

# The Swedish Doctrine of Equivalence

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## *Introduction*

Patent claims are single sentences found at the end of the patent document and are statutorily charged with the task of defining the patented invention (Article 69 European Patent Convention (EPC) and Section 39 Swedish Patent Act). In prosecution of an application the claims are tailored in communications between the examiner and the applicant. That is, however, only one part of the determination of the scope of protection by way of the claims. The patent's worth also depends on the occurrence of a new alternative to a stated feature in a patent claim. Such an alternative may allow competitors to substitute a feature in the claim and thus avoid the literal wording of the patent. This will usually entail that the patent falls rapidly in value. There is, however, in the Swedish law on claim interpretation one exception to the rule that a patent can be avoided by a departure from the "semantic" meaning of the claim. If the alternative is deemed equivalent to the feature in the claim there is infringement under the doctrine of equivalence. Needless to say, the doctrine is of considerable practical importance to patent law practitioners and technology based firms.

Theoretically there should be a unified European approach to patent claim interpretation. Article 69 in the EPC lays down that the claims determine the scope of protection and that the patent description may be used as an aid in interpreting the claims. The Protocol on the Interpretation of Article 69 EPC adds that the claims shall neither be interpreted literally nor treated as mere guidelines for the scope of protection. In the revision that goes by the name of EPC 2000 and came into force on 13 December 2007, additional efforts were made to harmonize European claim interpretation. A new second article was added to the Protocol with the heading "Equivalents". It reads:

"For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims."

The reference to "any element which is equivalent to an element specified in the claims" echoes the doctrine of equivalents with a long history in patent law. It is not a

prescription, though. The new provision only prescribes that “due account” is to be taken of equivalent elements.

No unified doctrine of equivalence exists, but there are likenesses, of course, in all manners of claim interpretation.<sup>1</sup> Some countries, notably the UK, do without a doctrine of equivalence separate from the skilled person’s construction of the meaning of the claim.<sup>2</sup> This is not the case in Sweden, though, where it is maintained that there is a meaningful distinction to be made, even in the context of interpreting the patent as a whole, between a skilled person’s normal literal/technical understanding of a claim feature, and the additional protection sometimes available to the patentee under the doctrine of equivalence. My purpose in this article is to set out the development of the Swedish approach to the doctrine of equivalence. Action in this area takes place almost exclusively in case law and therefore the most important Swedish cases will be mentioned. Rulings by the Stockholm District Court, the Svea Court of Appeal and the Swedish Supreme Court are discussed. These courts have exclusive jurisdiction in Sweden over cases on patent infringement, which has allowed accumulation of experience in this specialist field of law and, more importantly for this article, development of a distinct approach to the doctrine of equivalence.

### ***Starting-point – rejection of the general inventive concept***

The second sentence of the first article in the Protocol to article 69 EPC forbids a claim interpretation based on a perception of what the patent proprietor had contemplated. The Protocol lays down that Article 69 EPC “should [not] be taken to mean that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patent proprietor has contemplated.” This is sometimes believed to be a repudiation of an old German approach to claim interpretation based on the notion of a general inventive concept. However, that would probably be a caricature of the former German approach.<sup>3</sup>

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<sup>1</sup> See Pumfrey et al., The doctrine of equivalents in various patent regimes – does anybody have it right? 11 Yale J. L. Tech 261 (2009).

<sup>2</sup> “Equivalence as a guide to construction

Although article 69 prevents equivalence from extending protection outside the claims, there is no reason why it cannot be an important part of the background of facts known to the skilled man which would affect what he understood the claims to mean. That is no more than common sense. It is also expressly provided by the new article 2 added to the Protocol by the Munich Act revising the EPC, dated 29 November 2000”. Lord Hoffman in *Kirin-Amgen Inc v. Hoechst Marion Roussel Ltd*, [2004] UKHL 46.

<sup>3</sup> Lord Hoffman described the “claims as guidelines” approach as a caricature of the former German approach to scope of protection in *Kirin-Amgen Inc v. Hoechst Marion Roussel Ltd*, [2004] UKHL 46.

The rejection of a claim interpretation based on an amorphous general inventive idea also formed the starting-point for the post-EPC Swedish approach. The claim interpretations of today can be derived from developments starting by the case of *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*. It saw the debut of a critical stance to a doctrine of equivalence based on the notion of a general inventive idea devised by the inventor.

Stockholm District Court had held that the defendant infringed a patent on a mechanical tool under the doctrine of equivalence.<sup>4</sup> The reason put forward was chiefly that the general inventive idea in the patent (how a pedal was used in operating a planting tool) had been used in the accused object. This similarity trumped the fact that there were three differences between the patent claims and the accused device. It was held that the skilled person could have substituted the unfulfilled claim features by the features in the accused device. Svea Court of Appeal, however, held that there was no infringement.<sup>5</sup> The Court referred to the Swedish provision on scope of protection being identical to article 69 EPC and stated that the assumption in an infringement analysis must be that the protection is limited to the claims. True, Svea Court of Appeal agreed with the District Court that the operation of the pedal was the novel and inventive aspect in the invention (the same general inventive idea was used) and that a skilled person could by applying her skills have overcome the differences between the claims and the accused product. Nevertheless, the applicant had set out a certain design in the claims, even when it must have been apparent that the inventive idea could have been used in other, alternative ways. Svea Court of Appeal emphasized the notice function of the claims and the importance of legal certainty for third parties. A patent was not to be interpreted on the basis of a general inventive idea, largely unbounded by the claim wording. That would unduly burden competitors moving into the technical field of the patent looking for a new solution to the problem solved by the patentee (in one way).

