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Claim No HC 10C02001

IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
PATENTS COURT

Date: 13 June 2012

Before :

Mr John Baldwin QC

(sitting as a Deputy Judge of the Chancery Division)

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Between :

SUDARSHAN CHEMICAL INDUSTRIES LIMITED

Claimant

- and –

CLARIANT PRODUKTE (DEUTSCHLAND) GMBH

Defendant

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MARTIN HOWE QC and **HENRY WARD (**instructed by **Charles Russell LLP)** appeared on behalf of the Claimant.

ANTONY WATSON QC and **TOM MITCHESON (**instructed by **Taylor Wessing LLP)** appeared on behalf of the Defendant.

Hearing dates: 1st to 4th, 8th, 10th, 11th May 2012
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JUDGMENT

I direct that no official shorthand note shall be taken of this judgment and that copies of this version as handed down may be treated as authentic.

Dated 13 June 2012

Mr John Baldwin QC:

1. The Claimant, Sudarshan, is an Indian manufacturer and supplier of pigments, and a pigment of particular interest is Pigment Yellow 191 (PY 191). In about 2005 it developed a version of PY 191 (called Sudafast Yellow 132) but did not sell it in the UK or the USA because it was protected by patents, in particular EP 0361431 (431) and US 5047517 (517) respectively (the disclosures of which are identical in all material respects). Example 1 of these patents describes a process for the manufacture of PY 191. For convenience the parties referred to the text of Example 1 from 517 and I shall do the same.

2. EP 0361431 expired by effluxion of time in September 2009 and Sudarshan thought that, after that date, it would be safe for it to commercialise the process of Example 1. It did just that and developed what was called the 'Old Process' and it started to sell product in accordance with that process. However, PY 191 exists in different polymorphic forms and the Defendant, Clariant, is the proprietor of a product and process patent, EP 1170338 (338), in relation to one of those forms, the beta form. Little did Sudarshan know that the pigment it made when it carried out what it thought was the process of Example 1, i.e. the Old Process, contains a substantial proportion of the beta form. It found out this unpleasant fact when it received a letter from Clariant dated 25 November 2009.

3. Clariant's letter drew attention to the existence of 338, stated that it protected a method of preparing PY 191 in a special crystal modification, the crystal modification itself, irrespective of the production method and any finished article containing that crystal modification (such as master batches, plastics etc). It went on to assert that Sudafast Yellow 132 contains mostly PY 191 in the form of the protected crystal modification and that any export of Sudarshan's product or article containing it into a country where Clariant held a patent would cause patent infringement. It went on to say:

> *Certainly you will not be interested in continuously effecting a patent infringement, which may involve most serious penalties to the infringer and his customers. Therefore we urge you to immediately stop promoting Pigment Yellow 191 which is covered by our patent and expect your confirmation thereof until (sic) December 31, 2009.*

4. The effect of Clariant's letter was to cause Sudarshan to stop selling Sudafast Yellow 132 to any customer for use outside India and to revisit its implementation of Example 1. It wanted to make sure that it was merely working the prior art so

that there could be no infringement of the 338 patent. This led to the development of the 'New Process'. This action was another consequence of the letter.

5. By Claim Form issued 16 June 2010 Sudarshan sought a declaration that 338 was invalid, an order that it be revoked, a declaration that dealing in Sudafast Yellow 132 made by the Old or the New Process did not infringe any valid claim and an inquiry as to damages or an account of profits for unjustified threats of patent infringement proceedings. The Defence put all matters in issue and a Counterclaim alleged infringement by reason of the dealing or intended dealing in Sudafast Yellow 132. The claims alleged to be infringed are as follows:

> Claim 6
>
> *C.I. Pigment Yellow 191 of [a particular chemical composition] characterized by the following reflections in the X-ray powder diffractogram, measured with Cu-Kα radiation: β-polymorph [the peaks of the β-polymorph are then set out]*.
>
> Claim 7
>
> *A C.I. Pigment Yellow 191 mixture comprising at least 10%, preferably at least 25%, in particular at least 50%, with particular preference at least 75%, with very particular preference at least 90%, of the β-polymorph defined in claim 6.*
>
> Claim 8
>
> *The use of C.I. Pigment Yellow 191 as claimed in claim 6 or 7 for pigmenting varnishes, polymers, printing inks, aqueous or solventborne pigment preparations, electrophotographic toners and developers, powder coating materials, inks, preferably ink-jet inks, color filters, and for coloring seed.*

Thus, claim 6 is a claim to a product comprising the 100% beta form (or at least in a form pure enough to achieve the stated X-ray diffraction pattern), claim 7 is a claim to products containing varying degrees of the beta form (with a minimum of 10%), and claim 8 is to the use of PY 191 with varying degrees of the beta form (with a minimum of 10%) for various applications, none of which were contended to be anything other than obvious applications for such a pigment. No issues of construction arise in relation to these claims.

