Supreme People's Court determined that "Both can achieve the lifting and lowering of the upper cutter mounting plate, ..., and obviously perform the same function", and "in terms of effect, despite the fact that ... the piston rod of the involved patent switches its orientation at two extreme positions while the alleged infringing product is subject to a smooth orientation switch, since the horizontal distance of displacement of the upper cutter in an radial direction is quite short, the difference between the two features will not significantly impact on the achieved technical effects. The technical effects are identical."

Obviously, the identical technical effects as determined by the court are not exactly the same, but are very close.

5. Prosecution History Estoppel

Judicial precedent 6

Decision No. 1312, (2017) Civil, Appeal, Supreme People's Court (Jun. 22, 2017)

Claim 1 of the involved patent recites the feature that "a lift drive cylinder (43) is mounted to a top end of a support frame (2)" which is a feature incorporated in response to the first Office Action to overcome a lack of inventiveness. The alleged infringing product defines that the cylinder is mounted on the lateral side of the support frame.

The court of second instance determined that "according to the principle of estoppel, Changjiang Company cannot claim in an infringement case to include a technical solution other than the lift drive cylinder being mounted to the 'top end' of the support frame in the scope of protection of the patent right."

The Supreme People's Court decided that "In fact, what Changjiang Company tried to emphasize is that the 'support frame' of the patent involved is different from the 'quenching crane' of reference Document 1. Moreover, the lift drive cylinder of the patent involved is installed at the top of the support frame; the counterpart structure disclosed in Document 1 is also installed at the top end. Therefore, Changjiang Company did not emphasize and limit the feature of 'top end' during the granting process; and it was not because of any emphasis and limitation on the 'top end' that the patent involved of



Changjiang Company was granted".

It can be seen that for the features incorporated during the prosecution for patent granting, there will be cases where the principle of estoppel is applicable to only a part of a feature.

6. Public Dedication

Judicial precedent 7

Decision No. 5147, (2017) Civil, Appeal, Supreme People's Court (Dec. 28, 2017)

Claim 1 of the patent involved in this case recites the feature "soy flour" while the alleged infringing process recites "soybean fiber D of soybean residue powder".

The Supreme People's Court held that "the specification has disclosed the coordinate technical solutions of soybean flour and soybean 'extract powder'. Since the patentee did not included the soybean 'extract powder' in the scope of protection of the claims of the patent involved, it should be deemed that the technical solution of the soybean 'extract powder' is excluded from the scope of protection of the patent involved." Thus, the Supreme People's Court decided that the technical solution of soybean fiber D of soybean residue powder which belongs to soybean extract powder is also excluded from the scope of protection of the patent.

As shown above, public dedication indicates not only dedication of a specific feature, but the subordinate concept of the dedicated feature.

7. Grouping of technical feature

Judicial precedent 8

Decision No. 3802, (2017) Civil, Appeal, Supreme People's Court (Dec. 20, 2017)

Claim 1 of the patent recites a tie rod, a spring, and a sleeve, while the alleged infringing product has a pin and a spring.

The court of second instance held that the alleged infringing product lacked the sleeve and therefore did not constitute infringement.

The Supreme People's Court determined that "the key to this case is to properly group the technical features in order to perform a proper comparison of technical features. The technical features should be

grouped in view of the overall technical solution of the invention and taking in consideration relatively small technical units capable of independently performing a certain function and producing relatively independent technical effect."

On this basis, the Supreme People's Court decided that "the 'sleeve', although is an individual component, must rely on the cooperation with the spring to realize the desired function and effect. The two components must cooperate to play a role in the overall technical solution. Therefore, ... instead of considering the 'sleeve' as an independent technical feature, the feature that 'springs are sleeved to both ends, a sleeve having a bore diameter smaller than the diameter of the spring is sleeved to an outer circumference of the spring' should be deemed as an independent technical feature in the comparison."

Therefore, the technical feature should be grouped according to functions to ensure the rationality of the conclusion on infringement.

8. Exclusion by drafting

Judicial precedent 9

Decision No. 740, (2015) Civil, Appeal, Supreme People's Court (Nov. 12, 2015)

Claim 1 of the patent involved recites the feature of "upper surface having a conical surface", while the alleged infringing product has an "upper surface which is a plane".

The Supreme People's Court determined that "In the application for the patent involved, the technical solution to be claimed is limited to a water inlet sleeve having a conical surface on the upper surface and does not recite a plane. The conical surface and the plane are both a technical solution commonly known to an ordinary person skilled in the art when the application is made. Therefore, the patentee excluded the plane from the scope of protection of the patent involved by limiting the technical feature in the claims to a conical surface."

The above determination of the Supreme People's Court can be regarded as a punishment for low drafting quality. However, whether this rule of judgment is applicable to other similar cases should be analyzed case by case.

Conclusion

The foregoing is a preliminary study of equivalent infringement in China. It is the uncertainty in the determination that makes it impossible to conclude that there is an absolute standard for the determination of equivalent infringement in China. It is appreciated that relevant opinions in this article do not limit the understanding of people of the doctrine of equivalents as viewed from other aspects.

In China, the legal basis of equivalent infringement is in a stage of improvement. It is expected that more specific and applicable judicial interpretations will be enacted in the future and will bring dynamic changes that will be regarded with interest by all in the industry.

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- 6. Festo Corp. v. Shoket Kinzoku Kogyo Kabushiki (2002)
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8. WMS GAMING INC. V. INTERNATIONAL GAME TECHNOLOGY (1999)

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10. Maxacalcitol Case (2016)

11. Article 14 of Interpretations I: Where all the technical features alleged to fall within the scope of protection of the patent right are identical to or of no substantial difference from the corresponding technical features of a single existing technical solution, the courts shall determine the technical solution implemented by the accused infringer as a prior art as prescribed in Article 62 of the Patent Law.

12. Wilson Sporting Goods Co. v. David Geoffrey & Associates (1990)