

Publication in the Official Journal Yes / No
--

File Number: T 113/90 - 3.3.2
Application No.: 82 200 372.9
Publication No.: 0 062 373
Title of invention: Polymer concrete compositions and their use in preparing articles

Classification: C04B 26/18

D E C I S I O N
of 18 December 1991

Proprietor of the patent: SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.
Opponent: HÜLS Aktiengesellschaft

Headword: Polymer concrete/SHELL

EPC Article 56

Keyword: Inventive step (yes - after restriction of claims approved by the Respondent/Opponent)

Headnote



Case Number : T 113/90 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 18 December 1991

Appellant :
(Proprietor of the patent)

SHELL INTERNATIONALE RESEARCH
MAATSCHAPPIJ B.V.
Carel van Bylandtlaan 30
NL - 2596 HR Den Haag (NL)

Representative :

Aalbers, Onno
PO BOX 302
NL - 2501 CH The Hague (NL)

Respondent :
(Opponent)

Hüls Aktiengesellschaft
Postfach 1320
W - 4370 Marl 1 (DE)

Decision under appeal :

Decision of Opposition Division of the European
Patent Office dated 11 December 1989 revoking
European patent No. 0 062 373 pursuant to
Article 102(1) EPC.

Composition of the Board :

Chairman : P.A.M. Lançon
Members : I.A. Holliday
R.L.J. Schulte

Summary of Facts and Submissions

- I. European patent No. 0 062 373 concerning polymer concrete compositions was granted on the basis of three claims contained in European patent application No. 82 200 372.9.
- II. The Respondent filed a notice of opposition against the European patent requesting revocation of the patent on the grounds that its subject-matter lacked both novelty and inventive step. The following documents were cited:
- (1) DE-C-2 004 223
 - (2) Kunststoff-Handbuch, Bd. VIII, Polyester, Carl Hansen Verlag, München (1973), S. 250, 251, 274, 275, 455 and 456.
- III. The Opposition Division revoked the patent on the grounds that Claim 1, together with dependent Claims 2 and 3, did not comply with Article 56 EPC. In the view of the Opposition Division, document (1) represented the closest state of the art, being concerned with compositions comprising unsaturated polyester (UP) resins and an aggregate containing fly ash. Since the use of UP-resins in curable concrete compositions in relative small amounts was usual according to (2) and their properties well known, it was not inventive to choose the UP-resins specified in Claim 1 as granted. The Opposition Division also referred to the "International Plastics Handbook" published in 1983 (i.e. after the priority date of the patent in suit) by way of an expert's opinion.

The Opposition Division also expressed the view that the alternative composition of Claim 1, i.e. concrete comprising a "vinyl ester" appeared to be inventive.

However, in the absence of an appropriate auxiliary request, the patent in suit could not be maintained having regard to the obvious use of the phthalic acid/glycol UP-resins.

- IV. In the Statement of Appeal against the said decision, the Appellant merely denied that the UP-resins according to present Claim 1 would have been known to have in combination low volatility, low toxicity, low flammability and low shrinkage and considered that the decision to revoke the patent-in-suit was therefore based on an unfounded assumption. As regards the claimed use of the specified vinyl ester resins, the Appellant took the view that for reasons already contained in the file these resins should be considered patentable.

The Appellant also alleged procedural violations on the part of the Opposition Division firstly in that, having previously acknowledged the patentability of Claim 1 insofar as it related to vinyl ester resins, it was then decided to revoke the patent. Secondly the Appellant argued that, as noted above, the decision to revoke was based on an unfounded assumption relating to the properties of the UP-resins.

- V. In reply, the Respondent repeated the arguments in relation to the obvious use of UP-resins. The Respondent also repeated the statement made during the opposition procedure (letter dated 3 March 1988) that no objection would be raised to a patent restricted to a polymer concrete composition comprising a vinyl ester resin specified in Claim 1 as granted.

- VI. In response to the request of the Appellant, the Board appointed oral proceedings to take place on

7 November 1991, accompanying the summons with a communication pursuant to Article 11(2) of the rules of procedure of the Boards of Appeal. The Rapporteur informed the parties that in the light of the available prior art the choice of well-known UP-resins derived from glycol and iso- or orthophthalic acid would belong to the routine activity of the person skilled in the art. As regards the use of a vinyl ester resin as defined in present Claim 1, the Rapporteur indicated that there appeared to be no reason to question the Opposition Division's view concerning the inventive step associated with such a composition.

VII. In a telefax letter received by the Board on 5 November 1991, the Appellant indicated willingness to restrict to the embodiment relating to vinyl ester resins and accordingly did not intend to be represented at the proposed oral proceedings. Appropriately restricted claims were also filed.

The Respondent, in a telefax letter dated 5 November 1991 expressed satisfaction with the amended request of the Appellant and indicated that oral proceedings no longer seemed to be necessary. The oral proceedings were then cancelled.