Swedish case law was in this manner set in motion, in common with many other European countries, most notably Germany, in a gradual departure from supposing a general inventive idea.<sup>6</sup> This approach seems to stretch the forbidden field too far and endanger legal

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<sup>4</sup> Stockholm District Court, *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*, case no. T 7-92-85, 11 March 1987.

<sup>5</sup> Svea Court of Appeal, *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*, case no. T 356/87, 7 October 1988.

<sup>6</sup> German case law moving away from the use of a general inventive idea has been described by von Drathen: “[I]n the three judgments of the ‘quintet’, the Federal Supreme Court relates the third Schneidmesser question to the ‘responsibility of the patentee’ explicitly [citation omitted]. The passage makes clear that the patent specification is an expression of intent by the patentee concerning the protection he wants, and that it is interpreted from the (objectifying) position of a competing inventor who is entitled to rely on the meaning communicated to him. Thus, if the patentee does not formulate the patent claim wide enough to reflect the entire technical content of the invention, a later clarification by him will not permit the courts to grant this protection to him. Article 69 prevents the courts from using a wording-detached ‘general inventive idea’ [citation omitted] to help the patentee. This reflects the balance of fairness to the patentee and legal certainty for third parties as

certainty. It was firmly established that claim limitations cannot usually be disregarded, even if a person skilled in the art realizes that the usefulness of the invention is not delimited according to the claims.

### ***Factors limiting equivalence – the Swedish model***

The move away from a belief in a general inventive concept in determining scope of protection and the doctrine of equivalence, leads immediately to a new difficulty. Inevitable some of what the skilled person can identify as feasible alternatives to the patent claims are equivalents, others are not. The question is how to separate one from the other. Swedish courts have dealt with this dilemma by identifying a number of criteria that rein in the scope of protection that would otherwise flow from an unencumbered doctrine of equivalence. Certain factors or circumstances in a dispute prevent the scope of protection being stretched beyond the literal/technical wording of the claims. The Swedish model is to restrain use of a general inventive idea by identifying circumstances which hold the patentee to the precise claim wording. An example of this reasoning can be found in *Aventis Pharma v Bristol Myers Squibb*, decided by Stockholm District Court:

“An issue that the parties in this case have presented their views on is the possibility of awarding a patent a scope of protection beyond its immediate wording, an issue often addressed under the heading equivalence. European legal systems have approached this question from different angles. At the moment there seems to be unity in so far as that there is a scope for including equivalents, however the reach and also the methods for applying the doctrine of equivalence remains unclear. ... Some factors should under all circumstances be considered. The state of the art at the application day limits the reach of the scope of protection. The capacity of the person skilled in the art is a factor in the application of the doctrine of equivalence. And in the same vein, a departure from the patent claims, which in itself constitutes a patentable invention, will not be included in the scope of protection under the doctrine of equivalence.”<sup>7</sup>

Case law reveals that Swedish courts have identified seven factors indicating that no stretching of the scope of protection beyond the literal wording should happen: 1. the invention was a simple adaptation of known technology; 2. the feature not present in the

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required by PIA69 [Protocol on the Interpretation of Article 69 EPC]” (footnotes to cases from the Bundesgerichtshof have been excluded from the quote). See C. von Drathen, “Patent Scope in English and German Law Under the European Patent Convention 1973 and 2000”, 39 IIC p. 384 (409) (2008).

<sup>7</sup> *Aventis Pharma v. Bristol Myers Squibb*, Stockholm District Court, case T 5761-99 of 31 May 2002.

accused device has in the patent been labeled as an important element of the invention; 3. the invention and the accused product serves different purposes (solves different technical problems); 4. the accused product leads to an improvement over the patented invention; 5. the capacity of the skilled person would not have been enough to allow him to substitute the feature in the patent claim with the corresponding feature in the accused product; 6. a stretching of the scope of protection under the doctrine of equivalence would overlap with the state of the art on the application day of the patent; and, 7. a deliberate limitation of the feature has taken place during the examination of the patent. The technique of identifying situation where there is no recourse to the doctrine of equivalence is believed to allow Swedish courts to sail a middle ground between a general inventive concept and a strict literal interpretation of the claims. The enumeration of circumstances is similar to claim interpretations in other European countries based on questions concerning e.g. if the same technical problem is solved by the patented invention and the accused embodiment. I call them “reasons” or “circumstances” because they have not been framed as questions in Swedish case law. Nevertheless, the function of the circumstances is the same as the questions.

An important issue, though, is what scope for the doctrine of equivalence this Swedish practice leaves. Are the seven reasons for not applying the doctrine of equivalence frequent in infringement situations? If so, there is rarely any protection beyond the wording of the claims. On the other hand, if the seven reasons are not regularly present there is usually a scope of protection stretching beyond the claims. An attempt to answer this will form a conclusion from this article.

### ***The leading Swedish case – DeLaval v Lely***

A patent on a robot for milking free ranging cows led on 10 March 2008 to an infringement ruling by the Svea Court of Appeal, *DeLaval v Lely*, clarifying and confirming the previous case law on the doctrine of equivalence. It can be seen as a culmination of many years of practice starting with *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*. The claim in suit read in relevant parts ”... if a pre-determined time has passed since the cow in question was milked ...”, a milking operation would be initiated by the robot. The aim of the feature was to

ascertain that the robot would not initiate a milking operation on a cow that approached the robot, unless a certain span of time had passed since the same cow was last milked.

