

PATENTS ACT 1977

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IN THE MATTER OF an application  
by BORDEN (UK) LIMITED to amend  
the specification of Patent  
No. 2059972B

and

IN THE MATTER OF an opposition thereto  
by FOSECO INTERNATIONAL LIMITED.

DECISION

Specification No. 2059972A was published on 29 April 1981 based on an application filed on 30 September 1980 and claiming priority from GB application No. 7934017 filed on 1 October 1979. Notice of grant appeared on 30 March 1983, the day on which the patent was published as GB 2059972B.

An application to amend Patent No. 2059972B was filed on Form 14/77 on 9 December 1983. The reasons given for making the requested amendments were "To distinguish the invention from what is disclosed in published Japanese Patent Application No. 50-130627".

The applicants' specification relates to a foundry moulding composition comprising a granular refractory material, a phenolic resin binder, and a lactone as curing agent for the binder. Claim 1 relates to such a composition per se with claims 2 to 6 referring to preferred features thereof and claim 7 relates to a method of making a foundry mould or core in which ingredients defined in the same terms as claim 1 are mixed, the mixture then being formed and allowed to set. Claims 8 to 12 refer to preferred features of the method in similar terms to claims 2 to 6.

The requested amendments are shown in red on the copy of the printed 'B' document which accompanied the Form 14/77. For the purposes of the opposition it will be sufficient to consider the amendments to claim 1 since exactly similar amendments are requested in claim 7 and the remainder are consequential throughout the description or amount to the correction of printer's errors. The amended Claim 1 reads as follows, additions being underlined and deletions being in square brackets:

- "1. A foundry moulding composition comprising a granular refractory material, from [0.8] 1.0 to [5] 2.0% by weight of the granular refractory material of a binder comprising [an alkaline] a KOH-catalysed phenolic resin, and, as curing agent for the resin, from 25 to 110% by weight of the resin of a lactone

Thus it will be seen that it is the applicants' wish to restrict both the amount and the type of binder with the intention of distinguishing the invention from that disclosed in the aforesaid Japanese application.

In the Office, the Principal Examiner to whom the case was referred for report, indicated in a letter dated 17 January 1984 that whilst the amendments proposed may indeed distinguish the invention as far as novelty was concerned, it was not clear what inventive step the specification, amended as proposed, would exhibit over the invention disclosed in the Japanese application and requested the applicant to demonstrate, prima facie at least, that the invention satisfied all the criteria of Section 1 of the 1977 Act. On the strength of arguments submitted in an Agent's letter dated 22 February 1984 the Principal Examiner took the prima facie view that the amended specification related to a patentable invention over the cited Japanese application and the amendments then went on for advertisement.

An opposition to the amendments was then filed on Form 15/77 by Foseco International Limited on 18 July 1984 and the matter came

before me at a hearing on 2 October 1986. At the hearing Mr Simon Thorley appeared as Counsel for the applicants whilst the opponents chose not to attend and were unrepresented.

Referring to the opponents statement of opposition Mr Thorley drew to my attention the main points to be decided and summarised them as being in the areas of undue delay, the propriety of an advertisement in a trade journal concerning the grant of GB 2059972B and the validity of the claims of GB 2059972B both before and after the amendments were sought. Furthermore it was his submission that considerations in the former two areas would be defined by the applicants attitude to the issue of validity of the claims and therefore he proposed that I consider the validity issues first. This seemed to me a perfectly reasonable review of the matters to be decided and of the order in which they should be considered and so the hearing proceeded on that basis.

Before dealing in detail with the issue of validity Mr Thorley asked me to consider that the proposed amendments complied with the Act, in particular that they did not include added matter as required by Section 76. I am satisfied that they do so comply and informed Mr Thorley to that effect. The question of the internal inconsistency of the amendments raised in the opponents statement I will deal with later.

Coming to the matter of validity Mr Thorley impressed on me that this was a case where the judgement in Great Lakes Carbon Corporation's Patent [1971] RPC 117 applied i.e. in coming to a decision it was right for me only to consider those documents directly in front of me and not to turn the proceedings into those more appropriate to the High Court. Thus he argued that in considering the validity of the claims, whether in the amended or unamended form, I should take the attitude an examiner would adopt in the first place when deciding whether a patent should be granted. I accept his argument at least so far as agreeing that the only prior art I need to consider is the Japanese Patent Application No 50-130627.

Mr Thorley then invited me to consider the validity of the claims in their unamended form. He pointed out to me that there never has been any question of the Japanese Application providing a novelty citation in so far as it disclosed an amount of lactone of 20% based on the weight of resin whereas as a minimum the patent in suit has always required an amount of 25%. This I agree with. On the matter of inventive step in his evidence Dr Stevenson for the opponents had made an assertion that as a skilled chemist he would automatically try other proportions of lactone, including a proportion of 25% or more, to see if superior results could be obtained, an assertion which was challenged by Mr Railton for the applicants in his statutory declaration on the grounds that the lactone used in the Japanese application was an expensive ingredient and therefore it was far from obvious to use an increased amount. Moreover, Mr Railton argued that based on the Examples described in the patent in suit there were perfectly good reasons, for using a minimum of 25% lactone. The Japanese application was in any case in Mr Thorley's submission a weak citation in so far as the experiment therein relating to the use of a lactone was not repeatable since as pointed out by Mr Railton it did not, for instance, state the molecular weight of the resole resin or the amount of sodium hydroxide present.

