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D E C I S I O N
of 11 May 2005

Case Number: T 0013/03 - 3.2.5

Application Number: 97117409.9

Publication Number: 0835737

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Language of the proceedings: EN

Title of invention:

Injection stretch blow molding apparatus and method

Patentee:

NISSEI ASB MACHINE CO., LTD.

Opponent:

SIG Corpoplast GmbH/Kautex Maschinenbau GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56, 84, 123(2)

Keyword:

"Novelty, main request and second auxiliary request (no)"
"Extension beyond the content of the application as filed,
first and third auxiliary requests (yes)"
"Clarity, fourth auxiliary request (yes)"
"Inventive step, fourth auxiliary request (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0013/03 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 11 May 2005

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
17 October 2002 concerning maintenance of the
European patent No. 0835737 in amended form.

Composition of the Board:

Chairman: W. Moser
Members: W. Widmeier
W. R. Zellhuber

Summary of Facts and Submissions

- I. Co-appellants I (co-opponents) and appellant II (patent proprietor) lodged an appeal against the interlocutory decision of the Opposition Division maintaining European patent No. 0 835 737 in amended form.

The Opposition Division held that the grounds of opposition under Article 100(a) EPC (lack of novelty and lack of inventive step, Articles 54 and 56 EPC) and Article 100(c) EPC did not prejudice the maintenance of the patent in amended form.

- II. Oral proceedings before the Board of Appeal were held on 27 January 2005 and on 11 May 2005.

- III. Co-appellants I requested that the decision under appeal be set aside and that the European patent No. 0 835 737 be revoked in its entirety.

- IV. Appellant II requested that the decision under appeal be set aside and that the patent be maintained on the basis of the following documents:

(i) claims 1 to 22 as granted as main request; or

(ii) claims 1 and 16 according to either of the auxiliary requests 1 to 20 filed on 22 December 2004.

V. Claim 1 of the main request reads as follows:

"1. An injection stretch blow molding apparatus, comprising:

- an injection molding station (12) in which preforms (28) are injection molded in an upright state with neck portions thereof facing upward;
- a blow molding station (14) in which carrying members (36) supporting said preforms (28) are circularly carried and said preforms (28) are stretch blow molded into containers (38) in an inverted state;
- a transfer station (16), which is disposed between said injection molding station (12) and said blow molding station (14);

wherein said transfer station (16) includes:

- receiving means (54) for receiving said preforms (28) from said injection molding station (12) in the upright state;
- inverting and delivering means (58) for inverting said preforms (28) at least one at a time and for delivering said preforms (28) in the inverted state to said carrying members (36); and
- movement means (100, 56, 112; 141, 142) disposed between said receiving means (54) and said inverting and delivering means (58), and for moving said preforms (28) from said receiving means (54) to said inverting and delivering means (58) in the upright state,

characterized in that

- said transfer station (16) includes a buffer for said preforms (28),

- said buffer is a circulatory movement means, which comprises an endless moving member (106; 146) being driven in circulating manner, and
- a plurality of supporting members (110; 148) for carrying preforms are fixed at said endless moving member (106; 146)."

Claim 1 of the first auxiliary request is supplemented with respect to claim 1 of the main request at the end by the feature:

"and said endless moving member (106; 146) is a chain, which is passed around sprockets (104; 144) all having a given fixed distance to eachother".

Claim 1 of the second auxiliary request is supplemented with respect to claim 1 of the main request at the end by the feature:

"and said endless moving member (106; 146) is a chain, which is passed around sprockets (104; 144) along a constant carrying path".

Claim 1 of the third auxiliary request is supplemented with respect to claim 1 of the main request, among other features, also by the additional feature of claim 1 of the first auxiliary request.