This was the second infringement case between the same parties concerning the robot patent. This first litigation resulted in a ruling on 8 March 2002 by Svea Court of Appeal and forms a necessary background for the later case. The accused product in the first litigation was a milking robot in which the time span during which a cow was barred from being milked by the robot was determined by an algorithm where the time period was determined in hours and minutes but also depended on how much the cow had been eating. If the algorithm indicated that a cow would yield more than a certain number of liters of milk it could be milked. Svea Court of Appeal ruled that this solution fell within the terms of the claim. “Pre-determined time” did not have to be interpreted as fixed exclusively in hours and minutes. A pre-determined time could be dependent on other inputs than clock time. It was still pre-determined by the algorithm. The court specifically mentioned that a broad claim interpretation was justified in this case taking into account the considerable technical progress made by the inventor in designing the milking robot.

After being deemed an infringer Lely introduced a new version of the robot. Litigation started anew. The new product had a setting that allowed a cow to be milked if a certain percentage of the other cows in the herd had been milked, since the same cow had been milked the last time. Lely held its own patent on this milking criterion. The farmer decided on the percentage of the herd that had to be milked before one cow could be milked a second time. This solution was also, mainly, aimed at preventing too frequent milking operations, but the difference was that Lely’s criterion was now dependent on the entire herd of animals while the old criterion was determined individually for each cow. Both Stockholm District Court and Svea Appeal Court found a difference between the literal/technical meaning of the claim feature ”pre-determined time” and the solution employed in the accused product, i.e. ”counting cows until a certain percentage had been milked”. The redesigned robot used no pre-determined time in the sense that the skilled person would interpret this claim feature after having read the content of the patent specification.

DeLaval, however, argued that the new robot infringed under the doctrine of equivalence. Stockholm District Court ruled:

“The Court of Appeal held in the previous case between the parties that there were grounds for a broad determination of the scope of protection because the patent in suit represents a considerable technical advance. ... As far as [the doctrine of equivalence and] the claim feature ”a pre-determined time”, the Court finds ... that

it is clear to a skilled person that the aim of the feature is to prevent milking operations occurring too frequently. The accused embodiment must be seen as having the same purpose. The solution to this problem in Lely's product entails a decision when a cow enters the milking boot on whether it should be permitted to be milked by a calculation based on the number of milking operations performed in the herd since the cow in question was last milked. Even if the length of the interval may vary depending on how often or seldom the cows have been milked during the last 24 hours and how long each milking operation has taken, the effect achieved by the Lely design is that a minimum duration passes between the milking of one and the same cow. With this background it is, in the opinion of the District court, obvious that the purpose of the Lely design is the same as that of the invention.

Lely has also argued that their milking criterion entails advantages in comparison to the solution in the patent. Lely did in this regard emphasize that their criterion adapts to the behavior of the herd which may vary depending on e.g. the weather conditions. Another advantage put forward by Lely is that its method of determining if a cow is to be milked entails that the cows will always be milked in the 'correct' order, which will be important in case of a technical break-down. The possible advantages gained by Lely's design over the solution according to the patent cannot be considered to be of a magnitude that would lead to the conclusion that the Lely milking criterion achieves a different functional result than with the solution in the patent in suit. The result, irrespective of the solution, is that the cow will be milked at a time when the cow has sufficient milk in the udder. Lely's design must therefore be seen as equally suitable as the invention according to the patent.

According to the determination by the District Court the feature "a pre-determined time" in patent claim 1 cannot, on the basis of the purpose of the invention being to prevent too frequent milking operations, have such decisive significance for the patentability of the invention that the scope for an application of the doctrine of equivalence should be limited for this reason. Nor has it been concluded that DeLaval introduced the feature "a pre-determined time" in order to delineate the invention against the state of the art or in any other way intentionally limit the scope of protection. Lely's milking equipment must on these grounds be concluded to fall within the scope of the patent. The motion brought by DeLaval shall therefore be granted."

Stockholm District Court held that the accused milking robot infringed under the doctrine of equivalence. The judgment was appealed to Svea Court of Appeal, which basically agreed with the lower court. Lely argued that an important difference was that in their product it was unknown at the time of one milking operation when the cow could be milked the next time. However, this did not sway the Court of Appeal which held that:

"The arguments presented before the Court of Appeal do not lead to a different assessment than the one made by the District court. To what has been said by the District court the following can be added. When determining if Lely's milking criterion falls literally within the feature "if a pre-determined time has elapsed" in DeLaval's patent it is in the view of the Court of Appeal not decisive if the time that shall elapse between the milking according to DeLaval's milking criterion is calculated – or can be calculated – already at the time a certain cow is milked, or if the calculation is only performed at the time a cow returns for a possible new milking. For interpreting the literal meaning of the claim and the accused milking criterion it is, however, not insignificant

that DeLaval's feature (irrespective of the time when the calculation occurs) is related to whether a sufficient time has elapsed, while the decisive factor in Lely's milking criterion is whether a sufficient number of milking operations have been performed.

