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Case Number: T 1158/04 - 3.3.05

Application Number: 98904447.4

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Language of the proceedings: EN

Title of invention:
Multiautoclave for combinatorial synthesis of zeolites and other materials

Patentee:
SINVENT A/S

Opponent:
Symyx Technologies, Inc.

Headword:
Multiautoclave/SINVENT

Relevant legal provisions:
EPC Art. 54

Keyword:
"Novelty: yes"
"Remittal to department of 1st instance"

Decisions cited:
-

Catchword:
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Case Number: T 1158/04 - 3.3.05

D E C I S I O N
of the Technical Board of Appeal 3.3.05
of 5 June 2007

Appellant: (Patent Proprietor)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 4 August 2004 revoking European Patent No. 0968050 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: M. Eberhard
Members: B. Czech
H. Preglau

Summary of Facts and Submissions

I. The appeal is from the decision of the opposition division to revoke European patent No. 0 968 050.

II. Independent claim 1 of the patent as granted reads as follows:

"*1. A multiautoclave reactor vessel for use at elevated pressures comprising:*

a central block (2) having a plurality of perforations (1), wherein said perforations are through-going perforations, a cover means (7a,7b) on both sides of said central block (2), operatively associated with a sealing means (3a, 3b, 4, 5), for engagement with said central block to seal the open ends of said perforations forming a multitude of chambers, a sealing means (3a, 3b, 4, 5), operatively associated with the covers means (7a,7b), to form a pressure tight seal when said cover means (7a, 7b) is brought into position by a locking means (11, 12), and
locking means (11,12) acting in concert with the cover means (7a, 7b) to engage the sealing means (3a, 3b, 4, 5) so as to define a plurality of reaction chambers."

III. In its notice of opposition, the opponent relied inter alia on the following prior art documents:

D1: US 5 342 581 A
D2: US 5 039 493 A
D6: US 5 282 543 A
D7: US 4 728 502 A
D8: US 5 593 642 A
D9: WO 98/07026 A1
D10: US 5 585 069 A

IV. The opposition division came to the conclusion that taking into account general knowledge as illustrated

e.g. by D6 the claimed subject-matter lacked novelty over the disclosure of document D1, since it was "impossible to recognise a difference between the broadly claimed multiautoclave according to claim 1 of the opposed patent and the multiwell plate according to Fig.10 of D1".

V. With its statement of grounds of appeal, the appellant (proprietor of the patent) filed 1st and 2nd auxiliary requests. Referring to dictionary extracts, the appellant argued that the subject-matter of claim 1 as granted was novel over D1 since D1 did "not teach a device which falls within the skilled man's interpretation, or even the dictionary definition, of the term "autoclave"". Concerning inventive step, the appellant considered that this issue should, on the basis of the fact that it has not been heard at first instance, be referred back to the opposition division.

VI. In its reply, the respondent (opponent) argued that the subject-matter of claim 1 as granted lacked novelty in view of the disclosures of each of documents D1, D2 and D6 to D10. Concerning the properties of polypropylene-based seals it referred to an excerpt from a Sigma catalogue already cited in the opposition proceedings. The respondent argued that the subject-matter of claim 1, even if it were to be considered novel, was not inventive in view of D1.

VII. On 1 May 2007, the appellant filed two further sets of amended claims as new 2nd auxiliary request and as 3rd auxiliary request. The 2nd auxiliary request previously on file was withdrawn.

VIII. Oral proceedings were held on 5 June 2007.

IX. The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or in the alternative, that the patent be maintained on the basis of the claims according to the first auxiliary request filed on 9 December 2004 or in the alternative, that the patent be maintained on the basis of the claims according to one of the second or third auxiliary requests filed on 1 May 2007.

The respondent requested that the appeal be dismissed.