Independent claims 1 and 16 of the fourth auxiliary request read as follows:

"1. An injection stretch blow molding apparatus, comprising:

- an injection molding station (12) in which preforms (28) are injection molded in an upright state with neck portions thereof facing upward;
- a blow molding station (14) in which carrying members (36) supporting said preforms (28) are circularly carried along a carrying path, along which are provided a heating section (42), a blow molding section (44) in which said preforms (28) are stretch blow molded into containers (38) in an inverted state, and a removal section (46) for removing said containers (38);
- a transfer station (16), which is disposed between said injection molding station (12) and said blow molding station (14);

wherein said transfer station (16) includes:

- receiving means (54) for receiving said preforms (28) from said injection molding station (12) in the upright state;
- inverting and delivering means (58) for inverting said preforms (28) at least one at a time and for delivering said preforms (28) in the inverted state to said carrying members (36); and
- movement means (100, 56, 112; 141, 142) disposed between said receiving means (54) and said inverting and delivering means (58), and for moving said preforms (28) from said receiving means (54) to said inverting and delivering means (58) in the upright state,

characterized in that

- said transfer station (16) includes a buffer for said preforms (28),

- said buffer is a circulatory movement means, which comprises an endless moving member (106; 146) being driven in circulating manner,
- a plurality of supporting members (110; 148) for carrying preforms are fixed at said endless moving member (106; 146), and
- said endless moving member (106; 146) is a chain, which is passed around sprockets (104; 144) along a constant carrying path."

"16. An injection stretch blow molding method, comprising:

an injection molding step in which preforms (28) are injection molded in an upright state with neck portions thereof facing upward in an injection molding station (12);

a blow molding step in which carrying members (36) supporting said preforms (28) are circularly carried in a blow molding station (14) along a carrying path, along which are provided a heating section (42), a blow molding section (44) in which said preforms are stretch blow molded into containers (38) in an inverted state, and a removal section (46) for removing said containers (38);

a transfer step for inverting said preforms (28) removed from said injection molding station (12) and for transferring said preforms (28) to said carrying members (36) of said blow molding station (14); and wherein said transfer step includes:

a receiving step in which said preforms (28) injection molded in said injection molding station (12) are received in said upright state by receiving means (54);

a movement step in which said preforms (28) delivered from said receiving means (54) are moved by movement

means (100, 56, 112; 141, 142) in said upright state;
and
an inverting and delivering step in which said preforms
(28) are inverted at least one at a time by inverting
and delivering means (58) and are delivered in said
inverted state to said carrying members (36),
characterized in that
in said transfer step said preforms (28) are moved to a
buffer, which comprises a circulatory movement means
having an endless moving member (106; 104);
said endless moving member (106; 146) is driven in
circulating manner and carries said preforms (28) by
means of a plurality of supporting members (110; 148),
which are fixed to said endless moving member (106;
146), and
said endless moving member (106; 146) is a chain, which
passes around sprockets (104; 144) along a constant
carrying path."

VI. The following documents were in particular referred to
in the appeal procedure:

D1: WO 96/08356

D4: Fraunhofer-Gesellschaft, Tätigkeitsbericht 1989,
pages 178 to 181

D5: Corpoplast FA, Automatisierungsbaustein für die
PET-Flaschenproduktion, Brochure of Krupp
Corpoplast Maschinenbau GmbH, 2 pages

D21: US-A-4 313 720

- D27: Chapter 4, Operation and Adjustment, PF8-4B,
Nissei ASB Machine Co., Ltd.
- D28: 9 photographs showing a transfer station of a
stretch blow moulding machine
- D29: ASB Machine Commissioning Approval and Inspection
Certificate
- D32: Zweiachsig ausgerichtete Streck-Blasmaschinen,
Bedienungsanleitung, PF8-4B, Nissei ASB Machine
Co., Ltd.
- D34: Affidavit of Mr Ewald Schulz, dated 23 May 2003
- D35: Affidavit of Mr Ewald Schulz, dated 24 February
2004
- D36: Various documents concerning a cutting device
produced by W. Müller KG and delivered to Huber
Verpackungen GmbH + Co.
- D37: Affidavit of Mr Andreas Hund, dated 3 July 2004
- D38: Affidavit of Mr Peter Paragnik, dated 3 July 2004
- D41a: EP-A-0 872 329
- P41: English translation of JP 8-250906 (earliest
priority document of document D41a, filed
2 September 1996)

VII. Co-appellants I argued essentially as follows:

Main request

Document D1 shows the features of the preamble of claim 1. Documents D4 and D5 show a buffer for preforms consisting of an endless moving chain which also serves as a transfer station for the preforms. The obvious result of the combination of documents D1 and D4 or D5 is the subject-matter of claim 1. Consequently, the subject-matter of claim 1 does not involve an inventive step.

