



Response to Office Action on Claims of Purified Product Defined by Feature of Use

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In some product claims, the product is defined by a feature of use. Although the limiting effect of the feature of use to the product remains disputable, China has relatively stable regulations for prosecution of novelty and inventiveness or product claims using features of use and for determination of infringement in patent prosecution practice and judicial practice of infringement litigation.

For patent prosecution, the *Guide for Patent Examination* of China states that when a product claim contains a feature of use, whether or not the feature of use implies a special structure and/or component of the claimed product should be considered to determine whether the product possess novelty. For infringement litigation, the Chinese Patent Law states that the protection scope shall be determined according to the features recited in the claims. Moreover, the judicial interpretation of the Chinese Patent Law determines a full coverage principle for feature comparison.

In patent applications in the chemical field, some claim relates to a pure chemical substance that is purified to a particular purity, and recites the use of the chemical having the purity. For example, claims written in the following presentation manners are often seen in PCT applications entering the Chinese national phase:

- ① a compound A having a purity X (or containing a content Y of impurity a), which is for producing B
- ② a compound for producing B, which has a purity A (or containing a content Y of impurity a).

During the prosecution, if the examiner searches a document D which discloses the compound a, usually the examiner will determine that neither of claims ① and ② possesses novelty. Because in the above two presentation manners, although a feature of use is recited, and purity or a content of



impurity related to the feature of use is provided, the claim actually still claims an existing compound A. Therefore, the feature of use and the feature of purity are not taken in consideration in the prosecution. The examiner will determine that the features of purity and use do not define the structure of the compound A itself.

In our opinion, based the current norms of patent examination, the above opinions of the examiner are not inappropriate. However, there is still some controversy in this regard. For example, the judgment that the above claims ① and ② are limited to the compound A itself may be made merely based on the presentation manner. If the above claims are viewed from a comprehensive perspective, the technical solution should be not limited to the compound A itself, but a purification system of compound A having certain purity or certain impurity content for producing B. Such an interpretation does not clearly contradict the current claim interpretation method. Further, the recited feature of use should in fact have a limiting effect on the composition of the purification system, because the feature of use is often associated with the purity or impurity content of the compound. However, despite the above-mentioned viewpoints, in the practice of patent agency, the examiner barely accepts a response to the Office Action by arguing directly. In most cases, the examiner suggests that the applicant amend the claims.

In a different situation, the examiner gives opinions on claims ① and ② based on a searched document D' that directly discloses a purification system of compound A having identical purity or impurity content with the present application. In such cases, it would be hard to argue that the claim possesses novelty, because it is difficult to explain that the feature of use recited in present application distinguishes the composition of the purification system of the present application from the prior art.

In this case, the applicant can usually make a response by modifying the product claim into a use claim. Thus, not only the novelty issue is eliminated, but inventiveness can be recognized by stating the advantageous effect of the compound A in producing B.

In the practice of patent agency, it is common to modify the above claims into use claims in response to



the Office Action, which can significantly improve the possibility of being patented. However, the applicant still desires to be patented based on the product claims in view of marketing or strategic layout. In such cases, adaptive amendments to the presentation manner of the claims are still necessary. For example:

The original claim goes as follows:

a compound A, containing a content Y of impurity a, for producing B

During the prosecution, the examiner searches a document D'' that discloses a method for purifying A, and discloses that by the purifying method, the content of impurities including a can be controlled. But document D'' does not disclose a specific range of the content of a; and the disclosed purified A is used for produce C.

The amended claim goes as follows:

A composite of compound A for producing B, wherein the content of impurity a contained in the composite is Y.

The amended claim expresses the purification system of the compound A as a composite containing the compound A. After making such amendment, the applicant can make a response according to how a composite product claim with definitions by feature of use in the chemical field is dealt with.

Regarding the amended claim, since document D'' discloses neither the content of the impurity a nor the use for producing B, the examiner will acknowledge novelty of the claim. But the examiner can still question inventiveness of the claim and give the following opinions. Although the claim recites a feature of use, the different between the composite of the claim and that of document D'' is caused by the content of the impurity a. In the current stage, it cannot be determined that the feature of use forms additional limitation to the composite. Therefore, the claim actually claims a purified product.



Controlling the contents of various impurities in the product does not incur technical difficulties except for economic reasons. In other words, it is deemed that the purified product having identical composition of the present application can be easily obtained based on document D” (merely by adjusting the contents of impurities according to the acceptable cost).

Therefore, the examiner considers the purified product as a special composite. Without evidence proving that the recited content of impurity is hard to realize based on the prior art, the purified product is obvious. It may violate public interests to grant a patent right based on the above amended claim.

Such assertions of the examiner are disputable in our opinion. In terms of the purification method, there is indeed no apparent barrier for controlling the content of an impurity. However, economic factor cannot fully cover the problem. The feature of use of the present application is actually closely associated with the content of impurity a in the purified product. The feature of use contributes to distinguish the product according to the above claim from that of document D” in composition. Moreover, since B to be produced according to the above claim is different from C to be produced by document D”, the purified product has the effect of enabling improvement in certain performance (e.g., optical performance) of B produced. Therefore, it can be inappropriate to ignore the limiting of the feature of use.

Moreover, during infringement litigations, the scope of claims of a patent is determined by the contents recited by the claims. That is, the feature “for producing B” limits the “composite containing compound A”. When there is one other purified product having identical composition, it should be further confirmed whether the other purified product is used for producing B. Therefore, the public interest will not be violated.

To sum up, it is true that an attorney can be encountered with challenging situations when dealing with claims of purified products limited by features of use. But there are ways worth trying. In the above hypothetical opinions of the examiner, it can be refutable to consider “without technical barrier” equal to obviousness of technical solution. The examiner neglects the limiting effect of the feature of use to the



purified product, and thus fails to note the special effect of the purified product in a particular use.

Therefore, the rationality of the examiner's opinions is disputable.