X. The arguments of the parties concerning the appellant's main request can be summarised as follows:

At the oral proceedings, in comparing claim 1 and the prior art, the parties have expressed diverging views concerning the meaning to be given to the wording of claim 1, and in particular to the phrase "*to seal the open ends of said perforations*". More particularly, the appellant held that claim 1 only related to multiautoclave reactor vessels wherein the perforations were sealed at their ends such as to close the open ends, thereby forming reaction chambers. The appellant also held that in view of the wording of claim 1 itself, it was clear that the sealing means, the cover means and the locking means were different components of the multiautoclave. Nothing else was disclosed in the examples of the patent. In the respondent's view, the appellant was using the description to interpret the very broad claim 1 more narrowly. This was not permissible in view of e.g. decision T 0607/93 of

14 February 1996 (not published in the OJ EPO). More particularly, claim 1 also encompassed embodiments wherein some kind of seal was provided at or near the ends of the perforations, but wherein the ends of the perforations were not necessarily closed. In the understanding of the respondent, cover means could at the same time be sealing means or locking means, as e.g. in D6, and the bonding of cover means to a perforated block could also constitute sealing means and locking means, as e.g. in D9 and D10.

At the oral proceedings, without relying on documentary evidence, the appellant submitted that autoclaves were big bulky apparatuses for carrying out chemical reactions wherein high pressures and temperatures may be applied to chemicals for a considerable amount of time. People would know what an autoclave is. None of documents D1, D2 or D6 to D10 related to autoclaves.

Figure 10 of D1 related to a filter assembly and not to an autoclave. There was no mention of elevated temperatures or pressures in the description of the said assembly. D1 solved problems associated with cross-contamination of samples in neighbouring wells by preventing materials from flowing from one well to the other. The device of Figure 10 was not necessarily suitable for holding elevated temperature and pressure for several hours. From the corresponding description, it was not entirely clear whether this particular device was suitable for carrying out Polymerase Chain Reaction ("PCR" hereinafter) at all, i.e. whether it would remain gas and pressure tight during PCR conditions. The tightness of the device depended not only on the material used but also on the force of the

clamp. The device of Figure 10 of D1 was thus not a multiautoclave as required by claim 1 of the patent in suit.

D6 did not show a central block with perforations forming reaction chambers when sealed at both ends. Moreover, no locking means were disclosed in D6.
In the apparatus according to D7, the open ends of the channels extending through the stack of discs were not closed by sealing means.

D8 did not disclose an apparatus having a multitude of independent reaction chambers. The ends of the apertures in holder block 18 were not sealed. Gasket 24 did not seal the upper ends of tubes 11 or apertures 19. Gasket 34 shown in Figure 6 could not possibly be foreseen to close the upper end of tubes 11, since otherwise nothing would enter the tubes.

D9 disclosed sandwiched components, but chamber 11 was a channel for optical analysis and not a reaction chamber. Moreover, D9 did not disclose separate locking and sealing means. The window layer 13 could also be affixed to the layer below by bonding, e.g. by gluing or fusing.

Although figures 11 A to D of D10 showed a central block with through-going perforations and an encapsulation layer 318, it was not clear what could be considered as covering, sealing or locking means. D10 did not disclose sealing means and locking means.

According to the respondent in claim 1 a simple construction was phrased in very broad terms. The term

autoclave within the meaning of claim 1 meant nothing more than "*for use at elevated pressure*", i.e. the claimed reactor should be suitable for carrying out therein chemical reactions at elevated pressure.

The multi-well device shown in Figure 10 of D1 had the same structure and the same elements as the multiautoclave reactor vessel of claim 1. Since it was stated in D1 that the device shown in Figure 10 may be used for PCR, it had to be able to withstand temperatures of about 95°C. Considering that the gaskets and clamp of the said device provided a hermetic sealing of the wells, a pressure increase would inherently occur when performing PCR. The gasket materials mentioned in D1 were temperature stable and resilient, and therefore provided pressure tightness. Claim 1 did not indicate for which temperatures, pressures and reaction durations the reactor of claim 1 needed to be able to remain hermetically sealed. The device of Figure 10 was thus suitable to be used as autoclave in the sense of claim 1. The fact that the terms used in D1 for describing the said device were different from the terms used in claim 1 was not sufficient to establish novelty.