First and third auxiliary requests

The additional feature in claim 1 that all sprockets have a given fixed distance to each other is not disclosed in the application as filed. The application as filed discloses only two sprockets without any indication that the distance of these two sprockets is fixed. Thus, the subject-matter of claim 1 is not in accordance with Article 123(2) EPC.

Second auxiliary request

Figures 16 and 21 of document D41a show all features of the subject-matter of claim 1. These figures are also shown in the earliest priority document in respect of the European patent application disclosed in document D41a so that this priority is valid and document D41a constitutes prior art according to Article 54(3) EPC. The presence or absence of a heating section at the carrying path in document D41a is irrelevant because claim 1 does not comprise a corresponding feature. Thus,

the subject-matter of claim 1 lacks novelty with respect to document D41a.

Fourth auxiliary request

Claim 1 defines a carrying path in its preamble and a carrying path in its characterising portion. It is not clear whether these definitions concern the same carrying path or different carrying paths. According to the description of the patent in suit, the preforms are not circularly carried along a heating section, a blow moulding section and a removal section. The preforms are transported only up to the blow moulding section. The corresponding definition in claim 1 is thus not clear. Furthermore, it is not clear whether the expression "constant" relates to a constant path of the carrying members or a constant path of the preforms, and it is not clear either where the path is constant. Claim 1 therefore does not meet the requirements of Article 84 EPC.

Document D27 shows all features of the subject-matter of claim 1. Documents D29, D34 and D36 to D38 prove that the apparatus shown in document D27 was used in public before the priority date of the patent in suit. The delivery of the PF8-4B machine from the manufacturer "Nissei ASB Machine Co.,Ltd." to the customer "Huber Verpackungen GmbH & Co.", which took place before the priority date of the patent in suit, and the installation of a cutting device at this machine by the supplier "W. Müller KG" were not confidential so that not only employees of the customer but also other persons who were not obliged to confidentiality had access to the machine. The English

version of the operating manual of the PF8-4B machine, i.e. document D27, was not confidential. The alleged prior use is therefore to be considered prior art within the meaning of Article 54(2) EPC.

The subject-matter of claim 1 also lacks novelty with respect to document D41a. Column 29, lines 28 to 36, of this document show that the stand-by section 426, which is shown in Figure 16, is a heating station. Having regard to column 23, lines 27 to 34, of this document, it is clear that moderating the temperature of the preforms means that the preforms are heated, because the difference in temperature between the inside and the outside of the preforms can only be reduced by heating the outside rather than by cooling the inside. The latter is impossible.

Document D1 discloses all steps specified in the preamble of independent claim 16 (cf. Figures 1, 2, 4 and 21 and the corresponding passages in the description). Documents D4 and D5 show all method steps specified in the characterising portion of claim 16. The left part of the transport path of the preforms shown in Figure 2 of document D4 is a constant carrying path. Moreover, the length of the entire carrying path is constant because the chain has a fixed length. Anyway, claim 16 does not exclude that the carrying path comprises variable sections. Thus, the obvious combination of documents D1 and D4 or D5 results in the method of claim 16. The subject-matter of this claim therefore does not involve an inventive step.

VIII. Appellant II argued essentially as follows:

Main request

Document D1 relates to a single-stage apparatus and does not show a transfer station for preforms including a circulatory movement means with an endless moving member. Documents D4 and D5 relate to a two-stage apparatus in which the preforms are stored in a buffer to compensate for differences in the capacities of the injection moulding station and the blow moulding station, and in which the preforms are cooled down after the injection moulding step. The preforms are then heated again before the blow moulding step. A person skilled in the art would not combine features of a single-stage apparatus with features of a two-stage apparatus. Consequently, the subject-matter of claim 1 involves an inventive step.

First and third auxiliary requests

The embodiments shown in Figures 4 and 8 of the application as filed show that the two sprockets have a given fixed distance. The application as filed further supports in column 9, lines 3 to 6, and column 13, lines 34 to 37, that the number of sprockets is not limited to two. Thus, the subject-matter of claim 1 does not extend beyond the content of the application as filed.

