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Anmeldenummer / Filing No / N° de la demande : 80 302 108.8

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Bezeichnung der Erfindung: Foam extrusion apparatus and method
Title of invention:
Titre de l'invention :

Klassifikation / Classification / Classement : B 29 D 27/00

ENTSCHEIDUNG / DECISION
vom / of / du 29 January 1987

Anmelder / Applicant / Demandeur : CONDEC CORPORATION

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPO / EPC / CBE Articles 84, 123(2)

Kennwort / Keyword / Mot clé : "Clarity of the claims"
"Amendments of the application as filed"

Leitsatz / Headnote / Sommaire

Europäisches
Patentamt
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European Patent
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Boards of Appeal

Office européen
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Chambres de recours



Case Number : T 165/84

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 29 January 1987

Appellant : CONDEC CORPORATION
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Decision under appeal : Decision of Examining Division 093
of the European Patent Office
dated 29 March 1984 refusing European
patent application No. 80 302 108.8
pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : C. Maus
Member : H. Seidenschwarz
Member : E. Persson

Summary of Facts and Submissions

I. European patent application No. 80 302 108.8, filed on 23 June 1980, published under publication number 0 028 441 and claiming the priority of a previous application of 5 November 1979, was refused by the decision of the Examining Division 093 dated 29 March 1984.

The decision was based on Claims 1 to 7 received on 19 July 1982 and on the independent Claim 8 received on 10 March 1983.

II. In its decision, the Examining Division held that a person skilled in the art could arrive at the foam extrusion system according to Claim 8 merely by normal considerations. The subject-matter of this claim did, therefore, not involve an inventive step.

III. On 1 June 1984, the Appellant lodged an appeal against the decision, paying the fee for appeal simultaneously and requesting that the decision under appeal should be cancelled in its entirety. The Statement of Grounds was also submitted on 1 June 1984.

IV. In a communication dated 8 January 1985 the Rapporteur informed the Appellant of his preliminary opinion that the subject-matter of Claim 8 was not obvious for a person skilled in the art. He held, however, that the claim lacked clarity as is stipulated in Article 84 EPC. For delimiting the scope of protection for the invention it would be necessary that the claim comprised also provisions concerning the limitations of the variations in vacuum and, dependent therefrom, the allowable greatest change of depth of the water in the pool. According to the

findings of the Rapporteur there was no statement in the description which would overcome the aforesaid defect. The same reasons were also valid for the present Claim 1.

- V. In response to this communication the Appellant submitted new Claims 1A and 8A, received on 8 May 1985 which read as follows:

"1A. A large-scale vacuum foam extrusion system having a barometric leg through which the extrudate passes in use, from a first, higher elevation to a second elevation herein called a lower elevation which is from 3 to 15 metres below the higher elevation, the leg entering a pool of water at the lower elevation, the pool of water (39) being of greater volume than the barometric leg (26), characterised firstly in that the pool has a depth not substantially greater than that needed to ensure that the outlet opening of the leg is beneath water level when the leg is under normal working vacuum, secondly in that the pool has a surface area sufficiently large to minimise the change in pressure head on the extrudate when the barometric leg (26) is under variations in vacuum that would be conventionally employed in making extruded foam products, and thirdly in that a generally wedge-shaped hood or shroud (44) is disposed at the lower end of the barometric leg (26), is partially submerged in the water, has a lower edge which is substantially parallel to the water surface and has a vertically narrow horizontally-extending opening (130) to permit passage of the extrudate at its end opposite the leg (26)."

"8A. A large-scale vacuum foam extrusion system having a barometric leg of a length from 20 to 70 metres through which the extrudate passes, in use, from a first, higher elevation to a second elevation herein called a lower elevation which is from 3 to 15 metres below the higher

elevation, the leg entering a pool of water at the lower elevation, the pool of water (39) being of greater volume than the barometric leg (26), characterised in that the depth of the pool of water (39) is sufficiently small that is to say of the order of one metre and its surface area is sufficiently large that is to say having an area not less than the floor area employed for processing the extruded product in a conventional manner, the said depth and area being chosen to ensure firstly that the outlet opening of the leg (26) is beneath water level when the leg is under normal working vacuum, and secondly that the changes in pressure head on the extrudate due to variations in vacuum are minimised, the said depth and area being so related that the hydrostatic pressure on the product exiting the barometric leg is not sufficient to crush or reduce the cell construction being formed under the condition of the maximum vacuum which is employed to produce a product of the lowest practical foam density."