With regard to the algorithm used in Lely's milking criterion [a witness for Lely] stated in the Court of Appeal e.g. that animal owners themselves chose a value so that the calculation should fit the number of times a day that the cow is to be milked: if the animal owner e.g. wishes the cow to be milked three times a day it is calculated how many other cows that need to be milked in between. On the basis of this information the District Court's analysis of equivalence seems even more robust, in particular since the purpose of the Lely design and its usefulness, are the same as in the DeLaval invention. Thus, the Court of Appeal shares the District Court's determination that the use of Lely's disputed milking criterion does not literally infringe DeLaval's patent claim, but an infringement has occurred under the doctrine of equivalence. The judgment by the District Court is upheld."

The Swedish Supreme Court did not grant leave to appeal.

To summarize, in the two *DeLaval v Lely* rulings, the courts have held that "a pre-determined time" literally encompasses a milking criterion made up of other components than hours and minutes. When, however, the algorithm did not use hours and minutes at all, the feature was not literally infringed. The alternative of counting cows, aiming to ascertain that a certain portion of the herd has been milked before the same cow can be milked again, was not deemed to be use of a "pre-determined time". No overlap existed between the skilled technicians understanding of the claim and the modified robot. However, counting cows was held to be an equivalent and therefore an infringement.

The two courts applied criteria for determining equivalence that had been referred to in earlier Swedish patent infringement cases, but the criteria had not previously been applied one after the other and leading to a finding of infringement under the doctrine of equivalence. The *DeLaval v Lely* case therefore confirms an approach for evaluating possible protection outside the literal/technical meaning of the claims. At least since 1988 and the case of *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*, the same criteria have been used in Swedish cases on equivalence. But previously only one circumstance was mentioned and it led to a rejection of an extended scope of protection under the doctrine of equivalence. If for example the accused product was designed differently than a feature that had been emphasized and presented as essential during prosecution, this led to the conclusion that the accused product was non-infringing. In the next section of the article the seven factors will be exemplified based on cases where they have been used.

## ***Considerable technical advance or a simple adaptation***

In *DeLaval v Lely* the invention was deemed a considerable technical advance over the prior art on the priority date. This was perceived as a prerequisite for application of the doctrine of equivalence. A factor barring application of the doctrine in earlier cases has been that the invention was characterized by the court as a simple adaptation of the technology known on the priority day. Svea Court of Appeal expressed this view already in the decision *Lännen Tehtaat Oy v Svedbro Smide Aktiebolag*. The invention was, as mentioned above, a design for a handheld tool used in planting. Later, the same approach was applied in *Kvistberga Produkter AB v Guldmann Sverige AB*.<sup>8</sup> The invention was a telescopic ramp. Stockholm District Court held that: "The invention according to the patent constitutes a simple adaptation. The court will therefore take as its starting point that the patent has a narrow scope of protection." In *Hattos Patent AB v. vau De Svenska AB*, Stockholm District Court explained that: "A simple adaptation of this nature has a narrow scope of protection that regularly coincides with the wording of the independent claims."<sup>9</sup> The invention was a certain use of an elastic string in design of a rucksack. The inventive step was small. In *Molok Oy v BISSY Försäljnings AB*, Stockholm District Court held that: "A patent on an invention which only forms a combination of individually known and simple elements warrants a restricted scope of protection. The interpretation of the patent claims cannot be allowed to significantly depart from the literal wording."<sup>10</sup> The invention was equipment for waste disposal.

What seems to characterize simple adaptations of known technology is that they are of modest inventive step and lack important industrial consequences. No surprising result is achieved. The courts have not outright excluded the application of the doctrine of equivalence in these cases, but no invention deemed a "simple adaptation" has been granted a range of equivalents. It is worth noting that this criterion requires giving consideration in an infringement case to the technical advance made by the patentee. I will come back to this in the conclusions.

## ***An essential element for patentability***

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<sup>8</sup> *Kvistberga Produkter AB v Guldmann Sverige AB*, Stockholm District Court case T 2367-01, 19 March 2002.

<sup>9</sup> *Hattos Patent AB v vau De Svenska AB*, Stockholm District Court case no T 13826-99, 8 February 2001.

<sup>10</sup> *Molok Oy v BISSY Försäljnings AB*, Stockholm District Court case T 18214-98, 4 April 2000.

In *DeLaval v Lely* the courts held that the feature “a pre-determined time” did not contribute to the patentability of the robot. A reason to deny protection beyond the claims has in earlier cases been that the feature lacking in the accused product was essential for the patentability of the invention, i.e. related to novelty/inventive step or in some other way contributed to the grant decision. This approach can be exemplified by the following statement made in *Hattos Patent AB v Peak Performance Production AB*: ”The Court of Appeal shares the view of the District Court that the word ‘free-sliding’ in patent claim 1 is not due to a mistake. On the contrary, The Court of Appeal has from the state of the art on the application day, been able to conclude that this feature constituted a central element for the patented invention. The scope for application of the doctrine of equivalence is thus limited.”<sup>11</sup>

The Swedish Supreme Court held in *Eli Lilly v ratiopharm* that the importance, which in the patent description was ascribed to the feature, precluded an equivalent infringement.<sup>12</sup> The invention was a pharmaceutical formulation. The claims recited the use of three disintegrants (sodium starch glycolate, polymeric derivatives of acrylic acid and crospovidone). The product accused of trespassing on the patent did not utilize any of these chemical entities, but instead croscarmellose sodium. Croscarmellose sodium was not mentioned in the patent, but technical literature available on the application day indicated that a person skilled in the art would have considered croscarmellose sodium a functional substitute to the disintegrants in the claim. The Supreme Court held that:

“Even if a patent clearly states which components to use equivalence is not excluded if one of the components can be substituted by another of similar technical characteristics. However, in the present case the patent indicates that it is the combination of the components in the claim for producing the tablet, which forms the basis of patentability. Claim 1 defines which disintegrants to use and in the patent description it is said that the choice of disintegrant is one of the most important steps. This entails ... that the scope of protection of this patent is limited to pharmaceutical compositions with one of the disintegrants mentioned in the claim.”