Second auxiliary request

Document D41a is entitled to the earliest priority of 2 September 1996. However, the chain conveyor 2210 of

document 41a passes through a heater. Thus, the buffer of document 41a is not comparable with the buffer of the apparatus of claim 1. This claim has to be read in combination with the description of the patent in suit which shows that the heating section is located downstream of the buffer. Consequently, the subject-matter of claim 1 is novel with respect to document D41a.

Fourth auxiliary request

It is clear from claim 1 that there is a carrying path in the blow moulding station and a carrying path in the buffer of the transfer station. It is also clear that the carrying members are circularly moved within the various sections of the blow moulding station and what is meant by the constant carrying path. Claim 1 is therefore in accordance with Article 84 EPC.

The machine PF8-4B delivered by "Nissei" to "Huber Verpackungen" was part of a new common project of these two companies. In order to be able to produce wide-neck bottles with this machine, a cutting device was necessary which was developed by "W. Müller". As is usual in connection with such new projects, a confidentiality agreement existed which involved not only the employees of "Huber Verpackungen" but also the employees of "W. Müller". At the priority date of the patent in suit, this common project was still under way. It was finished only in December 1996. Consequently, whilst the machine has already been delivered to "Huber Verpackungen" in August 1996, it was not accessible to the public before the priority date of the patent in suit. Also the operation manual of the machine was

confidential as shown by document D32. The alleged prior use therefore does not constitute prior art within the meaning of Article 54(2) EPC.

The blow moulding section of the apparatus shown in document D41a does not have a heating section. The heating section is located upstream of the blow moulding station and designated in Figure 16 with the reference sign 2200. Moderating the temperature in the preforms means cooling the preforms. Thus, the subject-matter of claim 1 is novel with respect to document D41a.

Document D1 does not show a buffer for the preforms and documents D4 and D5 do not show a buffer with a constant carrying path. The buffer of documents D4 and D5 is flexible in order to compensate for changes in the amount of preforms delivered from the injection moulding station. As explained with respect to the previous requests, a combination of documents D1 and D4 or D5 is not obvious so that the apparatus of claim 1 and the method of claim 16 involve an inventive step.

Reasons for the Decision

1. *Procedural matter*

Since, during oral proceedings held on 27 January 2005, the status of document D41a could not definitely be assessed without infringing the right to be heard (Article 113(1) EPC) of appellant II, novelty of the subject-matter of claim 1 according to the main request with respect to document D41a was not discussed at that

time. The reason for this was that document D41a, which was introduced by the Board into the proceedings in accordance with Article 114(1) EPC, claims three priorities, only the earliest of which could give this document the status of prior art according to Article 54(3) EPC, and that, as a consequence, appellant II should be given the opportunity to examine the document in this respect. However, the Board decided on 27 January 2005 that, irrespective of whether or not document D41a had to be considered, the subject-matter of claim 1 according to the main request did not involve an inventive step. Furthermore, the Board decided during oral proceedings on 27 January 2005 that the subject-matter of claim 1 according to the first and third auxiliary requests extended beyond the content of the application as filed (cf. Reasons below). During oral proceedings held on 11 May 2005, the discussion started therefore with the status of document D41a and with novelty of the subject-matter of claim 1 according to the second auxiliary request with respect to that document, with the result that the subject-matter of claim 1 according to the second auxiliary request was considered by the Board to lack novelty with respect to document D41a (cf. Reasons below).

Claim 1 according to the main request and claim 1 according to the second auxiliary request differ from each other by added features in claim 1 according to the second auxiliary request. Thus, a lack of novelty of the subject-matter of claim 1 according to the second auxiliary request inevitably implies a lack of novelty of the subject-matter of claim 1 according to the main request. It is therefore not necessary to

refer in the reasons of this decision to the discussion of inventive step of the subject-matter of claim 1 of the main request.

2. *Status of document D41a*

The passages of document D41a which are relevant for assessing novelty of the subject-matter of claim 1 of the main, second and fourth auxiliary requests are Figures 16 to 21 and the corresponding passages of the description from column 30, line 40, to column 33, line 34. These figures correspond to Figures 1, 3, 4, 6, 8 and 12 of document P41, and said passages in the description of document D41a are supported by the text from pages 47 to 85 of document P41. The Japanese priority of 2 September 1996, claimed in respect of document 41a, is thus to be considered valid, and document D41a therefore constitutes prior art according to Article 54(3) EPC for the contracting states DE, ES, FR, GB, and IT.