D2 related to a positive pressure blotting apparatus using an array of wells. Figure 4 showed a central block 20 having a multitude of through-going perforations, cover means 10 and 30 on both sides of the central block operatively associated with sealing means to seal the open ends of the perforations. In the figures, 0-rings constituted the sealing means. D2 mentioned that the seal should hold at least 20 psi. D2 also disclosed a latch device which secured the

sections together. The device according to D2 was capable of holding substantial overpressure and to be used at elevated temperatures. D2 was thus novelty-destroying for claim 1.

D6 disclosed a two-dimensional array of reaction tubes for performing Polymerase Chain Reactions (PCR). This implied reaction vessels operative at elevated pressures and temperatures. Figures 2 and 5 showed a central block ("tray" in D6) having a multitude of through-going perforations, cover means on both sides of the central block operatively associated with a sealing means. The reaction tubes held by the tray could be regarded as an extended lining of the perforations, and the lower part of the reaction tubes could be considered as means sealing the lower open ends of the perforations. Figures 2 and 5 showed sealing means forming a pressure tight seal. Figures 2 and 5 also showed locking means, since platen 28 and 64 were lowered with force onto the reaction tubes. The platen could thus be considered as locking means but also as cover means. Hence, claim 1 also lacked novelty over D6.

D7 related to an apparatus for chemical synthesis comprising a multitude of reactors in a stack of plates or discs. A compressive force was provided to seal the disc to disc interfaces. Figure 1 showed a cover means on both sides of a central block with through-going perforations. The seal was achieved by a compressive force. The open ends of the channels formed by the aligned perforations in the stack of discs were sealed by the force pressing the cover plates 1 and 2 against the stack. A screw served as a locking means acting in

concert with the cover means to engage the sealing means so as to define a multitude of reaction chambers. Thus, claim 1 was not new over D7.

D8 related to an apparatus which was used for the multiple simultaneous syntheses of compounds. D8 mentioned pressure equalization holes, which implied the use of the apparatus at elevated pressures. Moreover, D8 expressly taught use of gaskets for a sealing effect to allow manipulations such as pressurization. Figures 1 to 6 and the related description showed a central block 18 with a plurality of through-going apertures 19, a reservoir block 15 as a first cover means, a manifold 20 as a second cover means, first and second sealing means 24 and 26 and fasteners 36 as a locking means. Reaction tubes 11 extending through the apertures 19 could be considered as extended linings of extended reaction chambers. An alternative embodiment was also disclosed in Figure 6, which showed a plate 30 operable as an upper cover means associated with gasket 34 as an upper sealing means. Thus, claim 1 was not new with respect to D8.

D9 related to an apparatus to investigate chemical reactions in parallel arranged miniaturized reactors, at elevated temperatures and pressures. Fig. 2 showed a central block having through-going perforations and cover means. The latter were effective for sealing and also implicitly constituted a locking means to withstand pressure. Hence, claim 1 was not new with respect to D9.

D10 disclosed in Figs 11a through 11d a microfabricated fluid distribution device comprising a central block

having multiple through hole perforations, a pair of cover plates bonded to the central block to seal the open ends of the perforations and to lock the assembly. Since the channels were contemplated for flowing liquids, they had to be regarded as hermetically sealed. The device was capable of being operated at elevated temperature and pressure. Thus, claim 1 was not new over D10.

Reasons for the Decision

Main request

1. Novelty over D1

1.1 D1 relates generally to multi-well plates and tube arrays in which various biological and biochemical materials are analysed or processed, and to multi-well microfiltration devices. D1 discloses assemblies for simultaneously confining multiple samples in separate chambers, comprising a plate defining a plurality of containment wells, a resilient gasket disposed between said plate and closing said wells, and a lid disposed on said gasket having means for compressing said resilient gasket on said plate to hermetically seal said wells and to prevent said samples from flowing from one well to another between said lid and said plate. Preferred assemblies comprise a clamp which clamps said plate, resilient gasket, and lid together, see D1, column 1, lines 7 to 15; claims 1 and 3.

