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**D E C I S I O N**  
**of 8 February 2001**

**Case Number:** T 0322/98 - 3.2.5

**Application Number:** 88311260.9

**Publication Number:** 0321117

**IPC:** B29C 45/17

**Language of the proceedings:** EN

**Title of invention:**

Method and system for localized fluid-assisted injection  
molding and body formed thereby

**Patentee:**

Melea Limited

**Opponents:**

Battenfeld GmbH  
Cinpres Limited

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 100(c), 123(2), (3)

**Keyword:**

"Extension beyond the content of the application as filed  
(no)"  
"Extension of the protection conferred (no)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0322/98 - 3.2.5

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.5  
of 8 February 2001

**Appellant:** Melea Limited  
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**Representative:** Rehders, Jochen  
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**Respondent I:** Battenfeld GmbH  
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**Representative:** Gosdin, Michael, Dr.  
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**Respondent II:** Cinpres Limited  
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**Representative:** Bayliss, Geoffrey Cyril  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 29 January 1998  
revoking European patent No. 0 321 117 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** A. Burkhart

**Members:** P. E. Michel  
G. Weiss

## Summary of Facts and Submissions

- I. The appellant (proprietor of the patent) lodged an appeal against the decision of the Opposition Division revoking the patent No. 0 321 117.

Opposition was filed by two opponents and based on Article 100(a) EPC (lack of novelty and inventive step). During the opposition proceedings also the ground for opposition according to Article 100(c) EPC (extension beyond the content of the application as filed) was raised.

The Opposition Division held that the grounds for opposition according to Article 100(c) EPC prejudiced the maintenance of the patent.

- II. Oral proceedings before the Board of Appeal were held on 8 February 2001.

- (i) After hearing the parties on the question of whether or not the application as filed disclosed "two concepts of the invention" as defined in points 2.1 and 2.2 of the decision under appeal, the Board concluded that there was no clear and unambiguous basis in the originally filed application documents for a so-called second concept of the invention differing from the invention defined in the originally filed claims 1 and 2 in that a spillover reservoir is used alone without an overflow reservoir as defined in the originally filed claims 1 and 2.

Thereupon, the appellant withdrew its requests for amended claims which covered two independent concepts of the invention as defined in points 2.1. and 2.2 of the decision under appeal.

- (ii) The appellant requested that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution on the basis of claims 1 to 12 presented during the oral proceedings.
- (iii) The respondents requested that the appeal be dismissed and that the patent be revoked.
- (iv) The independent claims 1 and 3 read as follows:

"1. A method for making a hollow-shaped body from a plastic resin in a gas-assisted injection molding system including a mold having an injection aperture and a body forming cavity, the method comprising: injecting an amount of molten resin sufficient for the preparation of the body from an injection nozzle through the injection aperture, along a resin flow path and into the cavity in the mold; injecting gas into the molten resin through at least one aperture to distribute the resin at least partially over interior surfaces defining the cavity, whereby the body is formed within the cavity; cooling the body so formed to a temperature beneath the softening point of the resin; relieving the pressure within the body; and opening the mold to remove the body, characterized by:

causing a portion of the molten resin to flow from the cavity into a resin overflow reservoir in the mold during injection of the resin into the cavity so that the resin at least partially fills the resin overflow reservoir; said method including the step of introducing the pressurized gas into the molten resin through the at least one aperture in the resin overflow reservoir communicating the gas aperture and the mold cavity."

"3. An injection molding apparatus (10) for making a hollow-shaped body (120, 124) from a plastic resin, the apparatus (10) including a mold (28; 68; 70), a source of pressurized gas (24) and an injection molding machine (12) having a nozzle (14) for injecting an amount of molten resin sufficient for the preparation of the body into the mold through a resin injection aperture along a resin flow path (60, 62, 64) and into a cavity (66; 114) in the mold (28; 68, 70), gas injection means (117) for locally injecting gas into the molten resin through at least one gas aperture (118) to distribute the resin at least partially over the interior surfaces defining the cavity (66; 114) characterized by the mold (28; 68, 70) having a resin overflow reservoir (112) in the mold (28; 68, 70) in communication with the cavity (66; 114) to receive the plastic resin from the cavity (66; 114) which flows from the cavity during the injection of resin into the cavity (66; 114), said gas aperture (118), within the

resin overflow reservoir (112) being located remote from the injection aperture and wherein the resin overflow reservoir (112) communicates the gas aperture (118) and the mold cavity (66; 114)."