6. Neither, by the close of the evidence, was there any real issue about the identity of the skilled addressee. He would have the characteristics of individuals with experience in pigment production and typically be educated to undergraduate or doctoral levels in their specialist subject areas. Thus chemists would have basic

chemical knowledge of organic reactions and how to carry out operations such as syntheses, isolation, drying and characterisation (including by X-ray powder diffractometry, 'PXRD') of azo pigments.

7. Moreover, it was clear from the evidence, and was not seriously contested, that at least claims 6 and 7 are infringed by the Sudarshan product.

8. Clariant contends that each of these claims is valid. However it has put forward a number of conditional amendments in case that contention fails. Since these do not come into play unless the original claims are invalid I will deal with them later in this judgment.

9. The specification of 338 points out that the majority of organic pigments exist in a plurality of different crystal forms, also called polymorphs, and that the different polymorphs may be identified by PXRD. It goes on to assert that previously only one polymorph of PY 191 had been disclosed, which it referred to as the alpha form, and said that it is formed if the synthesis is conducted in accordance with the details given in the 517 patent. The specification of 338 goes on to provide a different method of synthesis and contends that this new method results in the beta form, and it discloses a new PXRD for this beta form. It goes on further to say that the beta form may be obtained in a pure form or as a mixture of alpha and/or beta and/or a gamma form, a delta form or an epsilon form depending on various matters including purity of starting materials, concentrations, temperature and after treatments.

10. It was common ground that the alpha and beta forms of PY 191 are pseudo, not true, polymorphs. They exhibit the same molecular structure; the alpha form being a monohydrate and the beta form a trihydrate.

11. The problem facing Sudarshan is that it thought it was conducting a synthesis in accordance with the 517 patent, i.e. the prior art process expressly referred to in the 338 patent as leading to the alpha form, but was being accused of selling the novel beta form of the 338 patent. Whether or not it was conducting a synthesis in accordance with the 517 patent is one of the issues in these proceedings.

12. Sudarshan have carried out a number of experiments which it contends explains its predicament. Sudarshan contend, and Clariant accept, that the product of the 517 process after filtration but before drying is a wet cake. Sudarshan contend

that it has carried out PXRD experiments on this wet cake and determined that it is PY 191 in the pure beta form, according to the PXRD disclosed in 338. Sudarshan also contend that it has conducted some drying experiments on this wet cake and these experiments show that the beta form slowly converts to the alpha form on drying at temperatures of around 100° C. It has also conducted some experiments on the alpha form which it contends show that alpha slowly converts to beta on exposure to humidity. It contends that its experiments show that the beta form is the thermodynamically most stable form of the alpha and beta duo and that the inevitable consequence of supplying the alpha form will, if it is exposed to humidity of the kind, for example, you get in monsoon time in India, be conversion to the beta form.

13. Accordingly, Sudarshan contended that its main defence to the infringement proceedings was the *Gillette*[1] defence. It argued, however, that I should go on and consider the validity of 338 and find that all relevant claims were invalid.

The Gillette Defence

14. There are two issues to consider. The first is whether or not Sudarshan was merely working the prior art or obvious variations of it (such question to be addressed as of the priority date) and the second is whether or not this is the explanation for the levels of beta PY 191 in the Sudarshan product.

15. It was common ground that Example 1 did not contain every last detail required in order to put it into effect and, accordingly, it required some interpretation and addition.

16. Further, it was accepted that the following were common general knowledge at the priority date:

    16.1. Optimisation of pigment production was a common and necessary industry practice generally and in particular if the source was a patent document;

    16.2. A variety of techniques were known to enhance crystal quality. After-treatment (thermal treatment) and adding appropriate auxiliaries to the

[1] *Gillette Safety Razor Co v Anglo-Ameriucan Trading Co* (1913) 30 RPC 465

reaction medium, including adding rosin, which was known to inhibit crystal growth resulting in transparent pigments with fine particle sizes;

16.3. The use of co-couplers and co-amines for improving colouristic properties;

16.4. The use and availability of a variety of different diazotisation and coupling processes as well as finishing and after-treatments;