1.2 A particular embodiment of an assembly is shown in Figure 10 and described in column 7, lines 28 to 64.

The "modular multi-well filter assembly" 188 shown in Figure 10 comprises a multi-well base 192, a matching multi-well body 200 arranged on top of it, which together form multiple well chambers 216 (see D1; column 7, lines 40 to 41) and are covered by a lid 212 disposed on top of the multi-well body 200. Sealing gaskets 196 and 204 are arranged between the multi-well base 192 and the multi-well body 200, and between the latter and the lid 212, respectively. The openings of the well chambers 216 are closed by sealing gasket 204 and lid 212. The arrangement is held together by a clamp (not shown), which may be similar in design to the clamping arrangement illustrated in figures 5 and 6, see D1; column 7, lines 49 to 52 and lines 60 to 61).

1.3 Considering the multi-well body 200 as a *central block having a plurality of perforations*, the multi-well base 192 as a lower *cover means*, gasket 196 as *sealing means* and the "clamp" as *locking means* leads to the conclusion that Figure 10 and the corresponding description passages of D1 disclose a device with all the structural components of the reactor vessel according to claim 1, the said components also interacting in the same manner, thereby forming a device comprising multiple, hermetically sealed (see claim 1 of D1) chambers 216.

1.4 The term autoclave does not appear in D1. In the description passage relating to Figure 10, the uses foreseen for the "multi-well filter assembly" are not addressed. In particular, it is not indicated whether this device has to be suitable for carrying out PCR or other reactions involving elevated temperatures or pressures. Applications such as PCR are addressed at

two occurrences in D1 (column 3, lines 55 to 58 and column 5, lines 21 to 41). From these passages, it appears that the presence of an additional thermal equilibration sheet is considered to be of some importance to achieve rapid thermal equilibration which is necessary for PCR. Since such a thermal equilibration sheet is neither shown in Figure 10 nor mentioned in the text relating to this figure, there is no reason to assume that the apparatus described in Figure 10 is designed for performing PCR. Moreover, D1 is expressly not limited to PCR, but relates generally to analysing and processing biological biochemical materials, and it is concerned with avoiding cross-contamination of the samples rather than keeping gas-tightness or building up pressure at elevated temperatures. According to D1 resilient gasket materials may be used in the device of Figure 10 (column 7, lines 36 to 39 in combination with column 4, line 58 to column 5, line 12). However, such a resilient gasket forming a hermetic seal at ambient temperatures does not necessarily remain gas-tight when the temperature and hence the pressure within the wells is increased. It is also not directly and unambiguously derivable from the description of the device of Figure 10 that the force of the clamp used as locking means is sufficient to maintain a hermetic i.e. gas-tight seal at elevated temperatures as occurring during PCR, and hence to permit a significant pressure build-up within the chambers 216. Therefore, despite the structural similarities between the device of Figure 10 and the subject-matter of present claim 1, D1 does not even implicitly disclose a "*multiautoclave reactor vessel for use at elevated pressures*" according to present claim 1.

1.5 The subject-matter of claim 1 and, consequently, of dependent claims 2 to 16 is thus novel over D1.

2. *Construction of claim 1*

2.1 Claim 1 requires that the multiautoclave reactor vessel comprises "*a cover means on both sides of said central block, operatively associated with a sealing means, for engagement with said central block* ***to seal the open ends of said perforations forming a multitude of chambers***" (emphasis added by the board). Claim 1 does not mention other structural components or flow channels of the reactor vessel which could require some kind of sealing. In the board's view, the further phrase "*locking means acting in concert with the cover means* ***to engage the sealing means so as to define a plurality of reaction chambers***" (emphasis added by the board) confirms that the expression "*to seal the open ends*" is to be understood in the sense that the two open ends of each perforation are sealed such as to be closed to form a multiautoclave reactor vessel for use at elevated pressure.