3. *Main request and second auxiliary request*

Document D41a discloses an injection blow moulding apparatus, comprising: an injection moulding station 22, in which preforms are injection moulded in an upright state with neck portions thereof facing upward; a blow moulding station 34, in which carrying members supporting said preforms are circularly carried and said preforms are stretch blow moulded into containers in an inverted state; a transfer station 2000 which is disposed between said injection moulding station and said blow moulding station; wherein said transfer station includes: receiving means 1001 for receiving

said preforms from said injection moulding station in the upright state; inverting and delivering means 2300 for inverting said preforms at least one at a time and for delivering said preforms in the inverted state to said carrying members; and movement means 1002, 1176 disposed between said receiving means and said inverting and delivering means, and for moving said preforms from said receiving means to said inverting and delivering means in the upright state, the transfer station including a buffer 2210 for said preforms, said buffer being a circulatory movement means, which comprises an endless moving member being driven in a circulating manner, a plurality of supporting members for carrying the preforms being fixed at said endless moving member, and said endless moving member being a chain which is passed around sprockets along a constant carrying path (cf. Figures 16 to 21 and description, column 30, line 40 to column 33, line 34).

Consequently, document D41a discloses all features of the subject-matter of claim 1 of the main request and of claim 1 of the second auxiliary request. The subject-matter of these claims thus lacks novelty within the meaning of Article 54(1), (3) and (4) EPC. The main request and the second auxiliary request are therefore not allowable. It thus is not necessary to discuss the amendments to claim 1 according to the second auxiliary request under formal aspects (Articles 84, 123(2) and (3) EPC, Rule 57a EPC).

4. *First and third auxiliary requests*

Claim 1 of the first and claim 1 of the third auxiliary request comprise the added feature "said endless moving member (106; 146) is a chain, which is passed around sprockets (104; 144) all having a given fixed distance to eachother".

Appellant II considers Figures 4 and 8 of the application as filed to show that the distance of the sprockets is fixed. The Board cannot share this opinion. These figures do not comprise constructive details from which a person skilled in the art would conclude that the distances between all sprockets in general, regardless of the number of sprockets, are fixed. The application as filed is silent about the distances between the sprockets. In the absence of any reference in the description as to the distances between the sprockets and the importance that these distances be fixed, such an interpretation of the drawings is to be rejected.

The Board concludes therefore that the amendment to claim 1 of the first and third auxiliary requests concerning fixed distances between all sprockets extends the subject-matter of these claims beyond the content of the application as filed so that the requirement of Article 123(2) EPC is not met.

5. *Fourth auxiliary request*

5.1 Formal requirements

5.1.1 Claim 1 of the fourth auxiliary request specifies, in addition to claim 1 of the main request, that along the carrying path, along which the preforms are circularly carried in the blow moulding station, are provided a heating section, a blow moulding section, and a removal section, and that in the transfer station the endless moving member is a chain, which is passed around sprockets along a constant carrying path. These additional features are disclosed in the application as filed in column 6, lines 20 to 34, and in Figures 2, 4, and 8, respectively. Although these figures do not show that the sprockets have a fixed distance (see above, point 4), they nevertheless show that the carrying path along which the preforms are carried must be constant when the machine is operated, in other words, when the preforms are carried along. Deviations from the way of the carrying path during operation would give rise to dysfunctions as regards matching down- and upstream parts, and would block or disturb the operation of the machine.

The subject-matter of claim 1 is therefore not extended beyond the content of the application as filed so that the requirement of Article 123(2) EPC is met.

5.1.2 Since the amendments to claim 1 according to the fourth auxiliary request consist of additional features with respect to claim 1 as granted the scope of protection of claim 1 according to the fourth auxiliary request is restricted with respect to claim 1 as granted.

Consequently, also the requirement of Article 123(3) EPC is met.

5.1.3 It is clear from the wording of claim 1 that the carrying path mentioned in the preamble of the claim is the path along which the carrying members for the preforms in the blow moulding station are moved, and that the carrying path mentioned in the characterising portion is the carrying path along which the endless chain of the buffer is moved. Thus, although using the same term twice, the two carrying paths can clearly be distinguished.