16.5. The use of a wide range of temperatures for drying pigments;

16.6. High temperature drying was detrimental to the properties of pigments produced;

16.7. The use of flushing by which pigments in an aqueous phase are directly transferred to a non-aqueous phase;

16.8. The use of wet cake as a feedstock in plastic, ink and coating/paint applications (agreed as a general statement but Clariant contended that it depended on the individual pigment);

16.9. That organic compounds tend to form different polymorphs;

16.10. That polymorphism may arise from inclusion of water and solvent molecules in the lattice structure;

16.11. That polymorphic forms can display considerably different properties - important for the manufacture of pigments.

17. The Old Process differs from Example 1 in 4 respects, a co-amine was added during the diazotisation, a co-coupler was added during coupling, rosin was added to the coupler solution and the wet cake was dried at 85° C rather than the specified 120° C.

18. The Old Process was developed by Mr Satyanarayan (aka Mr Satya) who is responsible for the Research and Development activities of Sudarshan's pigment business and who gave evidence before me. I found him to be a good witness who was doing his best to assist the court. He said that he followed the process of Example 1 and where the method was not prescriptive he followed standard procedures for creating laked azo pigments. He said he optimised process parameters like pH, heating time, laking temperature, addition of minor quantities of co-amine and co-coupler, and surface treatment additives to match the colour properties of a sample which had been provided to him by a customer. He said he dried at 80° rather than 120° because he thought the latter temperature was

unusually high for pigments and his standard practice was to dry at the lower temperature.

19. One of the Defendant's experts, Dr Heron, commented on the Old Process. He noted that the starting materials were, as had been explained by Mr Satya different from those in Example 1. He did not comment on whether or not there was any significance in these differences other than to say that they could have had an effect on the formation of polymorphs of PY 191 and that there was no way to predict whether or not they would do so. The Defendant made no attempt to establish that the differences would have any effect on the overall process.

20. Dr Heron also noted that the specified drying temperature in Example 1 was 120° C and, although he said he could see no reason why the skilled addressee would depart from that temperature, he accepted that the drying regime would be optimised. He also accepted that he had no experience of the industrial drying of pigments; his comments appear to have been mainly based on no more than the fact that drying at a lower temperature would take longer and that there were good economic reasons for the manufacturing process in the plant to take as short a time as possible. This argument falls away if there are other considerations in play such as a factory set up to dry at a lower temperature, for example 80° C.

21. Dr Heron also commented that there was no way of predicting whether or not a reduced temperature drying regime would produce a pigment of the same desirable characteristics as that produced by drying at 120°. He said that any change resulting in the production of a less dry pigment could be detrimental to the commercial success of the pigment. As with the changes to the starting materials, there was no attempt by the Defendant to establish that the difference in the drying regime of the Old Process from that prescribed by Example 1 did have any of the deleterious consequences referred to by Dr Heron.

22. Clariant also relied on the fact that the Old Process was the product of a large number of iterative experiments (upwards of 50), contending that the fact that there were such a large number meant that Sudarshan was doing much more than merely implementing Example 1. However, Sudarshan was doing more than just implementing Example 1. It was working Example 1 with the object and intent of

producing PY 191 with particular colour characteristics and particular flow characteristics.

23. Clariant also relied on the fact that it had measured the beta polymorph content of the product of the Old Process and found that it was very high (>80%), much higher than would be expected from carrying out the Example 1 process. Clariant invited me to conclude from this that the Old Process must be significantly different from and not an obvious variation of Example 1. Clariant put forward no experimental evidence to support this contention.

24. Clariant also relied upon the fact that the pH levels in the Old Process were different from those in Example 1. However, the pH at striking was the same and, according to the evidence (and as any ordinary chemist would expect) this is the critical point. I reject this criticism by Clariant.

25. Dr McHugh, who gave evidence for the Claimant, was of the clear view that the differences between the Old Process and Example 1 were no more than minor processing differences which would have been obvious to the skilled addressee and were the typical result of process optimisation with a view to obtaining appropriate colouristic properties and to enhance the dispersibility of the product in the application medium. He was cross examined at length but his evidence was not shaken. He accepted that he probably would not have come up with the precise process steps devised by Sudarshan, a matter which Clariant contended was highly significant. But in my judgment it has no significance at all. Dr McHugh's evidence was that there were a large number of obvious ways of implementing the Example 1 process which might be arrived at by a developer seeking to optimise colour and other properties of the end product. In these circumstances, any particular way is no more and no less obvious than any of the others.

26. I am satisfied that the objections raised by Clariant to the contention that the Old Process was no more than an ordinary and obvious implementation of Example 1 of 517 were entirely hypothetical and were not based on any matters of substance.