2.2 Furthermore, the multiautoclave reactor vessel according to claim 1 comprises "*cover means brought into position by a locking means*", these "*locking means acting in concert with the cover means to engage the sealing means*". In view of the particular wording used, the board considers that this phrase clearly expresses that the structural components required for performing the functions of covering, sealing and locking, respectively, can be distinguished from each other.

2.3 There is thus no necessity to revert to the description of the patent in suit to understand the meaning of claim 1 and to compare the claimed subject-matter with the disclosure of the cited prior art documents. Consequently, decision T 0607/93 (see in particular the Reasons, point 2.2, 6th paragraph) is of no relevance in the present case. Moreover, the board notes that nothing in the patent specification supports a broader understanding of claim 1. On the contrary, the above understanding of claim 1 is fully in accordance with all the specific embodiments described in the patent (description sections [0014] to [0030]; figures 1, 3 and 5).

3. *Novelty over documents D2, D6, D7, D8, D9 and D10*

It emanates from the following analysis that these documents do not disclose subject-matter falling within the ambit of claim 1 as construed by the board (see points 2.1 and 2.2 herein above).

3.1 Novelty over D2

3.1.1 D2 discloses a positive pressure blotting apparatus for biological molecules comprising a middle section 20 containing wells 27, which is covered by hollow top section 10 and bottom section 30, the three sections being secured together by suitable means. A pressure of at least 30 psi is applied to the sample which is forced to flow from the top section 20 through a membrane 22 arranged between the middle section 20 containing the wells and bottom section 30 for capturing and disposing eluate. Reference is made to D2, claim 1; Figures 1 to 3 and 4(a) to 4(c); column 1,

lines 7 to 9; column 3, lines 11 to 13 and lines 27 to 32, column 3, line 38 to column 4, line 41.

3.1.2 Middle section 20 can be considered as a central block having a multitude of through-going perforations. These perforations are in fluid communication with the hollow zones 12 and 33 within the top and bottom sections 10 and 30, which are fastened to the middle section and can be regarded as cover means. However, the individual perforations are thus not sealed (in the sense of present claim 1, see point 2.1 herein above) at their two open ends. In particular, the only seal provided between the top section 10 and the middle section 20 is an O-ring arranged near the outer periphery of the two sections (see figures 1, 2, 4(a) and 4(b)) for maintaining the elevated pressure in hollow zone 12 and the perforations.

3.2 Novelty over D6

3.2.1 D6 relates to a cover for a two-dimensional array of reaction tubes 18, 68 to be used in a device for performing PCR, which cover provides a hermetic sealing of the tubes. The tubes are held in a tray 16, 66 comprising openings for receiving the tubes, which extend downwards into a thermal cycler block 20, 70. The open upper ends of the reaction tubes are sealed by a "cover" 10, 50. In operation, the sealing cover is pressed against the open upper ends of the tubes with force by lowering a heated platen 28, 64 onto it. Reference is made to column 1, lines 14 to 18; column 6, last paragraph; figures 2 and 5; column 4, lines 24 to 51; column 5, lines 53 to 59.

3.2.2 The board has doubts whether tray 16, 66 can be considered as a "block" and whether the tray openings with reaction tubes arranged therein can be considered as lined perforations. Even accepting this view for the sake of argument, the board cannot accept that in that case the closed lower ends of the reaction tubes ought to be considered as sealing means for the perforations "lined" with the upper part of the same tubes. Claim 1 cannot be considered to encompass devices as shown in D6 since it requires that the sealing means are "*operatively associated with the cover means to form a pressure tight seal when said cover means is brought into position by a locking means*". Moreover, when the heated platen of D6 is considered as locking means, then the shown devices cannot be considered to comprise sealing means distinct from cover means, or cover means distinct from the locking means.

