

Internal distribution code:

- (A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

**Datasheet for the decision
of 13 September 2011**

Case Number: T 0356/09 - 3.2.05

Application Number: 03077427.7

Publication Number: 1394462

IPC: F16L43/00

Language of the proceedings: EN

Title of invention:

Thermoplastic laminate duct

Patent Proprietor:

The Boeing Company

Opponent:

AIRBUS France

Headword:

Relevant legal provisions:

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

Keyword:

Scope of claim extended (main request and first to seventh
auxiliary requests - yes)
Added subject matter (eighth to 23rd auxiliary requests - yes)

Decisions cited:

G 1/93

Catchword:



Case Number: T0356/09 - 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 13 September 2011

Appellant: AIRBUS France
(Opponent) 316 Route de Bayonne
31060 TOULOUSE Cedex (FRANCE)

Representative: Khairallah, Murielle
Cabinet Plasseraud
52, rue de la Victoire
FR-75440 Paris Cedex 09 (FRANCE)

Appellant: The Boeing Company
(Patent Proprietor) 100 North Riverside Plaza
Chicago, IL 60606-1596 (ETATS-UNIS D'AMERIQUE)

Representative: Pitchford, James Edward
Kilburn & Strode LLP
20 Red Lion Street
London WC1R 4PJ (ROYAUME UNI)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted
12 December 2008 concerning maintenance of the
European Patent No. 1394462 in amended form.**

Composition of the Board:

Chairman: W. Zellhuber
Members: S. Bridge
M.J. Vogel

Summary of Facts and Submissions

- I. Appellant I (opponent) and appellant II (patent proprietor) each lodged an appeal against the interlocutory decision of the Opposition Division maintaining European patent No. 1 394 462 in amended form.
- II. The opposition was filed against the patent as a whole based on Article 100(a) EPC (lack of inventive step, Article 56 EPC), Article 100(b) EPC and Article 100(c) EPC.
- III. Oral proceedings were held before the Board of Appeal on 13 September 2011.
- IV. Appellant I requested that the decision under appeal be set aside and that the European patent No. 1 394 462 be revoked.
- V. Appellant II requested that the decision under appeal be set aside and that the patent in suit be maintained on the basis of the following documents:
 - (i) main request and first to seventh auxiliary requests: the sets of claims, filed as main request and first and second auxiliary requests respectively, on 15 April 2009 and filed as third to seventh auxiliary requests, respectively, on 21 October 2009;
 - (ii) eighth to 15th auxiliary requests: the sets of claims, filed as main request and first to seventh auxiliary requests Group A, respectively, on 11 August 2011; or

(iii) 16th to 23rd auxiliary requests: the sets of claims, filed as main request and first to seventh auxiliary requests Group B, respectively, on 11 August 2011.

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

"1. A method of forming a thermoplastic laminate duct (10), the method comprising:
 providing a thermoplastic laminate preform (60) generally corresponding to a desired shape of a first duct segment (20);
 configuring the preform (60) to approximate the desired shape of the first duct segment (20) defining a passage (12); and
 consolidating the preform (60) to form the first duct segment (20);
wherein said providing step comprises determining a flat geometric pattern that generally corresponds to the desired shape of the first duct segment (20) wherein said determining step comprises calculating the flat geometric pattern such that said consolidating step forms the first duct segment (20) to the desired shape of the first duct segment (20) without trimming the first duct segment (20) after said consolidation step, and cutting a flat sheet (58) of thermoplastic laminate according to the flat geometric pattern."

VII. Claim 1 respectively according to the first to seventh auxiliary requests successively introduce further features, but do not contain the feature "*the method preventing trimming after forming*" from granted claim 1.

VIII. Claim 1 according to the eighth to 15th auxiliary requests respectively differ from claim 1 respectively

of the main request and first to seventh auxiliary requests in that the feature "*the method preventing trimming after forming*" is inserted after "*consolidating the preform (60) to form the first duct segment (20)*".