27. My conclusion is fortified by the results obtained from manufacturing PY 191 by the New Process. The New Process differs from the Old Process in that 3 of the 4 variations to Example 1 were abandoned. Sudarshan retained only the addition of

rosin, but otherwise reproduced Example 1 as faithfully as possible given its limited content. The addition of rosin was retained because, according to Mr Satya, its use was essential in order to obtain the appropriate physical characteristics of the pigment. Again a large number of iterations were performed in work up until Sudarshan settled on the precise process details. The product is PY 191 with the same colour and performance characteristics as the product of the Old Process.

28. Clariant's criticisms of the New Process were, of course, now restricted to the addition of rosin. For the reasons given in relation to the Old Process, in my judgment they have no substance.

29. The next question is the nature of the polymorphic content of the product of the Old and the New Process.

30. With respect to the product of the Old Process, Clariant measured it and found it contained over 80% beta; Dr Cockcoft, a witness for Sudarshan also measured it and found over 80% beta. There was no evidence to the contrary. Unfortunately Clariant did not reveal until a few days before trial (in any but the most obscure way) that the sample it complained of originated with a potential customer. The consequence was that no documents or other relevant information were available which might have shed light on the actual conditions during its manufacture and packaging.

31. With respect to the product of the New Process, this was measured and found to be about 40% beta.

32. Sudarshan carried out a number of experiments in order better to elucidate what was going on with respect to the polymorphic profile during the process of the manufacture of PY 191. Clariant had a number of objections to these experiments and to the interpretation of the results but in my judgment none of them had any substance. For example, in one of Sudarshan's experiments the PXRD peaks were shifted slightly from the beta profile. Sudarshan's expert's, (Dr Cockcroft's), evidence was that this was due to the shrinkage of the sample before measurement and was of no consequence in the context of determining the identity of the polymorph. Clariant's expert, Dr Kennedy, put up a number of theories for the departure in his evidence in chief but readily accepted in cross examination that

Dr Cockcroft's explanation was the most likely. Moreover, Dr Kennedy commented, apparently adversely, that additional experiments could have been done to provide further proof. This may well be true but Clariant put forward no experiments itself which might lead to the conclusion that the results of Sudarshan's experiments were in some doubt. In these circumstances any further experimentation was, in my view, unnecessary.

33. I should note that not all of the experiments which Sudarshan put forward were repeated or capable of repeat and Clariant took objection thereto. However, this is a matter which goes to the weight of the evidence rather than its admissibility. What to my mind is significant about the experiments, however, is that they are all consistent with the other experiments and none of them pointed to any conclusions other than the ones that I have drawn.

34. In my judgment Sudarshan's experiments established the following facts to the required standard:

    34.1. The polymorphic content of the wet cake product of the Example 1 process is 100% beta;

    34.2. drying the aforesaid wet cake at 120° C results in a gradual conversion of the trihydrate beta form to the monohydrate alpha form;

    34.3. addition of water to the alpha form, for example by wetting the surface, results in its conversion to the beta form;

    34.4. exposure of the alpha form to a moist atmosphere will result in gradual conversion to the beta form. The rate of conversion depends on temperature and humidity. Conversion will be significant in the conditions found in monsoonal India or elsewhere in the tropics. It will occur at a much lower rate in normal conditions in northern Europe;

    34.5. the beta polymorph is more thermodynamically stable than the alpha form under ambient conditions.

35. The results of the experiments were supported by at least two pieces of evidence in relation to the Clariant version of PY 191 which has been on the market since many years before 2003. The first piece of evidence relates to a batch of Clariant PY 191 which was first sold to a Swiss customer in 1998. Sudarshan got hold of

this product in about 2010, tested it and found it contained over 35% beta polymorph. I was told that the sample was in its original container and that there was nothing to suggest the integrity of the container had been compromised. Secondly, Professor Schmidt, the 338 inventor, analysed some commercial samples of Clariant PY 191 many years ago and he found that they contained about 10-15% beta.

36. A final piece of evidence supporting the conclusion that the wet cake contains 100% beta comes from the work of Dr Schmidt carried out on Example 1 of 517. He determined that the wet cake product of this Example when dried at room temperature under vacuum was 100% beta, and he accepted in cross examination that it was likely to have been 100% beta prior to drying.

37. The results of these experiments together with measurements on the Sudafast product establish well beyond the required standard that the levels of beta found in the products of the Old Process and the New Process are the consequence of carrying out an ordinary commercial implementation of Example 1.