VIII. The Appellant now requests that the patent in suit be maintained on the basis of Claims 1 to 3 filed on 5 November 1991. Having regard to point V. above the Respondent's request is, in effect, the same. The said Claim 1 reads as follows:

"1. A polymer concrete composition comprising a curable unsaturated ester resin, and an aggregate comprising fly ash and sand, characterized in that the composition comprises (1) from 3% to 15% by weight of a composition

comprising a vinyl ester resin and a free-radical initiator, said composition having a curing time of at least 1 hour at ambient temperature, said vinyl ester resin being selected from resins prepared by reacting an ethylenically unsaturated monocarboxylic acid with a glycidylpolyether of a polyhydric phenol having an epoxy equivalency greater than 1.0 (2) from 85% to 97% by weight of an aggregate composition containing 5% to 50% by weight of fly ash based on the aggregate composition, at least part of the balance being sand."

- IX. In a letter dated 29 November 1991, the Respondent indicated his explicit approval of the amended text with a comment that the use of the expression "vinyl ester resin" in Claim 2 was incorrect.

Reasons for the decision

1. The appeal is admissible.
2. The amended Claim 1 corresponds to Claim 1 as granted except that all references to the UP-resin based on glycol/iso- or orthophthalic acid have now been deleted. Dependent Claims 2 and 3 are based on Claims 2 and 3 as granted. The requirements of Articles 123(2) and 123(3) are accordingly satisfied.
3. Since the Appellant has now restricted the scope of the patent in suit to what corresponded to the auxiliary request originally submitted with the grounds of appeal and the Respondent has confirmed that he has no objection to the maintenance of the patent on this basis, the requests of the two parties are in the circumstances concurrent. In accordance with Article 102(3) EPC, the Board has examined if the patent and its subject-matter in

the amended form now proposed satisfies the requirements of the European Patent Convention. The Board has no reason to differ from the view expressed by the Opposition Division both in a communication dated 11 January 1989 and in the contested decision that the prior art cited during the opposition procedure does not prejudice the maintenance of the patent in the manner now proposed.

4. The Appellant has alleged procedural violations by the Opposition Division and has requested a refund of the appeal fee.

4.1 On the first point, as indicated in the communication from the Rapporteur dated 22 August 1991, the Board is satisfied that no procedural violation took place. The Opposition Division acknowledged the patentability of the embodiment relating to vinyl ester resin in the communication dated 11 January 1989 (final paragraph). However, in accordance with the letter dated 3 March 1989, the only auxiliary request on the part of the Appellant was "the mere cancelling of Example IX and the renumbering of Example X into IX". Accordingly, Claim 1 then on file retained the reference to the use of UP-resins, which embodiment the Opposition Division considered to lack inventive step. Since there was only one main claim to be considered and the said claim contained a reference to subject-matter deemed to be unpatentable, the only course available to the Opposition Division was to revoke the patent.

4.2 The second point on which a procedural violation was alleged was that the decision was based on "non-documented technical evidence, i.e. mere assumptions". It must be admitted that the Opposition Division's decision to revoke the patent was to some extent based on a reference to Saechling's "International Plastics Handbook" which was

referred to in the communication dated 11 January 1989. The intention of the Opposition Division can only be construed as to illustrate "by way of an expert's opinion" that the properties of the UP-resins, which then featured in Claim 1, would have been well known at the priority date of the patent in suit. As is apparent from the reference to "Encyclopedia of polymer science and technology" in the Rapporteur's communication dated 22 August 1991, the properties of UP-resins specified in Claim 1 as granted were already known in 1969. Accordingly, the Opposition Division's contention that the properties of the said resins would have formed part of the common general knowledge of the skilled man at the priority date cannot be dismissed as "mere assumption".

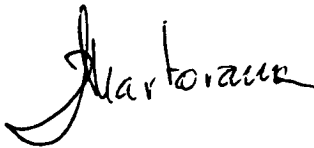
- 4.3 Since, in the judgment of the Board, there was no procedural violation on the part of the Opposition Division, there can be no question of refunding the appeal fee.
5. The Board notes the Respondent's comment that the expression "vinyl ester resin" used in Claim 2 is incorrect and observes that a corresponding objection has not been raised in respect of Claim 1. Although perhaps not chemically exact, the term "vinyl ester resin" has acquired a specific meaning in the epoxy resin art. Especially when read in conjunction with Claim 1, there can be no doubt about the meaning of the expression. The requirements of Article 84 EPC can accordingly be regarded as satisfied.

Order

For these reasons, it is decided that:

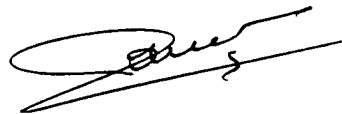
1. The decision of the Opposition Division is set aside.
2. The case is remitted to the department of the first instance with the order that European patent No. 0 060 373 be maintained on the basis of Claims 1 to 3 filed on 5 November 1991 and adapted description filed on 11 November 1991.

The Registrar:



P. Martorana

The Chairman:



P.A.M. Lançon

Schmitt 18.11.91


17.12.91