3.3 Novelty over D7

3.3.1 D7 discloses an apparatus for carrying out chemical syntheses of oligonucleotides, inter alia "at high fluid pressures" (column 3, lines 3 to 5), comprising a compressed stack of superimposed plates or discs 15 to 26, which plates are rotatable relative to one another before carrying out a synthesis. Each plate has four through-going fluid passages 35 to 38 and a reaction chamber 39 equipped with a fluid outlet 40 at the bottom of the plate. Reference is made to column 1, lines 1 to 5; column 2, line 45 to column 4, line 1; figures 1, 3, 4 and 6. Sealing is only mentioned in column 3, lines 58 to 52 in connection with Figure 6, where reference is made to the "compressive force needed to seal the disc to disc interfaces once the

positions of the individual discs have been properly arranged".

3.3.2 The fluid passages extending through the stack of rotatable plates are in fluid communication with fluid passages 47 to 50 in the fixed plates 12 and 13, the latter passages being aligned with tubes 3 to 6 and 7 to 10 attached to the end plates 1 and 2, see column 2, lines 45 to 52 and figures 1, 2 and 5. Even accepting for the sake of argument that the stack of individually rotatable plates 15 to 26 can be considered as a central block with through-going perforations, there is no disclosure in this document of sealing (in the sense of present claim 1, see point 2.1 herein above) the respective open ends of the fluid passages extending through the central stack of plates.

3.4 Novelty over D8

3.4.1 D8 relates to an apparatus for carrying out multiple simultaneous syntheses of compounds, in particular organic compounds, optionally under pressure. D8 discloses a central structural element ("holder block 18") having multiple through-going "apertures" 19 for securing elongated reaction tubes 11 extending through the apertures and into "reaction wells 16" arranged underneath the holder block 18 in a "reservoir block 15". Above the holder block 18, the reaction tubes extend into a hollow chamber enclosed by a "manifold 20". A gasket 24 is arranged between manifold 20 and the holder block to create a sealing effect therebetween and to allow pressurisation. Reference is made in particular to D8, column 1, lines 17 to 19; column 7, line 31 to column 9, line 44; Figures 1 to 5.

In the embodiment shown in figures 2 to 4, spring clips 35 and 36 are used to fasten the elements including the manifold 20, the holder block 18 and the reservoir block 15 together. The embodiment shown in Figure 6 comprises spring clips 36 and 37 and additionally rods 32 and tighteners 33 for fastening the elements together, see column 9, line 62 to column 10, line 41. According to the specific embodiment shown in Figure 6, the top wall 28 of manifold 20 additionally comprises apertures 29 aligned with the apertures in the holder block. A further plate 30, also comprising aligned apertures 31, is clamped 37 and screwed 32/33 to the apparatus. A further gasket 34 made from a resealing material is arranged between plate 30 and the top wall 28 of the manifold 20 and closes aperture 29 to seal the manifold, see column 9, lines 45 to 61.

3.4.2 As acknowledged by the respondent during oral proceedings, there is no passage in D8 supporting that gasket 34, foreseen for closing the manifold, closes the upper ends of the tubes 11. The upper ends of the apertures 19 in the central holder block and the upper open ends of tubes 11 are thus all in fluid communication with the space enclosed by the manifold 20. Hence, irrespective of whether plate 30 or manifold 20 are considered as upper cover means, and despite the presence of gaskets 24 or 34 in the embodiments of figures 1 to 6 of D8, there are no constructional elements disclosed in any of these embodiments which could be considered as upper ends of perforations through a central block and which are sealed in the sense of present claim 1 (see point 2.1 herein above).

