

IN THE MATTER OF Patent Application  
No 8521609 in the name of  
General Electric Company

REASONS FOR DECISION

At a hearing before me on 12 June 1989, Mr P M Turner of Urquhart-Dykes and Lord appeared as agent for the applicants: Mr M J R Blackman attended as the examiner in the case. At the close I decided to refuse the application and the following are my reasons for doing so.

The application was filed on 30 August 1985, claiming priority from US application 678725 dated 5 December 1984. The extended Rule 34 period expires on 5 July 1989.

The application is concerned with siloxane materials characterised by the presence of terminal and/or side chain aromatic dibasic acid anhydride group(s) linked directly through the aromatic groups to the terminal and/or chain silicon atom(s). Initially claims (5 to 8) were also included to certain polyimide siloxane materials.

In the claims as currently presented, claim 1 sets out three alternatives; identified as (A), (B) and (C).

- (A) defines anhydride siloxanes having from 5 to 2000 diorganosiloxy units and terminal aromatic anhydride groups linked through the aromatic group to terminal silicon atoms.
- (B) defines anhydride siloxanes having 1-2000 siloxy groups each silicon atom carrying an aromatic anhydride group and

an R group which is a (1-13) monovalent hydrocarbon or substituted hydrocarbon radical.

(C) defines anhydride siloxanes consisting of units of the type set out in both (A) and (B) above.

The remaining claims (2 to 7) relate to more restricted materials of the type set out in claim 1.

Following several reports made by the examiner under Section 18(3), and reponses from the applicant, the examiner considered that the response dated 17 May 1989, following the report dated 19 April 1989, could not be regarded as a bona fide attempt, at that stage in the proceedings, to satisfy the Comptroller that the requirements of the Act were complied with or to amend the application to achieve compliance, as required by Section 18(3).

I now set out the course of the proceedings with some precision since I consider that what can be regarded as a bona fide attempt to put an application in order at any stage is dependent on the previous course of the proceedings, as is the exercise of any discretion in these matters.

The main objections arising in this application relate to plurality - Section 14(5)(d), novelty - Section 1(1)(a) and inventive step - Section 1(1)(b). Plurality was first notified in the letter dated 1 October 1985 accompanying the Search Report. All three objections were set out in some detail in the first substantive examination report dated 8 April 1988. Applicant's reponse through Mr Turner's letter dated 14 September 1988 dealt only with some relatively minor matters and the plurality objection, the latter being largely met by deleting original claims 5 to 8 relating to the polyimide materials. This amendment implied recognition of the relevance of the novelty objection, without making any attempt to meet that objection. No comment was made either on novelty or inventive step.

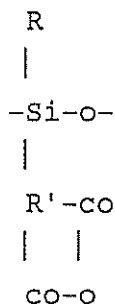
The second substantive examination report issued on 16 November 1988 and referred to the possible further difficulties under Section 14(5)(d), because the claims remained very broad, and reiterated the novelty and inventive step objections, mainly by reference to the relevant paragraphs of the first report. The Applicant's response to this report was filed on 15 March 1989 and commented briefly on the novelty references.

As the examiner considered that the comments appeared to have little relevance to resolving either the novelty or the inventive step issues, a further report was issued on 19 April 1989 dealing with the comments made and once more setting out the position under Section 1(1)(a) and 1(1)(b) in detail, mentioning also the Section 14(5)(d) position and some more minor matters. Paragraph 9 of that report gave an explicit warning of the necessity to deal with all outstanding matters at that stage, if the application was to be pursued. The examiner considered that the response to this report dated 17 May 1989, presents an argument in relation to the novelty issue which, while slightly differently worded, is similar to that previously presented and again does not properly address the problem in respect of both novelty and inventive step having regard to an article by Pratt et al and GB A 216404 (General Electric/Rich), and moreover makes no comment on the second limb of the inventive step objection based on the analogous norbornane dicarboxylic acid anhydrides of US A 4404350 (Ryang). I will return to these disclosures in more detail shortly.

Finally, further letters dated 1 and 2 June 1989, concerning both the bona fide and the substantive issues were received from the Applicants. As I indicated at the hearing the matter at issue is the nature of the response of 17 May 1989 itself and I can therefore only take limited account of those letters in so far as they bear on that issue.

Turning to the objection under Section 1(1)(a), this arises in respect of alternative (B) in claim 1, and corresponding parts of later claims eg 4 and 6, having regard to the disclosures in J Org Chem Volume 38, No 25, 1973, J R Pratt et al "Organosilicon Compounds.XVIII. Silicon-Containing Di-anhydrides", pages 4271-4274 (hereafter "Pratt et al") and in GB-A-2164041 (General Electric/Rich) - hereafter "Rich".

In its simplest form, alternative B of applicants claim 1 is a compound containing the group



R being a monovalent hydrocarbon or substituted hydrocarbon group and R<sup>1</sup> being a trivalent aromatic group - typically this side chain containing R<sup>1</sup> is a phthalic anhydride grouping. The unfulfilled valencies are not defined, it is merely stated that the units are chemically combined and Mr Turner agreed that any practical possibility was included.