- IX. Claim 1 according to the 16th to 23th auxiliary requests respectively correspond to claim 1 respectively of the eighth to 15th auxiliary requests. The 16th to 23th auxiliary requests respectively differ from the eighth to 15th auxiliary requests in that there are no product claims.
- X. The arguments of appellant I in the written and oral proceedings can be summarised as follows:

Article 123(3) EPC

The expression "*the method preventing trimming after forming*" present in claim 1 as granted is missing from claim 1 respectively according to the main request and the first to seventh auxiliary requests.

The skilled person from the safety conscious aerospace industry understands "*preventing trimming*" to mean that any attempt at trimming after forming will either severely damage the duct or at least leave visible signs of such tampering, because the machining of thermoplastic materials, in particular reinforced thermoplastic materials, necessitates special tools with special conditions of use. Therefore, the expression "*preventing trimming after forming*" is not devoid of technical meaning and cannot simply be removed in accordance with the Enlarged Board of Appeal decision G1/93 (OJ 1994, 541).

The further expression "*without trimming*" of claim 1 (all requests) only occurs in the context of the *calculation* of the flat geometric pattern and is thus not an explicit requirement of the actual consolidation step.

Therefore, the subject-matter of claim 1 of the main request and the first to seventh auxiliary requests does not meet the requirements of article 123(3) EPC.

Article 123(2) EPC

The expression "*the method preventing trimming after forming*" present in claim 1 respectively according to the eighth to 23rd auxiliary requests, does not occur as such in the application as filed. This expression goes beyond the mere desire to avoid *the need for* trimming, assuming such a desire could be inferred from originally filed description (see paragraphs [0010] and [0026], application as published).

Therefore, the subject-matter of claim 1 of the eighth to 23rd auxiliary requests does not meet the requirements of article 123(2) EPC.

- XI. The arguments of appellant II in the written and oral proceedings can be summarised as follows:

Article 123(3) EPC

Trimming of reinforced laminates may be difficult but it is not impossible with the right tools and procedures. This fact merely provides evidence for a desire to avoid trimming after forming and does not constitute evidence of any kind of absolute physical impossibility. There is also no basis in the patent in

suit that multiple folding of an edge renders this edge of the duct inaccessible to trimming.

Thus, there is no evidence to suggest that it would ever be physically impossible to trim a consolidated thermoplastic laminate duct segment.

The skilled person thus necessarily considers the expression "*... preventing trimming after forming*" as technically nonsensical, because no *method* (claim 1 as granted) or *material* (claim 10 as granted) can actually prevent trimming. Thus, this expression can be deleted from the claims, in accordance with the Enlarged Board of Appeal decision G1/93 (OJ 1994, 541).

The only alternative interpretation of "*... preventing trimming after forming*", would be in the sense of *preventing the need for trimming after forming*. This would be consistent with the description of the patent in suit (paragraphs [0012] and [0028]). However, as claim 1 (all requests) already contains the stricter requirement that the "*consolidating step forms the first duct segment (20) to the desired shape of the first duct segment (20) without trimming*", the removal of the expression "*the method preventing trimming after forming*" (understood in the sense of *preventing the need for trimming after forming*) does not change the scope of protection.

Therefore, the subject-matter of claim 1 of the main request and the first to seventh auxiliary requests meets the requirements of article 123(3) EPC.

Article 123(2) EPC

Although the expression "... *preventing trimming after forming*" is not literally present in the application as filed, paragraphs [0010] and [0026] (application as published) provide a basis for *preventing the need for trimming after forming*. This is also the only interpretation which makes technical sense as the skilled person necessarily considers that there is no way to actually prevent trimming.

Therefore, the subject-matter of claim 1 of the eighth to 23rd auxiliary requests meets the requirements of article 123(2) EPC.

Reasons for the Decision

1. Article 123(3) EPC

The expression "*the method preventing trimming after forming*" was present in claim 1 as granted, but is not in claim 1 respectively according to the main request and the first to seventh auxiliary requests.