It was said in the patent description that the choice of disintegrant was an important part of the invention and therefore the Supreme Court believed that it was important for patentability and denied application of the doctrine of equivalence. Only features tangential to the patentability of the invention have a range of equivalents.

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<sup>11</sup> *Hattos Patent AB v Peak Performance Production AB*, Svea Court of Appeal case T 8915-01, 18 October 2002.

<sup>12</sup> *Eli Lilly v ratiopharm*, Swedish Supreme Court case Ö 2667-02, 20 December 2002.

## ***A different purpose***

In *DeLaval v Lely* the courts found that the aim of the pre-determined claim feature was to prevent milking operations occurring too frequently. The accused embodiment achieved the same purpose by counting cows. It was held to be obvious that the purpose of the Lely criterion was the same as that of the criterion in the invention. In previous cases, Swedish courts have denied infringement under the doctrine of equivalence if there was a difference between the purpose stated in the patent for the feature at issue and the purpose for using the corresponding part in the accused product. If the technical problem being solved is different, there is no room for stretching the scope of protection to encompass the attacked product.<sup>13</sup>

In *Kvaerner Masa-Yards v Götaverken Arendal Aktiebolag* Svea Court of Appeal held that: "The shape of the bow on the ship Oden does not rely on solutions to problems that are addressed in the patent in suit. As the Odengroup has maintained, this precludes an application of the doctrine of equivalence."<sup>14</sup> The accused ship did not possess the technical advantages that were associated in the patent description with the shape of the patented bow. In a similar vein, the Supreme Court held in *Comviq GSM AB v Europolitan AB* that: "Since both the problem that the Twincard is made for and the solution it proposes, is different from Comviq's patented invention, the Twincard cannot be comprised under the scope of protection by an application of the doctrine of equivalence."<sup>15</sup> In Comviq's patent it was said that the main purpose for the invention was to enable differentiation between costs for phone calls of different categories (private, work related, etc.). The Twincard did not achieve such a categorization. The latter phone card aimed at enabling the use of one phone subscription in mobile phones having different card formats.

## ***Improved result in accused product***

If the design of the accused product has a purpose different from those mentioned in the patent, it has just been mentioned that there is no room for the doctrine of equivalence. Equivalence may also be denied if the accused product fulfills the same purpose as the

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<sup>13</sup> A. Stenvik, *Patenters beskyttelsesomfang* p. 690, Oslo 2001; M. Nyberg, *Patenträttsliga bedömningsgrunder* p. 312, Stockholm 2000.

<sup>14</sup> *Kvaerner Masa-Yards v Götaverken Arendal Aktiebolag*, Svea Court of Appeal, case T 644/96, 15 April 1998.

<sup>15</sup> *Comviq GSM AB v Europolitan AB*, Swedish Supreme Court, *Nytt Juridiskt Arkiv* 2000 at 497.

patented invention, but represents an important advance compared to the patent claims. The same technical problem is addressed, but the quality of the solution in the accused product is superior. In such a case there is hardly any room for stretching the scope of protection to the accused product. In the second *DeLaval v Lely* case considerable efforts were invested in analyzing possible advantages of “counting cows” compared to using a minimum time. The finding that possible advantages with “counting cows” were insignificant allowed application of the doctrine of equivalence.

Stockholm District Court held in *FMT v Safegate* that laser was not equivalent to microwaves (radar) in a system for measuring distances at airports.<sup>16</sup> The Court held: “For the skilled person, who is aware of the difference between radar and laser, it appears as if the patent scope was deliberately restricted. Irrespective thereof, there is no room for the doctrine of equivalence in this case because Safedock’s solution provides advantages compared to the patented invention, which the inventor must not be allowed to take advantage of them. Thus, Safedock does not infringe claim 1”.

Technical advantages in the accused device compared to the product according to the patent claims, are thus valuable for a defendant accused of infringement under the doctrine of equivalence. A patent holder can hardly, by recourse to the doctrine of equivalence, prevent the marketing of significant improvements over the patentholder’s solution. Further innovation, inspired by and based upon the original invention, in the zone surrounding the granted claims is thus not stifled unduly. A protection extended under the doctrine of equivalence, due to the pioneering nature of the invention, is balanced against any significant technical advance by the defendant which overrides the former and prevents an infringement.

### ***The difference was beyond the capacity of the skilled person***

A fifth reason to deny protection beyond the metes and bounds of the claims could be that the accused product is sufficiently technically advanced for a person skilled in the art to be unable to devise it starting from the claimed product.<sup>17</sup> Stockholm District Court applied this reasoning in *Aventis Pharma v Bristol Myers Squibb*.<sup>18</sup> The invention was a new process

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<sup>16</sup> *FMT International Trade Aktiebolag v Safegate International Aktiebolag*, Stockholm District Court cases no. T 7-552-95 and T 7-824-95, 20 October 1997.

<sup>17</sup> M. Nyberg, *supra* note 12 p. 303.