38. Accordingly, the *Gillette* defence succeeds with respect to the product claims.

39. These experiments also establish that the results of the measurements on pre-priority Clariant PY 191 are sufficiently reliable for me properly to conclude that this product was (and is) likely to contain significant quantities of beta, the actual amount depending on the circumstances in which the product had been made and kept. The only data I have is of levels up to and including 35% and, these levels being within a likely range, I find that the results of the measurements are reliable. There was no evidence which might contradict this conclusion (or any of the conclusions I drew regarding the experiments in this case) although it would have been relatively easy to submit some if the conclusions were incorrect. Instead Clariant relied on what turned out to be a rather poor attack on the experiments themselves and the way they were conducted.

40. I turn now to the effect of this experimental data on the validity of the 338 patent.

41. Counsel for Clariant accepted that if the court were satisfied that the wet cake product of Example 1 was 100% beta, then the product claims of 338 were bad. I am satisfied that the inevitable result of carrying out Example 1 is wet cake containing 100% beta. There is no evidence that anyone has managed to carry out

Example 1 and not get a wet cake containing 100% beta[2]. I am also satisfied that carrying out Example 1 with the sort of obvious variations that would be introduced in order to commercialise the product also leads to wet cake with 100% beta. Thus the product claims of 338 are bad for want of novelty and want of inventive step.

42. Regarding the use claims, Clariant pointed out that PY 191 wet cake had never been used for pigmenting polymers and that it was not obvious to use it in this way. Sudarshan's position was the direct opposite. It led evidence to the effect that it frequently sold pigments in wet cake form and had already supplied its own PY 191 in that form. Furthermore Dr McHugh's evidence was to the effect that it was obvious to use pigment wet cake in the plastic, ink and coating/paint applications for the 338 patent. He described the rationale and technical advantages of using wet cake and explained that it would be obvious to the skilled addressee that he could use PY 191 wet cake for these various applications. The only real challenge to this evidence was based on the fact that it had not been done before; there was no real challenge to the rationale and advantages of doing it. Dr Heron pointed out that there are problems manipulating wet cake due to its sticky nature but he accepted that a benefit was that there were no dust problems. My conclusion on Dr Heron's testimony on the point is that pigments are most commonly sold in dry form but there are occasions where wet cake is the more suitable medium. Professor Schmidt said that to his knowledge it was not possible successfully to use wet cake pigment in plastics without drying the pigment before use, but I was not satisfied he had any basis for his remarks (and he had no relevant experience).

43. I think the likely explanation for there being no previous sales of PY 191 wet cake is that Clariant do not sell it in this form. Clariant led no evidence as to why this state of affairs had arisen and I might infer that if there were a good reason, then such evidence would have been led. I do not need to make this inference. Dr McHugh's evidence was persuasive and I was satisfied by the reasons he gave for his opinion.

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[2] I discount those experiments which simply did not work, of which there were two; they were failed syntheses rather than syntheses which led to PY 191 in other than beta form.

44. In these circumstances the use claims fail for lack of inventive step.

45. Sudarshan also attacked the validity of the patent on the basis of prior use, that is to say, the fact that pre-priority Clariant PY 191 contained significant quantities of the beta polymorph. Clariant accepted that this prior use could legitimately be considered in conjunction with the 517 disclosure but argued that there was no enabling disclosure; the skilled addressee might be able incidentally to make the product but would not know and would not find out what it was, i.e. the beta form. In view of the clear conclusions of fact I have made earlier in this judgment, it is not necessary to reach any conclusions in relation to this additional attack.

46. I now turn to the proposed amendments.

47. The final version of the first set of proposed amendments took original claim 6 (paragraph 5 above) and prefaced it with the words '*A C.I. Pigment Yellow 191 mixture comprising at least 10% of the β-polymorph being defined as follows:*', amended claim 7 so that it was limited to a mixture comprising at least 25% β-polymorph, created new claims 8, 9 and 10, each one to a mixture containing 50%, 75% and 90% respectively, renamed original claim 8 to claim 11 and amended the reference to 'claim 6 or 7' to 'any of claims 6 to 10', and added new claims 12 and 13 in this form

> Claim 12
>
> *The use of C.I. Pigment Yellow 191 as claim in any of claims 6 to 10 for pigmenting polymers and powder coating materials.*
>
> Claim 13
>
> *The use of C.I. Pigment Yellow 191 as claimed in any of claims 6 to 10 for pigmenting polymers and powder coating materials and which has been subjected to mechanical fine division by dry grinding.*

48. New claims 7 to 10 are anticipated by the inevitable result of carrying out Example 1, i.e. wet cake comprising 100% beta. They also lack inventive step by reason of the fact that the skilled addressee carrying out obvious optimisations of Example 1 will produce wet cake comprising 100% beta.