In the course of the appeal proceedings, the following four interpretations of the above expression were advanced:

- (a) the above expression cannot have a technical meaning, because trimming can always be carried out, even if it means damaging or destroying the duct. Thus, no method can absolutely prevent trimming and the expression can be considered as technical nonsense;

- (b) the above expression can be interpreted in the light of the description (paragraphs [0012] and [0028] of the patent in suit). According to paragraph [0012] ("*Preferably, the geometric pattern is determined such that the duct segment is consolidated to the desired shape of the first duct segment without trimming the segment after consolidation*") and paragraph [0028] ("*Preferably, the preform 60 is cut according to a flat geometric pattern that generally corresponds to the desired shape of the duct segment 20 so that the preform 60 can be configured and consolidated to form the desired shape of the duct segment 20 without trimming the duct segment 20 after forming*") the wording "*preferably ... without trimming ... after consolidating/forming*" indicates that trimming should be avoided after forming. Thus, the above expression can be interpreted in terms of *the method preventing the need for trimming after forming*;
- (c) in the light of the paragraphs [0012] and [0028] of the patent in suit, the above expression can be interpreted narrowly in terms of forming a duct "*without trimming after forming*" since the determining step (claim 1, all requests) already comprises calculating the flat geometric pattern accordingly;
- (d) the above expression has a technical meaning as such in the context of forming a duct: for example, on the one hand, the opponent's argument that "preventing trimming" may be interpreted in the sense of "*not permitting*" in that any attempt at trimming would be later on detectable, thus preventing any trimming after forming and on the

other, an edge of the laminate preform which is folded over twice in the same direction will become inaccessible. Any attempt to trim such an edge will necessarily damage the duct after forming, thereby effectively preventing its further use as a duct. Thus, the Board cannot exclude that there might be methods which effectively prevent trimming after forming.

The contentious expression can only be deleted in accordance with the Enlarged Board of Appeal decision G 1/93 (OJ 1994, 541) when it has no technical meaning. However, as there is no basis for ruling out interpretations (b) to (d), the contentious expression has technical meanings. Omitting the expression "*preventing trimming after forming*" from claim 1 respectively according to the main request and the first to seventh auxiliary requests thus removes the corresponding technical subject-matter, thereby extending the protection conferred, contrary to Article 123(3) EPC.

Appellant II further argued that claim 1 (all requests) already contained the stricter requirement "*without trimming the first duct segment (20) after said consolidation step*". However, this expression "*without trimming*" only occurs in claim 1 (all requests) in the context of the calculation of the flat geometric pattern (see claim 1, all requests, "*calculating the flat geometric pattern such that said consolidating step forms the first duct segment (20) to the desired shape of the first duct segment (20) without trimming the first duct segment (20) after said consolidation step*") and, therefore, is not an explicit requirement of the actual consolidation step. This feature thus cannot prevent an extension of the protection conferred

when the expression "*the method preventing trimming after forming*" of granted claim 1 is omitted.

2. Article 123(2) EPC

The expression "*the method preventing trimming after forming*" present in claim 1 respectively according to the eighth to 23rd auxiliary requests does not occur literally in the application as filed.

In the context of the invention, the only references to trimming occur in paragraphs [0010] and [0026] (application as published). These paragraphs correspond to paragraphs [0012] and [0028] of the patent as granted and, as already set out above, at best only provide a basis for interpretations (b) and (c).

Thus, the application as filed does not provide any basis for interpretation (d). As already set out above, the Board cannot exclude that there might be methods which effectively prevent trimming after forming.

Therefore, claim 1 respectively according to the eighth to 23rd auxiliary requests comprises added subject-matter, contrary to Article 123(2) EPC.

3. Additional remark

Although not relevant to this decision, the Board notes that the above arguments apply likewise to the device claims (main request and first to 15th auxiliary requests).

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

D. Meyfarth

W. Zellhuber

Decision electronically authenticated