In Pratt et al compound 14 on page 4273 and in Rich, Example 2, the compound 1, 3-bis (4'-phthalic anhydride) - tetramethyl disiloxane is prepared and characterized. In my view, this compound meets the requirements of claim 1, alternative (B), in that it contains the necessary aromatic anhydride group linked directly to a silicon atom, a methyl group to satisfy R, an oxygen atom attached to the silicon atom, the remaining valency on silicon being satisfied by a further methyl group, the remaining valency on the oxygen atom being satisfied by the second dimethyl silyl phthalic anhydride group.

Objection under Section 1(1)(b) arises in two ways. First, the examiner considers that chain extension of the known disiloxane products described in Pratt et al and in Rich above to provide products as defined in claims 1, 4 and 6 at least, particularly alternative (A), is not inventive since methods of increasing chain length eg by reaction with other conventional siloxane oligomers are conventional in the art. Second, he considers the preparation of the aromatic analogues of the norbornane anhydride materials disclosed in US 4404350 (Ryang) - hereafter "Ryang" - for the same objective of providing suitable precursors for siloxane-polyimide preparation to be non-inventive, again especially in respect of alternative (A).

Mr Turner's argument on the novelty issue at the hearing seemed to be based on the premise that he did not understand the relevance of the objection. However in my view the objection has been clearly set out on three separate occasions and in any event appears to me to require little explanation. The matter is so straightforward that I am frankly puzzled that neither Mr Turner nor the applicants appreciated the significance of this objection. I am also puzzled that if Mr Turner really did not understand the objection he made no approach to the examiner for further elucidation. After further discussion, Mr Turner agreed that there was indeed no distinction between claim 1, alternative (B) when n equals 1, and the disclosures of Pratt et al and Rich, and that there had therefore been no proper response to this objection in the course of the proceedings in reply to the three reports under Section 18(3). In addition, the responses of 15 March 1989 and 17 May 1989 do not seem to me to properly address the objection under Section 1(1)(b) or go any way towards meeting it. Mr Turner was unable to assist me further at the hearing apart from stating that he believed that the responses given addressed the issues raised. When pressed I understood him to admit that the response of 17 May 1989 was insufficient also in this respect. Further, he agreed that no submissions had been provided at any stage on the second limb of inventive step objection, based on Ryang.

Section 18(2) specifies that "the examiner shall investigate ..... whether the application complies with the requirements of this Act and the rules and shall determine that question and report his determination to the comptroller". Section 18(3) then specifies that "if the examiner reports that any of those requirements are not complied with, the Comptroller shall give the applicant an opportunity within a specified period to make observations on the report and to amend the application so as to comply with those requirements ..... and if the applicant fails to satisfy the Comptroller that those requirements are complied with, or to amend the application so as to comply with them, the Comptroller may refuse the application."

It is normal practice when communicating Section 18(3) reports to an applicant to include an invitation to file a reply within the specified period setting out observations and/or amendments to overcome the objections. Further, a warning is included that "The Comptroller may refuse your application, after giving you an opportunity to be heard, if you do not make a bona fide attempt, within the period specified above, either to satisfy him that these requirements are complied with, or to amend the application so as to comply with them."

The specific relevant requirements of Section 18 are thus drawn to an applicant's attention at each stage of the substantive examination process, together with a warning of the consequence of failing to take the necessary action. Such indications were indeed included in each letter sent embodying Section 18(3) reports on the present application.

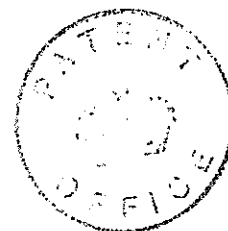
As I pointed out at the hearing, it is thus open to the Comptroller to refuse an application even at the stage of reply to the first substantive examination report. In practice the Office does not normally enforce this provision at that stage, even where the reply is de minimis, and a dialogue then ensues through one or more further substantive examination reports and responses from the Applicant, in most cases achieving compliance with the Act and rules to allow grant of a patent.

Clearly, however, this process cannot operate unless the examiner makes clear the position at each stage and, correspondingly, the applicant makes reasonable efforts to progress the application towards eventual grant or refusal in response to each official letter. In the present application, the applicant has had very adequate opportunities to meet the requirements of the Act and rules and has failed to avail himself of those opportunities. In particular, I consider that the response dated 17 May 1989 did not advance the case in any significant respect towards allowance, notwithstanding the additional warning included in paragraph 9 of the third substantive examination report of 19 April 1989.

In the light also of the fact that this was the third response, filed at a very late stage in the proceedings, I had no alternative but to accept the examiner's contention that the response made on 17 May 1989 did not constitute a bona fide attempt to meet the outstanding matters.

Accordingly I concluded that the present application should be refused and this I so directed. Having informed Mr Turner of this decision at the hearing the applicants have a period of 6 weeks from the date of the hearing to enter an appeal if they so wish.

Dated this 19 day of June 1989



P L EGGINGTON

Principal Examiner, acting for the Comptroller-General