49. New claim 12 lacks inventive step in the light of my finding that an obvious use of wet cake is in pigmenting polymers.

50. Sudarshan also contended that I should refuse the amendment to new claim 12 because it adds matter (and therefore would be contrary to s. 76, Patents Act 1977), a matter to which I will return.

51. New claim 13 is interesting. Clariant contend that if wet cake is subjected to mechanical fine division by dry grinding all or most of the beta form will convert to the alpha form prior to its use in the specified application, and accordingly there is no anticipation or lack of inventive step. Of course Clariant did no experiments to show this was the case, since it doggedly refused to admit that the wet cake contained any beta form. But there were experiments which showed that beta converted to alpha on drying at elevated temperatures, and it is likely that the skilled addressee may wish to dry the wet cake prior to grinding, grinding being a common treatment to which pigments are subject. Accordingly, contend Clariant, claim 13 is novel and inventive.

52. Sudarshan submitted that new claim 13 is bad because of an added matter objection. It drew my attention to the well-known explanation of Aldous J in *Bonzel (T.) v Intervention Ltd (No.3)* [1991] R.P.C. 553 at 574 and the further guidance set out at first instance by Kitchin J and approved by the Court of Appeal in *European Central Bank v Document Security Systems* [2008] EWCA Civ 192:

> *"97. ... First, it requires the court to construe both the original application and specification to determine what they disclose. For this purpose the claims form part of the disclosure (s.130(3) of the Act), though clearly not everything which falls within the scope of the claims is necessarily disclosed.*
> *98. Second, it is the court which must carry out the exercise and it must do so through the eyes of the skilled addressee. Such a person will approach the documents with the benefit of the common general knowledge.*
> *99. Third, the two disclosures must be compared to see whether any subject matter relevant to the invention has been added. This comparison is a strict one. Subject matter will be added unless it is clearly and unambiguously disclosed in the application as filed.*
> *100. Fourth, it is appropriate to consider what has been disclosed both expressly and implicitly. Thus the addition of a reference to that which the skilled person would take for granted does not matter: DSM NV's Patent [2001] R.P.C. 25 at [195]–[202]. On the other hand, it is to be emphasised that this is not an obviousness test. A patentee is not permitted to add matter by amendment which would have been obvious to the skilled person from the application.*
> *101. Fifth, the issue is whether subject matter relevant to the invention has been added. In case G1/93, Advanced Semiconductor Products, the Enlarged*

Board of Appeal of the EPO stated (at [9] of its reasons) that the idea underlying Art.123(2) is that that an applicant should not be allowed to improve his position by adding subject matter not disclosed in the application as filed, which would give him an unwarranted advantage and could be damaging to the legal security of third parties relying on the content of the original application. At [16] it explained that whether an added feature which limits the scope of protection is contrary to Art. 123(2) must be determined from all the circumstances. If it provides a technical contribution to the subject matter of the claimed invention then it would give an unwarranted advantage to the patentee. If, on the other hand, the feature merely excludes protection for part of the subject matter of the claimed invention as covered by the application as filed, the adding of such a feature cannot reasonably be considered to give any unwarranted advantage to the applicant. Nor does it adversely affect the interests of third parties.
102. Sixth, it is important to avoid hindsight. Care must be taken to consider the disclosure of the application through the eyes of a skilled person who has not seen the amended specification and consequently does not know what he is looking for. This is particularly important where the subject matter is said to be implicitly disclosed in the original specification."

53. My attention was also drawn to that somewhat subtle form of added matter known in the jargon as "intermediate generalisation". Pumfrey J described it in *Palmaz's European Patents* [1999] RPC 47 , 71:

> *"If the specification discloses distinct sub-classes of the overall inventive concept, then it should be possible to amend down to one or other of those sub-classes, whether or not they are presented as inventively distinct in the specification before amendment. The difficulty comes when it is sought to take features which are only disclosed in a particular context and which are not disclosed as having any inventive significance and introduce them into the claim deprived of that context. This is a process sometimes called 'intermediate generalisation."*

54. The passage in the specification which forms the basis of the proposed amendment is in these terms:

> Depending on the desired field of application it may be sensible to subject the resulting pigment to mechanical fine division. This fine division may be carried out by wet or dry grinding or by kneading. The grinding or kneading operation may be followed by treatment with a solvent, with water, or with a solvent/water mixture in order to convert the pigment into a useful form.