<sup>18</sup> *Aventis Pharma v Bristol Myers Squibb*, Stockholm District Court case no. T 5761-99, 31 May 2002.

for manufacturing a medicament. The Court made the following statement, based on whether the skilled person would have been able to use the technical teaching in the accused process:

To use  $\beta$ -lactam [the compound in the accused process which was not mentioned in the claim] ... with the purpose of manufacturing paclitaxol was in the view of the District Court in no way apparent to a skilled person if he took the patent as his point of departure. On the contrary, the success being achieved by the use of  $\beta$ -lactam in the production of paclitaxol must be considered highly surprising and cannot have appeared to the skilled person as an obvious alternative method in achieving the necessary esterification, but the result of inventive activity. Due to these circumstances the District Court concludes that the method used by Bristol does not infringe under the doctrine of equivalence.

The District Court rejected the application of the doctrine of equivalence, because a person skilled in the art would not have realized that  $\beta$ -lactam in the accused method, was a viable alternative to the process according to the patent claim. Equivalents must according to this ruling be within the reach of the skilled person.

However, after the *DeLaval v Lely* case it is much more difficult to argue that a patent on the accused alternative is relevant. It does not seem to prevent an application of the doctrine of equivalence if the variation is patentable in its own right. Lely's milking criterion "counting cows" had been patented in the EPO with DeLaval's solution as the closest prior art. The lawyer representing Lely in the Swedish infringement case argued that the patentability of Lely's solution over DeLaval's solution prevented an application of the doctrine of equivalence. Non-obvious adaptations of a claim were not equivalent, according to Lely. Unfortunately, the two courts did not comment on the relevance of Lely's "counting cows-patent". What can be made of this silence? It is obviously incorrect to now hold that all inventive modifications of a patent are non-infringing in Swedish patent law. Dependent patents exist even if they do not literally infringe. But it is unclear how to distinguish between, on the one hand, inventive developments that are dependent and, on the other, inventive developments that are independent of the basic patent. No other means than the ordinary rules for claim interpretation seem to carry this burden. If so, patentability of the accused inventive product has no role to play in deciding if it infringes. An inventive modification is judged according to the same rules as a non-inventive modification. *DeLaval v Lely* leads to the conclusion that the patentability of the accused product is in itself practically irrelevant under the Swedish doctrine of equivalence.

## ***An overlap with the state of the art***

It was not mentioned in the *DeLaval v Lely* cases, but it has been held in previous Swedish case law that the doctrine of equivalence may not lead to a scope of protection encompassing solutions that formed part of the state of the art on the priority date (the so-called Formstein or Gillette defenses).<sup>19</sup> This issue was not relevant in *DeLaval v Lely* due to the pioneering nature of the invention, but the principle that the doctrine of equivalence may not encroach upon technology known or available to a skilled person on the priority date is obviously still valid. Svea Court of Appeal held in *Comviq GSM AB v Europolitian AB* that: "Due to the state of the art on the application date, the doctrine of equivalence cannot produce the scope of protection argued by Comviq."<sup>20</sup> It is only natural that the state of the art caps the reach of the doctrine of equivalence. What has been in the public domain should not be monopolized later on.

The same line of reasoning can probably be taken one step further. Everything obvious for a skilled person over the state of the art on the application day is not protected by the doctrine of equivalence. No Swedish court seems as of yet to have expressed this view, but it can hardly be in doubt. Not only what is known on the application day, but also that which is obvious over the known, shall be at the free disposal for everyone.<sup>21</sup>

## ***Amendments or statements made during grant proceedings***

Finally, the courts in *DeLaval v Lely* held that DeLaval did not during prosecution of the patent introduce the feature "a pre-determined time" in order to delineate the invention against the state of the art, or in any other way expressed a particular intent to limit the scope of protection to the literal claim wording. In other cases, Swedish courts have denied an application of the doctrine of equivalence if during grant proceedings the feature has been added in response to the state of the art. This entails scope discrepancies between a first filing with a claim to "a chair with three legs and a leaning back" and a claim to "a chair with three

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<sup>19</sup> *Formstein (Moulded Kerbstone)* BGHZ 98, 12 = GRUR 1986, 803, 6 IIC p. 795 (1987) is the source of a defence in German law called the Formstein objection, which is to the effect that the patent cannot be extended to cover equivalent embodiments if such embodiments were either known or were obvious in the light of the state of the art. The UK Gillette defense is similar.

<sup>20</sup> *Comviq GSM AB v Europolitian AB*, Svea Court of Appeal case no T 1512-96, 23 October 1998.

<sup>21</sup> A. Stenvik supra note 12 p. 673.

legs” which was amended by the addition of the feature ”a leaning back”, in response to an action from the examiner. It is unlikely that the added feature ”a leaning back” can be stretched to e.g. a functionally equivalent vertical back in an infringement case. If a feature is added or redrafted in prosecution it seems that the applicant thereby relinquishes possible equivalents.