3.5 Novelty over D9

3.5.1 D9 relates to a device for investigating catalytic chemical reactions, optionally under elevated temperature or pressure, comprising a multitude of miniaturised reactors arranged in parallel. The reactors 2 are arranged in a central block 4 arranged between spacer blocks 9 and 12, which blocks are provided with feed and discharge lines 5, 10, 15 for the reactants and reaction products. The reaction products from each of the reactors are analysed in respective flow-through chambers consisting of perforations 11 extending through the central and spacer blocks ("Küvettenbohrungen" 11). These flow-through chambers are closed by transparent windows 13 applied to the outer surface of the spacer blocks, thereby permitting the analysis of the reaction products by methods involving radiation. Reference is made in particular to D9; claims 1, 3, 6, 12 and 19; Figures 1 and 2; page 8.

3.5.2 The board notes that according to Figure 2 of D9 it is reactor 2 and not chamber 11 that is used as reaction chamber. Moreover, chamber 11 is a flow-through chamber provided with inlet and outlet lines 10 and 15 near its two ends. These two lines open into chamber 11 and are thus not sealed in use. Although it can be accepted that operation of the apparatus will implicitly require some locking and sealing means to close the openings of chambers 11 by means of window 13, D9 is entirely silent about the way this is to be achieved. During the oral proceedings, bonding, e.g. by gluing, was discussed as a possible way to achieve both locking and sealing. Consequently, D9 does not even implicitly

disclose in a direct and unambiguous manner locking means that can be distinguished from the sealing means (see point 2.2 herein above).

3.5.3 According to two other approaches of the respondent presented in writing, the central block 4, the reactor 2 and the feed line 5, or the spacer block 9, the reactor 2 and the discharge line 10 could also be considered as *central block* and *through-going perforations* in the sense of claim 1, respectively. However, following this approach, it cannot be gathered from Figure 2 that the open ends of the said through-going perforations, i.e. 2 and 5 on the one hand or 2 and 10 on the other hand, are sealed in the sense of present claim 1 (see point 2.1 herein above).

3.6 Novelty over D10

3.6.1 D10 discloses an apparatus for the chemical processing of a plurality of samples which comprises an array of micron sized wells and connecting channels arranged on a solid substrate and enclosed by one or more covers affixed to the substrate. The chemical processing may e.g. comprise PCR, and may thus involve elevated temperatures and pressures. Figures 11A to 11D relied upon by the respondent illustrate how, according to a specific aspect, cross-overs of fluid channels can be fabricated. These figures show that at crossovers the substrate 314 has through-going channels 315, which are covered on both sides of the substrate by plates 318 "bonded" to the substrate. Reference is made to D10; column 1, first paragraph; column 2 to 3, "Summary of the invention"; claim 1; column 4, lines 42 to 44;

column, 9, lines 31 to 37 and lines 55 to 56; column 13 line 48 to column 14, line 11.

3.6.2 The board however notes that the through-going channels 315 are parts of conduits (315 - 317 - 315 in Figure 11C) for transmitting fluids, and not parts of the wells wherein the desired process are actually taking place. In operation, fluids thus flow through the said conduits. The cover plates being bonded to the substrates by some unspecified method, it may be accepted that they are locked to the substrate and that they enclose, and thus seal to some extent, the said conduits. However, locking means that can be distinguished from the sealing means (see point 2.2 herein above) are not directly and unambiguously derivable from D10.

3.7 Summarising, the subject-matter of claim 1 and, consequently, of dependent claims 2 to 16 is disclosed by none of documents D1, D2 and D6 to D10, upon which the appellant relied in substantiating its novelty objections in the appeal proceedings.

4. Remittal

The opposition division has not expressed an opinion concerning the issue of inventive step. Under these circumstances, in accordance with the appellant's request, the board considers it appropriate to exercise its discretion under Article 111(1) EPC and to remit the case to the department of first instance for further prosecution of the case, in order to give the parties the opportunity to defend their claims and submissions before two instances.

Auxiliary requests

5. In view of the above findings concerning the main request, the appellant's auxiliary requests need not be dealt with in the present decision.

Order

For these reasons it is decided that:

1. The appeal decision under appeal is set aside.

2. The case is remitted to the opposition division for further prosecution.

The registrar The chairman

C. Vodz M. Eberhard