55. It can be seen from this that there is no disclosure in the original specification either that it is inventive or that there is technical significance in the use of PY 191 in polymers or powder coating materials in particular, or in such use when the pigment has been subject to mechanical fine division by dry grinding in particular.

Accordingly, and following the approach set out in the above mentioned citations, the effect of the amendment is to add subject matter relevant to the invention. Therefore, the amendment is contrary to s 76 of the Act and is not allowable.

56. Sudarshan also objected to new claim 13 on the basis that it did not cure the validity objection. It referred to the passage in the specification I have set out above and the suggestion that treatment with water after dry grinding was just the sort of obvious thing the skilled person might do, depending on his particular application, and that if he did do this then there would be reconversion of any alpha form back to beta form – see paragraph 51 above.

57. Mr Howe initially objected to this proposed amendment being considered at all since it was introduced after the evidence had been completed and so he had been denied a proper opportunity to lead or cross examine to all matters which were relevant. He argued that if I were to consider it at all, then I must do so bearing in mind that the limited evidential support for his argument should not be held against him; in effect I was being invited to take a broad view of the evidence. Mr Watson agreed that he could not object to this course.

58. There was plenty of evidence in the case to the effect that particle size, crystal size and crystallinity were important in the context of pigments and a leading text (*Herbst and Hunger)* suggests one way of improving crystallinity is water treatment. There was no specific evidence about water treatment of pigments subject to mechanical fine division by dry grinding, due Mr Howe submitted, to the fact that such was not relevant to the case as put when the evidence was adduced. However, from considering the evidence as a whole, I am satisfied that water treatment was a normal and obvious treatment for a pigment, whether it had been subject to mechanical fine division by grinding or kneading, wet or dry. One reason for that conclusion is that the two processes are distinct from each other. The first process is a mechanical process of fine division and the second is a conversion of the finely divided particles into a useful form. Another reason is that my impression from the evidence is that tools such as wet grinding, dry grinding, improving crystallinity by solvent treatment and the like are part of a host of similar such common tools which are used as and when appropriate. Accordingly, had the added matter objection failed, the amendment would still not have been allowed.

59. The second set of amendments introduces a disclaimer and provides new claims 6 to 11 as with the first set. The disclaimer was in these terms:

> EP 0 361 431 discloses the production of a pigment of formula (1) as an aqueous suspension which is then filtered and washed and dried. We disclaim the said pigment as an aqueous suspension or in form which has not been dried.

60. It is evident that the intention is to overcome the fact that Example 1 produces wet cake in the beta form. However, it is immediately apparent that there are some problems with this disclaimer. For example, Professor Schmidt gave evidence that he dried the wet cake in a vacuum at ambient temperature and it remained 100% beta. Mr Watson's answer to this was that the disclaimer would be understood as referring to drying in accordance with Example 1, although there was no evidence that this was so or even likely to be so.

61. Clariant's pleaded case was that this amendment was an allowable disclaimer to disclaim an accidental anticipation. In addition to the ambiguity with drying, already mentioned, there are a number of other difficulties. The first is that the wet cake is more than an anticipation, it renders the claims bad for lack of inventive step – see my earlier findings; and, as Mr Watson accepted, disclaimers are not appropriate to overcome this kind of invalidity.

62. The second difficulty is that the anticipation is not accidental. As was made clear by the Court of Appeal in *LG Philips LCD Co Ltd v Tatung (UK) Ltd* [2006] EWCA Civ 1774; [2007] RPC 21, at [33] to [34]:

> *"33. The law on added matter was considered again by the Enlarged Board of Appeal, in a case where the amendment involved a disclaimer narrowing the claim, in G1/03 PPG Industries/Disclaimer [2004] EPOR 33 . The effect of that decision is that a specific disclaimer does not add matter (contrary to Art.123(2) of the European Patent Convention —equivalent to s.76), if it is inserted into a claim to avoid an "accidental" anticipation, but it does add matter if it is inserted to avoid a "non-accidental" anticipation—see part 2 of the decision. An accidental anticipation involves a:*
> *"disclosure ... belong[ing] to a remote technological field or [one whose] subject-matter suggested it would not help to solve the problem [addressed by the patent in question]".*
> *In other words, "the disclosure has to be completely irrelevant for assessing the inventive step"—see [37].*
> *34. A little later in the same paragraph, the Enlarged Board identified an accidental anticipation in slightly different words, but to much the same effect, namely that:*

"the disclosure in question must be so unrelated and remote that the person skilled in the art would never have taken it into consideration when working on the invention".
In conclusion on this topic, in [44], the Enlarged Board said that:
"When an anticipation is taken as accidental, this means that it appears from the outset that the anticipation has nothing to do with the invention. Only if that is established, can the disclaimer be allowed.""