In *Eli Lilly v ratiopharm* the Swedish Supreme Court held with respect to documents from the prosecution history that they could be: ”used to interpret unclear patent claims and statements made in the description, as long as it leads to a narrowing of the scope of protection”.<sup>22</sup> The prosecution history must not result in a stretching of the protection but can be used to block an application of the doctrine of equivalence. When Svea Court of Appeal tried the same case it held that:

“In deciding whether the product of ratiopharm infringes under the doctrine of equivalence there are ... reasons to note that the patent claims state ’... are the disintegrants for the formulations in this invention’ ... while in the patent application it was stated that ’... are suitable disintegrants for the formulations in this invention ...’ The discarding from the application of the word ’suitable’ supports the holding that the encompassed disintegrates have been intentionally limited. The scope for the doctrine of equivalence at this claim juncture is therefore limited. In these circumstances ... the Court of Appeal concludes ... that the claimant has not made a patent infringement sufficiently probable.”<sup>23</sup>

The applicant may interpret a feature in the claim in contacts with the patent office, without actually amending the claim. The interpretation will be recorded in the patent office file. The rule barring equivalents applies equally to an interpretation which did not amend the wording. All actions on the part of the applicant during the grant proceedings, whether the introduction of a new claims limitation or the narrow interpretation of an existing feature, seem to affect equivalents. An example can be seen in *Sandströms Transportprodukter v SCHMITZ Cargobull* where Stockholm District Court held that:

”In the determination of the scope of protection guidance can be had from the prosecution history. In a document ... containing a drawing and text submitted together with the patent application it was stated that ... In a document sent to the Patent Office the applicant maintained ... In a brief appealing the rejection of the application by the Patent Office the applicant stated ... According to a protocol from the hearing in the Patents Appeal Court the applicant asserted that ... In a document submitted to the Patent Office ... the feature ... was given its final wording ... In the previous claim this feature was lacking and it was only stated that ... What has

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<sup>22</sup> *Eli Lilly v ratiopharma*, Swedish Supreme Court case no. Ö 2667-02, 20 December 2002.

<sup>23</sup> *Eli Lilly v ratiopharma*, Svea Court of Appeal case no. Ö 4949-02, 17 June 2002.

occurred in the granting proceedings entails that the patent cannot be given a broader interpretation than that it is directed to a distinct design, with the consequences that this will have for the scope of protection.”<sup>24</sup>

Third parties can assume in Swedish law that limitations a patentee has put forth in the grant proceedings remain in force many years later in an infringement case. A patentee may not go back on anything he has said or represented to the Swedish or the European Patent Office. This is important because the vast majority of granted patents have amended or interpreted claims features. Prosecution history estoppel, or file wrapper estoppel, of this kind appears not to be available in some important EPC countries.<sup>25</sup> The estoppel is believed in Swedish law to be valuable, e.g. because the file history often provides pertinent interpretations from the relevant time and is readily accessible by electronic means. Equivalents of course still remain available for features in an amended claim that has been unaffected by an amendment or interpretation.

### ***Concluding remarks on the Swedish doctrine of equivalents***

The Swedish case law that has been discussed in this article limits the scope for applying the doctrine of equivalents considerably. Ever since the *Länner Tehta Oy v Svedbro Smide Aktiebolag* case, patentees have been continuously denied the benefit of stretching the scope of protection. *DeLaval v Lely* was an exception – the first case since *Länner* – in which none of the factors barring the doctrine were present. Anyone basing an infringement accusation on the doctrine of equivalents will therefore face an uphill battle. She will have to prove that the circumstances discussed above are not present in the case. The doctrine of equivalence is repeatedly referred to by Swedish courts as an opportunity available to patent holders, but does not in practice seem to come into play on many occasions.

The doctrine of equivalence is framed in Sweden as an enumeration of situations in which no extended protection is granted. The question of what characterizes an equivalent is not really part of the analysis. Equivalence is what remains when all reasons for not extending

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<sup>24</sup> *Sandströms Transportprodukter v SCHMITZ Cargobull*, Stockholm District Court case no. T 7-664-96, 5 November 1999.

<sup>25</sup> Lord Hoffman in the House of Lords (UK Supreme Court) held in *Kirin-Amgen Inc v. Hoechst Marion Roussel Ltd*, [2004] UKHL 46, that: “The courts of the United Kingdom, the Netherlands and Germany certainly discourage, if they do not actually prohibit, use of the patent office file in aid of construction. There are good reasons: the meaning of the patent should not change according to whether or not the person skilled in the art has access to the file and in any case life is too short for the limited assistance which it can provide.”

protection have been exhausted. Other countries have questions that are to be answered and these function more or less the same as the circumstances used in Swedish law, although I am not sure any other country has as many as seven circumstances that prevent protection going beyond the technical meaning of the claims. The factors barring the doctrine of equivalence in Swedish law appear to entail a relatively restrictive claim interpretation, in the span of possible ways to reach what in European patent law is the much sought-after middle position between a purely literal claim interpretation and a nebulous general inventive concept.<sup>26</sup>

The most interesting and unusual aspect of Swedish case law is, though, that scope of protection is largely assessed in a balancing of the technical achievements of the patentee and the accused infringer. Equivalents are relevant in cases pertaining to inventions of superior technical and commercial significance, a group sometimes described as pioneering inventions. In the first *Lely v DeLaval* case Svea Court of Appeal held that: "An interpretation of the wording of the claim is not enough to ascertain the scope of protection. In addition a weighing together of all facts pertaining to the case must be done. From the facts of this case it can be seen that the invention in its entirety at the priority date meant a considerable technical progress. ... Taking this into consideration, opportunities for a broad interpretation of the patent are opened up ..."<sup>27</sup> Subsequently, the doctrine of equivalence was applied on this basis in the second *DeLaval v Lely* case. For the infringement it was also necessary that any advantages with counting cows were insignificant.