At this point I asked Mr Thorley whether he had carried out the extrapolation of the graph of compression strength against amount of lactone as suggested by Mr Railton in paragraph 5 of his statutory declaration. He had not. However, if such an extrapolation is carried it shows that a rise in compression strength commences at about 25% lactone thus confirming that value as the lowest to show the advantages of the invention.

In spite of the fact that Mr Thorley considered the claims in their unamended forms to be valid he then turned my attention to the claims as proposed to be amended. Clearly the claims were to be limited both in respect of the amount and type of the binder to be used and evidence of the advantage of using a KOH-catalysed

phenolic resin binder had overcome an initial objection from the Office. Mr Railton in his evidence had shown the advantage of using KOH rather than NaOH, even though KOH was more expensive, and that evidence had gone unchallenged. Mr Thorley submitted therefore that it was not obvious in this particular art to move from the use of NaOH to KOH. What the amendment achieved was a claim less susceptible to attack in High Court proceedings, although the applicants had always believed the unamended claims to be valid.

Having heard Mr Thorley on the matter of the validity of the claims both as unamended and in the form they are proposed to be amended and having considered the evidence in these proceedings I think it appropriate at this stage for me to come to a decision in respect thereof since that decision will affect how far I need to go in my deliberations on the other matters to be decided.

Clearly the Japanese application which has led to the applicants request to amend has never been regarded as a relevant citation in respect of novelty and I have had strong and convincing argument put to me as to why it should not be regarded as relevant in respect of inventive step. Particularly when considering the evidence of Mr Railton I find very good reasons to come to the conclusion that the applicants have presented a prima facie case for the application in its unamended form to be held as relating to an invention which is both novel and inventive when compared to what is disclosed in the Japanese application and I note that the opponents have not taken the opportunities afforded them to rebut that evidence. I find it particularly persuasive that if one constructs the graph, as I indicated above, the point at which compression strength begins to rise is when a minimum of 25% lactone, based on the resin binder, is used. There are therefore good reasons, supported by Mr Railton's evidence as to why a minimum of 25% lactone is used. Thus, even if I accept, which I do not, that a skilled man might try 25% given the Japanese application, what that application does not teach the skilled man is that 25% is a minimum value above which substantial increases

in compression strength can be obtained and that seems to me to be one of the applicants inventive features. For this reason and because there are considerable doubts about the repeatability of the disclosure in the Japanese application and thus the exact nature of what that application teaches the skilled man I find the application even in its unamended form to be valid in respect of both novelty and inventive step.

Turning to the amended claims I find no reason to depart from the conclusion previously reached in the Office and subsequently backed by evidence from Mr Railton together with Mr Thorley's submissions at the hearing that they relate to a novel and non-obvious invention. One matter of concern however which I put to Mr Thorley was that on the Form 14/77 the reasons given for amendment were "to distinguish the invention from what is disclosed in published Japanese Patent Application No. 50-130627" which seemed to me to be in contradiction of the fact that the applicants had always regarded their application as being so distinguished. Mr Thorley admitted that this was a slip of drafting and that what was intended was "further distinguish" and I am prepared to regard the statement of reasons as amended in this respect.

Finding as I do on the evidence of the patent itself that the patent as granted was always clear of the Japanese application it seems to me that I need not go into the matters of undue delay and the propriety of the advertisement published in a copy of 'Foundry Trade Journal' announcing the grant of the patent. I am satisfied that the applicants have always considered the Japanese application, from the time it was brought to their attention in the Search Report on their parallel European application, not to be a relevant citation. Indeed the advertisement in the "Foundry Trade Journal" suggests to me that the applicants did regard their patent as valid and in the absence of any evidence to show a wilful disregard of the Japanese document on their part I do not need to consider these matters further. Thus as I have not needed it to reach my decision I see no need to admit into these

proceedings a statutory declaration of Mr Lewis relevant to the matters of delay and the advertisement, sworn on the day previous to the hearing, which Mr Thorley had invited me to admit and, as a consequence I see no need to show that declaration to the opponents. Nevertheless I do admit this declaration to the extent that the applicants may wish to refer to it in any appeal proceedings but in such a case the opponents will have ample time to consider the document.

There remains one major matter outstanding for me to consider and that concerns the alleged internal inconsistency of the proposed amendments. As I understand Dr Stevenson's argument on this point from his statutory declaration it is that the weight of water contained with the resin in preparing the foundry moulding compositions of the invention is to be taken into account when working out the proportion of resin binder used. On this basis the amount of binder in new Example 1 is exactly 2.0% but all the other Examples which employ a greater amount of aqueous KOH solution in forming the binder are held to employ an amount of binder in excess of 2.0%. Having heard Mr Thorley on this matter and taking into account paragraphs 6 and 7 of Mr Railton's evidence I am persuaded that Dr Stevenson's line of argument must be wrong. I find myself in total agreement with Mr Railton when he says that it is clear to him from the words used in the Specification (my emphasis) that the water in which the KOH added to the resin is dissolved does not form part of the KOH-catalysed phenolic resin. Indeed as Mr Railton points out, in paragraph 10 of Dr Stevenson's declaration he does not consider the water to be part of the resin used in the prior art and to this extent Dr Stevenson is being inconsistent. I am therefore of the conviction that the allegation of internal inconsistency must fail.

In the result, therefore, I decide that all the amendments shown in red on the copy of the printed specification filed on 9 December 1983 are such as may lawfully be made in these proceedings and I therefore allow them to be made.

I was not addressed on the matter of costs and, in all the circumstances of the present case, I consider it appropriate not to make any award as to costs.

Dated this 30<sup>th</sup> day of October 1986

M F VIVIAN

Superintending Examiner, acting for the Comptroller



THE PATENT OFFICE