Subsidiarily he requested oral proceedings.

VI. In the oral proceedings which were held on 29 January 1987 the Appellant requested that a patent should be granted on the basis of the above Claims 1A and 8A and Claims 2 to 7 received on 19 July 1982.

He admitted that Claims 1 and 8, received on 19 July 1982 and 10 March 1983 respectively, did not meet Article 84 EPC. The present text of Claims 1A and 8A would overcome this shortcoming. Referring to the question of the Board as to whether any feature inserted additionally in the claims was supported by the application as filed the Appellant was of the opinion that those features which are not disclosed explicitly could be derived from the whole content of the disclosure. The limitations for the

pressure head (Claim 8A) and the variations in vacuum (Claim 1A) could be derived from the statements concerning crushing the cell construction in the product being formed.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. In view of the objection of the Board that Claims 1 and 8 underlying the decision lacked clarity the Appellant inserted several new features in these claims. The examination as to whether these features are disclosed in the application as filed produces the following result:

2.1 Claim 1A

In comparison with former Claim 1 this claim comprises apart from new features which are disclosed explicitly and which require, therefore, no further discussion, the following features.

- (a) The pool has a depth not substantially greater than that needed to ensure that the outlet opening of the leg is beneath the water level when the leg is under normal working vacuum.
- (b) The variations in vacuum are such which would be conventionally employed in making extruded foam products.

It may be so that feature (a) is comprised implicitly by the passages cited by the Appellant as far as that is concerned. The second feature is, however, not supported by the documents as filed.

Concerning the disclosure of this feature the Appellant referred to page 2, lines 20 to 24 and page 3, lines 24 and 25 of the description. It is correct that variations in vacuum are mentioned on page 3, lines 24 and 25. However, any indication is lacking from which the skilled person could derive that the limitations of the variations are such which would be conventionally employed, i.e. the greatest and lowest vacuum employed in making extruded foam products.

The subject-matter of Claim 1A extends, therefore, beyond the content of the application as filed.

2.2 Claim 8A

The examination of the new features mentioned in the claim in comparison with the text underlying the decision under appeal produces the result that the claim comprises the following new features which are not disclosed explicitly in the application as filed:

- (a) The surface of the pool has an area not less than the floor area employed for processing the extruded product in a conventional manner.
- (b) The depth and the area of the pool being so related that the hydrostatic pressure of the product exiting the barometric leg is not sufficient to crush or reduce the cell construction being formed under the condition of the maximum vacuum which is employed to produce a product of the lowest practical foam density.

Even if one agrees with the Appellant that the first feature is supported by the application as filed, this would not be sufficient to accept that the claim fulfils Article 123(2) EPC since, in the Board's view, feature (b) is not disclosed in the original documents.

In support of his opposite opinion the Appellant referred to page 2, lines 10 to 15 and page 13, lines 6 to 8, 20 and 25 to 35 and page 16, lines 16 to 21 of the description. The skilled person could, however, not derive from these parts of the description the limitation of the hydraulic pressure mentioned in the feature. From these citations he could learn only that it is important to minimise the pressure head in order to prevent crushing or reducing the cell construction and, further, that with a large area shallow pool it would be possible to minimise changes in the pressure head when the vacuum changes. However, no limitation of the vacuum which is employed and of the density of the product which should be produced follows simply from these statements.

Hence, neither present Claim 8A is supported by the content of the application as filed.

Under these circumstances it is not necessary to decide whether it is justified in the present case to define features of the subject-matter of the claim by the result to be achieved.

- 2.3 If the above-mentioned features are deleted in Claims 1A and 8A the text of such claims would lack clarity because it would not comprise provisions concerning the limitations of the variations in vacuum and the corresponding allowable greatest change of the depth of the water in the pool. One could, therefore, not learn from the claims the exact distinctions which delimit the

scope of protection. No possibility to overcome this defect exists as the documents as filed do not comprise any statement referring thereto.

Consequently, despite the fact that in the Board's view the idea underlying the subject-matter of Claim 8A was not obvious no possibility exists for wording an allowable text of Claims 1A and 8A.

3. The rest of the set of claims comprises only claims depending on Claim 1A. As this claim is not allowable any basis for the allowability of the dependent Claims 2 to 7 is lacking.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar

The Chairman

B A Norman

C Maus