63. In the present case I accept Sudarshan's submission that the matter sought to be disclaimed could not be less remote or unrelated, coming as it does from the original PY 191 patent.

64. Clariant submitted that the law was more helpfully set out by the Court of Appeal in *Napp v Sandoz* [2009] RPC 18, [69]-[85]. However, Clariant accepted that these passages make clear that matter will be added if the disclaimer renders the patent non-obvious. But unless it does exactly that, it is of no assistance to Clariant. Accordingly, this second proposed amendment is not allowable for added matter reasons.

65. I now turn to the question of threats. Sudarshan rely on a letter sent to them by Clariant which contains the following passage:

"…Any making, using, selling, offering for sale or import of the protected product or Article in said territories is prohibited by law…
Certainly you will not be interested in continuously effecting a patent infringement which may involve most serious penalties to the infringer and his customers"

66. Clariant's answer to the claim is three fold. First it pleads justification, second it contends that threats made against manufacturers are not actionable - see s 70 (4) Patents Act 1977 - and there is no evidence it wrote to any customers, third it says that at the time the threats were made it did not know and had no reason to suspect the patent was invalid – see s 70 (2A). I have already dealt with the first answer.

67. In relation to the second, threats made to manufacturers, Sudarshan contends that the threat was made in relation to its customers. Section 70(1) is in these terms:

Where a person (whether or not the proprietor of, or entitled to any right in, a patent) by circulars, advertisements or otherwise threatens another person with proceedings for any infringement of a patent, a person aggrieved by the threats (whether or not he is the person to whom the threats are made) may, subject to subsection (4) below, bring proceedings in the court against the person making the threats, claiming any relief mentioned in subsection (3) below.

68. Mr Howe contends that Sudarshan's customers were threatened (within the meaning of the section) and that Sudarshan is a 'person aggrieved' thereby. Further he reminded me that the test for whether or not threats have been made is an objective one – see *Luna Advertising Co Ltd v Burnham & Co* (1928) 45 R.P.C. 258.

69. In connection with Clariant's contention that it did not communicate any threat to Sudarshan's customers, Mr Howe drew attention to *John Summers v Cold Metal Process* (1948) 65 RPC 75, 96. In that case Romer J construed the words 'threatens any person' in the predecessor to section 70 to mean not only 'communicates a threat to any person' but to include also 'the expression of a threat in relation to any person'. I accept that; it makes sense of the provisions designed to protect customers. As Mr Howe contended, if Sudarshan knows that its customers are going to be harassed by patent infringement claims it will be wary of supplying those customers, for fear of damaging its business relationships with them.

70. In connection with the third defence, s 70 (2A) is as follows:

> (2A) If the defendant or defender proves that the acts in respect of which proceedings were threatened constitute or, if done, would constitute an infringement of a patent -
> (a) the claimant or pursuer shall be entitled to the relief claimed only if he shows that the patent alleged to be infringed is invalid in a relevant respect;
> (b) even if the claimant or pursuer does show that the patent is invalid in a relevant respect, he shall not be entitled to the relief claimed if the defendant or defender proves that at the time of making the threats he did not know, and had no reason to suspect, that the patent was invalid in that respect.

Clariant adduced evidence from Dr Hutter to substantiate this defence. He works for Clariant in Patent Management and is the author of the patent application that became the 338 patent. He is also the author of the letter complained of by Mr Howe. He said that at the time of writing the letter he did not know nor did he have reason to suspect that the 338 patent was invalid. I accept that evidence. However, it seems to me wholly to miss the point.

71. The issue is whether Clariant knew or had any reason to suspect that the patent was invalid and there is no evidence that Dr Hutter took any steps at all to find out the position in relation to that. Indeed there was evidence that Clariant knew that its prior art PY 191 contained the beta polymorph and that it also knew, through its collaboration with the 338 inventor Professor Schmidt, that wet cake produced from Example 1 of 517 was 100% beta. Each of these matters would, without

some explanation, give reason for Clariant to suspect that the 338 patent was invalid.

72. There was some evidence in the case from a potential customer of Sudarshan who received a copy of the above mentioned letter. However, that evidence was not relied on to establish liability and I mention no more of it.

73. In the circumstances my conclusion is that the patent must be revoked and the threats action succeeds.