- (v) With respect to the claims 1 to 12 now on file, the appellant argued essentially as follows:

The subject-matter of claims 1 and 3 was based on the originally filed claims 1 and 2, the originally filed Figures 1 and 3 and the corresponding parts of the originally filed description, cf. column 5, lines 29 to 43 of the A2-publication.

The feature of claim 1

"causing a portion of the molten resin to flow from the cavity into a resin overflow reservoir in the mold during injection of the resin into the cavity so that the resin at least partially fills the resin overflow reservoir"

could be derived from the originally filed description, cf. column 2, lines 28 to 33 and column 5, lines 38 to 42 of the A2-publication, and from originally filed claim 1, cf. lines 9 to 13 of the A2-publication. Since the flow of a portion of the molten resin from the cavity into the resin overflow reservoir did not occur passively but was caused by the injection pressure at the injection nozzle into the mold cavity and therefrom into the resin overflow reservoir, the expression "causing a portion of



the molten resin to flow..." did not extend the content of the application as filed.

The subject-matter of claims 2 and 4 was based on the originally filed claim 9 in connection with the originally filed Figures 7 to 11 and the corresponding parts of the originally description, cf. column 6, lines 3 to 45 of the A2-publication.

The subject-matter of claims 5 to 12 was based on the originally filed claims 3 to 8 and 10 to 12.

The scope of the independent claims 1 and 3 was restricted with respect to the scope of the independent claims 1 and 3 as granted.

Consequently, the claims 1 to 12 did not contravene Article 123(2) and (3) EPC.

(vi) With respect to the claims 1 to 12 now on file the respondents argued essentially as follows:

The feature of claim 1

"causing a portion of the molten resin to flow from the cavity into a resin overflow reservoir in the mold during injection of the resin into the cavity so that the resin at least partially fills the resin overflow reservoir"

involved the positive step of causing a portion of the resin to at least partially fill the resin overflow reservoir, this step being

performed as an additional step during the step of injecting the resin into the cavity.

The disclosure in the application as filed was no more than

"the mold has a resin reservoir in communication with the cavity to receive the plastic resin" (claim 2) and

"the resin at least partially fills the reservoir (claim 1 and column 2, line 33 of the A2-publication) during the step of injecting an amount of molten resin sufficient for the preparation of the body."

There was no disclosure of positively causing the resin to flow.

The same considerations applied to the feature of claim 2

"causing a portion of the molten resin to flow from the cavity into a resin spillover reservoir in the mold during injection of the pressurised gas into the cavity so that the resin at least partially fills the resin spillover reservoir".

Therefore, the method of claims 1 and 2 extended beyond the content of the application as filed, contrary to Article 123(2) EPC.

## Reasons for the Decision

### 1. *Amendments*

1.1 The amended claim 1 differs from claim 1 as granted essentially in that

- the expression "or pressurised fluid into the cavity" is deleted,
- the expression "via the reservoir or" is replaced by the expression "through the at least one aperture in the resin overflow reservoir communicating the gas aperture and the mold cavity", and
- the "pressurised fluid" is now specified as "pressurised gas".

These amendments are based on the following locations of the originally filed application documents (see A2-publication):

Claim 1; Figures 1 and 3 and corresponding parts of the description, cf. column 5, lines 29 to 42.

The feature of claim 1

"causing a portion of the molten resin to flow from the cavity into a resin overflow reservoir in the mold during injection of the resin into the cavity so that the resin at least partially fills the resin overflow reservoir"

was already contained in claim 1 as granted.

This amendment made during the examining proceedings does not extend beyond the content of the application as filed, for the following reasons:

It is true that the originally filed application documents do not *expressis verbis* mention the term "causing a portion of the molten resin to flow...". However, the person skilled in the art reading the originally filed claims 1 and 2 as a whole in connection with the description of the embodiments of Figures 1 and 3 learns that the wording of the originally filed claim 1 "wherein the resin at least partially fills the reservoir" (see column 8, lines 12 and 13 of A2-publication) and the wording of the originally filed claim 2 "a reservoir in communication with a cavity to receive the plastic resin (see column 8, lines 37 and 38 of the A2-publication) do not mean that the flow of a portion of the molten resin from the cavity into the resin overflow reservoir occurs passively but is positively caused by the injection pressure exerted at the injection nozzle which "effects" or "causes" the filling of the overflow reservoir via the mold cavity.