It is also clear from the wording of claim 1 that in the blow moulding station the carrying members for the preforms, and not the preforms, are circularly moved. The preforms, when blow moulded into containers, are removed.

It is also clear what is meant by a constant carrying path. This does not only mean a constant length but also a constant form of the path.

The Board is therefore satisfied that the amendments to claim 1 of the fourth auxiliary request do not give rise to a claim which contravenes Article 84 EPC.

5.1.4 The amendments to claim 1 are occasioned by grounds of opposition under Article 100(a) EPC and are therefore in accordance with Rule 57a EPC.

5.1.5 The above conclusions also apply to independent claim 16, because this claim specifies the method features which correspond to the apparatus features of claim 1.

5.2 Alleged prior use

The alleged prior use which, according to co-appellants I, has taken place before the priority date of the patent in suit concerns a blow-moulding machine "PF8-4B" manufactured by Nissei ASB Machine Co., Ltd., Japan. Technical details of this machine are shown in document D27, which is part (chapter 4) of the instruction manual of this machine. A publication date of the manual is not known. As shown by document D32 (cf. cover page), which is the German version of the introductory portion of this manual, the manual was not published and was confidential. It thus cannot be assumed without particular evidence that the English version of the instruction manual (document D27) was made available to the public before the priority date of the patent in suit. Document D27 thus does not constitute prior art according to Article 54(2) EPC.

Although, as admitted by appellant II, the machine was delivered to the customer "Huber Verpackungen" before the priority date of the patent in suit, co-appellants I were not able to prove that the public had access to the machine before this date. The commissioning approval and inspection certificate (document D29) of the delivered machine is dated 23 October 1996, i.e. after the priority date of the patent in suit. Furthermore, the machine was not intended for immediate use but had to be adapted to the needs of the customer

by a supplemental cutting device which was developed and produced by the third company "W. Müller KG". The affidavit of Mr Ewald Schulz (documents D34 and D35) shows that employees of "Huber Verpackungen" had access to the machine but were obliged to confidentiality. It is therefore to be assumed that the third party employees working at the machine had the same obligation. Document D36 cannot show the contrary; it refers to technical details of the development of the cutting device. The affidavits of Mr Andreas Hund and Mr Peter Paragnik (documents D37 and D38) state that there was no obligation to confidentiality. This contradicts document D35. Apart from that, it is unknown what these two persons could see and actually saw from the Nissei PF8-4B machine. Persons developing and constructing a supplementary device, intended to process the product of an independent upstream machine, need not necessarily have access to details of the upstream machine. As admitted by co-appellants I, document D28 consists of photos taken in 2003 and cannot therefore prove anything.

The Board has therefore come to the conclusion that it had not been shown up to the hilt that the persons working at the Nissei PF8-4B machine, including third company employees, were under no obligation of confidentiality and thus form the public within the meaning of Article 54(2) EPC, that persons not having been obliged to confidentiality had access to the Nissei PF8-4B machine, and whether such persons could have seen the relevant details of the machine.

The alleged prior use is therefore not to be considered prior art according to Article 54(2) EPC.

5.3 Novelty

Document D41a does not disclose that, along the carrying path of the blow moulding station, a heating section is provided. According to document D41a, the heating section 2200 is provided at the carrying path of the transfer station (cf. Figure 16, column 30, line 56 to column 31, line 2, and column 32, lines 51 and 52). The argument of co-appellants I that the reduction of the differences of temperature in the preforms in the stand-by section of the blow moulding station (cf. column 23, lines 27 to 34 and column 29, lines 28 to 36) is achieved by heating so that this stand-by section is a heating section, cannot be accepted. According to the description of the transfer station between the injection and blow moulding stations (cf. column 30, line 56 to column 33, line 10), the preforms are cooled after the injection moulding station in cooling station 2100 and heated again in heating station 2200. Should there still be a difference of temperature in the preforms downstream of this heating station, then this must be a difference from a higher temperature at the outside of the preforms to a lower temperature in the inside of the preforms because in heating station 2200 the preforms are heated from outside. Thus, if there is any influence of active means in the stand-by section on the temperature of the preforms, this must be a cooling means rather than a heating means. However, a skilled reader would interpret these passages as a passive cooling of the preforms with the stand-by time the preforms stay in the stand-by section.