I believe that it is not common practice in Europe to, in this manner, openly compare the patentee's and defendant's respective technical progress in an infringement case. It might even appear as an inappropriate blending of infringement and invalidity issues. This may have a legal foundation, though, in the Protocol to Article 69 EPC where it is provided that the claim interpretation should afford: "a fair protection for the patentee". Fairness can be judged from the importance of the technical advance made the applicant and by the defendant. Patent law is about technical progress and little else. Thus, all claims are not treated equally in Sweden. Fair protection for the patentee balanced by legal certainty for third parties, is believed to demand literal claim interpretation except for the most important inventions which may be granted extra reach. Technical progress in the accused product may bar the doctrine of equivalents, though, even in cases of important inventions. The courts in *DeLaval v Lely* were prepared to disregard minor advantages in Lely's product. The possible improvements were deemed insignificant compared to the technical advance made by the patent holder.

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<sup>26</sup> H. Bleken, *Ekivalens i norsk patentrett*, Nordic Intellectual Property Review 2010 p. 108 (130).

<sup>27</sup> *Lely Industries v DeLaval International*, Svea Court of Appeal case no. T 7924-00, 8 March 2002.

This balancing of technical achievements seems to be quite different in nature from a skilled person's understanding of what the claims were intended to protect, the latter being a crude summary of what the author perceives as the principal mode of claim interpretation today in Germany and England.<sup>28</sup> From a policy perspective, though, the Swedish balancing approach may facilitate for valuable innovations, inspired by and based upon the original invention, in the zone surrounding granted claims. Incentives will be maintained in the claim penumbra if competitors are told that added-value in their solution will propel it outside the scope of protection.<sup>29</sup>

To summarize, this contribution has tried to present recent Swedish experiences with the doctrine of equivalence. Primarily it has tried to show the restrictions that apply to an argument based on an alleged general inventive concept which would disregard the literal meaning. The restrictions have repeatedly been upheld and have developed into a well-established body of law under the heading of the doctrine of equivalence, but without defining what constitutes "equivalence". It has also been argued that the limitations, as a practical matter, are frequent in patent infringement cases and therefore that the technical meaning of the claim wording regularly exhausts the scope of patent protection in Swedish law. *DeLaval v Lely* is an exception that illustrates and confirms a strong bias for a literal/technical claim interpretation. Finally, it has been argued that the Swedish doctrine of equivalence entails an open balancing of the parties respective technical achievements and that this appears to be a hallmark for Swedish claim interpretation.

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<sup>28</sup> "[There] is only one compulsory question, namely that set by article 69 and its Protocol: what would a person skilled in the art have understood the patentee to have used the language of the claim to mean?" per Lord Hoffman in *Kirin-Amgen v Hoechst Marion Roussel*, [2004] UKHL 46. In Germany the Bundesgerichtshof held in *Cutting Blade I* (case X ZR 168/00, 33 IIC p. 874 (2002)) that: "[I]f an embodiment departing from the essential meaning of the patent claim is to be included within the extent of protection, it is not sufficient that (1.) it solves the problem underlying the invention with modified but objectively equivalent means and (2.) that the person skilled in the art is able to use his specialist knowledge to identify the modified means as having the same effect. Just as the same effect cannot be found without focusing on the patent claim, (3.) the considerations that the person skilled in the art must apply must in addition be focused on the essential meaning of the technical teaching protected in the patent claim in such a way that the person skilled in the art regards the different embodiment with its modified means as being equivalent to the solution in question."

"[I]t is not decisive for the scope of protection whether the variant has a material effect upon the way the invention works. The point is whether the essential considerations required by a person skilled in the art to find the variant are sufficiently close to the patent claim to constitute an equivalent alternative. Both approaches require a value judgment in the end". See P. Meier-Beck, *Scope of Patent Protection and Equivalence*, 36 IIC p. 339 (344) (2005). "Overall, both the third Protocol question [in England] and Schneidmesser questions have one purpose in common, which is to emphasise the patentee's responsibility. In the sense of the third sentence of PIA69 this helps to provide a 'reasonable degree of certainty for third parties' and to counterbalance the questions which, in favour of a 'fair protection for the patentee', call for the technical equivalence of effect and means of a patent and embodiment (Protocol question one and Schneidmesser questions one and three)." See C. von Drathen, "Patent Scope in English and German Law Under the European Patent Convention 1973 and 2000", 39 IIC p. 384 (409) (2008).

<sup>29</sup> For an extended argument to this effect see B. Domeij, *Patent Claim Scope: Initial and Follow-on Pharmaceutical Inventions*, 23 *European Intellectual Property Review* (2001) p. 326.

In much the same way as animals on the Galapagos Islands have developed unique features in isolation and managed to maintain their characteristics after contacts with other parts of the world, the Swedish approach to claim interpretation has been affected by Article 69 EPC and European case law – foremost by abandoning the general inventive idea – but many unique traits have survived. Article 69 EPC and the Protocol thus seem to be able to accommodate a wide variety of species. Further European harmonization is obviously desirable, but I believe most practicing Swedish lawyers are comfortable with the developments that have taken place in case law. It provides a well-defined template for legal arguments and in most infringement disputes it is relatively easy to determine that no protection beyond a technical and dictionary-like understanding of the claim is available, which furthers legal certainty. It seems likely that the present Swedish law on claim interpretation will survive for quite some time yet, maybe until the ever elusive EU-patent comes in to existence. It is perhaps too much to expect, though, that the Swedish approach will find new habitats.