Moreover, the originally filed application documents do not disclose any means other than the injection pressure for filling the overflow reservoir during injection of the resin into the cavity.

Therefore, the method of claim 1 does not contain subject-matter which extends beyond the content of the application as filed.

- 1.2 The amended dependent claim 2 is based on originally filed claims 9, 13 and 18, and on the originally filed

description, column 6, lines 3 to 45 (of the A2-publication).

Although the term "causing a portion of the molten resin to flow..." is not *expressis verbis* mentioned in the originally filed application documents, this term does not extend beyond the content of the application as filed. It is clear from the original description of Figures 7 to 11 that the flow of a portion of the molten resin from the cavity into the resin spillover reservoir 88 does not occur passively but is positively caused by the gas pressure exerted at the gas aperture 73 which "effects" or "causes" a portion of the resin to flow away from the gas aperture 73 via the cavity into the spillover reservoir 88 during injection of the gas.

Therefore, the method of claim 2 does not contain subject-matter which extends beyond the content of the application as filed.

1.3 The independent claim 3 differs from the independent claim 3 as granted essentially in that

- the expression "or during introduction of pressurised fluid into the cavity through an aperture remote from the interior surface of the resin reservoir" is replaced by the expression "said gas aperture (118) within the resin overflow reservoir (112) being located remote from the injection aperture and wherein the resin overflow reservoir (112) communicates the gas aperture (118) and the mold cavity (66, 114)", and
- the "fluid injection means" are now specified as

"gas injection means".

These amendments are based on the following locations of the originally filed application documents (see A2-publication):

Claim 2; Figures 1 and 3 and corresponding parts of the description, cf. column 5, lines 29 to 42.

Therefore, the apparatus of claim 3 does not contain subject-matter which extends beyond the content of the application as filed.

- 1.4 The amended dependent claim 4 is based on the originally filed claims 9, 13, and 18, and on the originally filed Figures 7 to 11 and the corresponding parts of the originally filed description (see column 6, lines 3 to 45 of the A2-publication).

The dependent claims 5 to 12 are based on the originally filed dependent claims 3 to 8 and 10 to 12.

Therefore, the subject-matter of claims 4 to 12 does not extend beyond the content of the application as filed.

- 1.5 With respect to the independent claims 1 and 3 of the patent as granted, the amended independent claims 1 and 3 are now restricted to only one embodiment of the invention, wherein a resin overflow reservoir 112 is present for receiving plastic resin during the injection of the resin into the cavity.

With respect to the granted claims 1 and 3, which contained two independent embodiments of the invention

using either a resin overflow reservoir 112 or a spillover reservoir 88, the scope of protection has now been restricted by establishing two dependent claims 2 and 4 referring to the further embodiment of the invention, wherein a spillover reservoir 88 for producing an endless hollow body portion is present in addition to the resin overflow reservoir 112.

The amended claims 1 to 4, therefore, do not extend the protection conferred.

- 1.6 Claims 1 to 12, presented during the oral proceedings of 8 February 2001, therefore, do not contravene Article 123(2) and (3) EPC.

2. *Remittal to the first instance*

The Opposition Division gave its decision solely upon the ground of opposition according to Article 100(c) EPC (extension of the subject-matter of the patent beyond the content of the application as filed) and, expressly left open the question of whether or not the subject-matter of the patent in suit is new and involves an inventive step (Article 100(a) EPC).

Therefore, in accordance with the established case law of the Boards of Appeal (cf. Paterson, "The European Patent System", London 1992, page 90, No. 2-83), the Board exercises its discretion under Article 111(1) EPC to remit the case to the first instance for consideration of the undecided issues of novelty and of inventive step.

**Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for further prosecution on the basis of claims 1 to 12 presented during the oral proceedings of 8 February 2001.

The Registrar:

The Chairman:

M. Dainese

A. Burkhart