The subject-matter of claim 1 of the fourth auxiliary request is thus novel with respect to document D41a. The same applies to claim 16 which also specifies that a heating section is provided in the blow moulding station.

5.4 Inventive step

5.4.1 According to Article 56 EPC, document D41a is to be disregarded when assessing inventive step of the subject-matter of claim 1.

5.4.2 The Board agrees with the parties that document D1 is to be considered the closest prior art and that this document shows the features of the preambles of claims 1 and 16.

The problem to be solved by the subject-matter of claims 1 and 16 is to further improve this prior art and to provide an injection stretch blow moulding apparatus and method which allows to produce containers of high quality even out of thick preforms (cf. paragraphs [0008] and [0009] of the patent in suit).

This problem is solved by providing a buffer for the preforms as specified in the characterising portions of claims 1 and 16. This buffer allows cooling of the preforms so that also the temperature of the inside of a thicker preform can be reduced sufficiently for further processing (cf. paragraph [0011] of the patent in suit).

5.4.3 Document D1 does not suggest such a buffer. It discloses a transfer station between the two moulding stations without any buffering function.

Documents D4 and D5 disclose a buffer for preforms intended to be arranged between an injection moulding station and a blow moulding station, which serves in one part for cooling of the preforms and in a second part for compensating for differences in the process speeds of the injection and blow moulding station (cf. in document D4 the chapters "Problemstellung", "Aufgabenstellung", and "Problemlösung"; and in document D5, page 2). The buffer is a circulatory moving endless chain which comprises carrying members for the preforms and is passed around sprockets (cf. in document D4 the chapter "Technische Beschreibung", and in document D5, page 2, the photo and the drawing). In order to compensate for varying process speeds at the input side and the output side of the buffer, some of the sprockets are mounted on a movable slide block to vary the ratio of the lengths of the downstream and upstream moving parts of the chain and thus to vary the amount of preforms stored in the buffer.

Differing from that, in the buffer of the apparatus of claim 1 and the method of claim 16, the amount of preforms which can be stored in the buffer remains constant because the chain is passed along a constant carrying path.

Document D1 mentions that the injection blow moulding apparatus "can also be applied to so-called cold parison molding wherein the preforms are returned to room temperature before being heated again and blow

molded" (cf. page 48, lines 22 to 26). In that case, it is obvious to combine documents D1 and D4 or D5 in order to improve the apparatus and method of document D1. However, the result of this combination would be to provide the flexible buffer shown in documents D4 or D5 between the injection and blow moulding stations according to document D1. Thus, this combination would not result in a buffer with a chain which is passed along a constant carrying path. A person skilled in the art would not be motivated to omit the variable part of the buffer shown in documents D4 and D5.

5.4.4 Document D21 discloses a transfer station for transferring preforms from a preform moulding station to a blow moulding station, comprising a storage station or buffer 10 (cf. column 2, line 57 to column 4, line 8 and Figure 1). The buffer is in the form of a shuttle mechanism comprising a plurality of rails. The endless chain 34 is not part of the buffer. This chain transports the preforms from the buffer through a heating station 36 to the blow moulding station. Thus, a combination of documents D1 and D21 would result in a buffer including rails as shown in document D21, rather than an endless chain as defined in claims 1 and 16.

5.4.5 It follows that neither a combination of document D1 with document D4 or D5 nor a combination of document D1 with document D21 leads to the subject-matter of claims 1 and 16.

Consequently, the apparatus according to claim 1 and the method according to claim 16 involve an inventive step (Article 56 EPC). The same applies to the subject-

matter of claims 2 to 15 and 17 to 22 which are dependent on claims 1 and 16, respectively.

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 with the order to maintain the patent on the basis of the following documents:
 - (a) claims 1 and 16 filed as fourth auxiliary request on 22 December 2004, and claims 2 to 15 and 17 to 22 as granted; and
 - (b) description: pages 2, 2a, 2b, 3 to 8 presented in the oral proceedings of 11 May 2005; and
 - (c) drawings, Figures 1 to 10 as granted.

The Registrar:

The Chairman:

M. Dainese

W. Moser