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**Datasheet for the decision
of 18 March 2024**

Case Number: T 1207/21 - 3.2.05

Application Number: 16193166.2

Publication Number: 3141374

IPC: B29C65/14, B29C65/20, E06B3/96,
B29K27/06, B29L31/10

Language of the proceedings: EN

Title of invention:
Method for welding profiled elements in plastic material, in particular PVC

Patent Proprietor:
Graf Synergy S.r.L.

Opponents:
Kaban Makina San.ve Tic. Ltd. Sti.
Emmegi S.p.A.
Urban GmbH & Co. Maschinenbau KG

Relevant legal provisions:
EPC Art. 54, 84, 100(a), 100(b), 111(1), 123(2), 123(3)
EPC R. 139
RPBA 2020 Art. 11, 13(2)

Keyword:

Ground for opposition - insufficiency of disclosure (no)
Ground for opposition - lack of novelty (yes)
Request for correction of error in auxiliary request 1
(refused)
Amendments within the meaning of Article 13(2) RPBA - auxiliary
request 1 (no)
Amendments - extension beyond the content of the application
as filed - auxiliary request 1 (no) - broadening of the scope
of protection - auxiliary request 1 (no)
Claims - clarity - auxiliary request 1 (yes)
Remittal to the department of first instance (yes)

Decisions cited:

G 0002/88, G 0001/12, G 0003/14, T 2058/18



Beschwerdekammern

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Case Number: T 1207/21 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 18 March 2024

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 14 June 2021
rejecting the oppositions filed against European
patent No. 3 141 374 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman P. Lanz
Members: M. Holz
 T. Karamanli

Summary of Facts and Submissions

- I. Opponent 1 (appellant I), opponent 2 (appellant II) and opponent 3 (appellant III) lodged an appeal against the opposition division's decision rejecting the oppositions filed against European patent No. 3 141 374 (hereinafter: "the patent"), which is based on the European divisional application No. 16 193 166.2.
- II. The patent proprietor (respondent) filed a reply to the appellants' statements of grounds of appeal, including claim sets according to auxiliary requests 1 and 2.
- III. By letters dated 12 May 2022 and 17 April 2023, appellants I and III filed further submissions.
- IV. In a communication under Article 15(1) RPBA issued on 30 January 2024, the board provided its preliminary opinion that, *inter alia*, there was a discrepancy between claim 1 of the respondent's auxiliary request 1 and the corresponding passages of its reply.
- V. By letter dated 16 February 2024, the respondent filed further submissions including two claim sets entitled "Auxiliary Request 1 (corrected)" and "Auxiliary Request 2". In point 1 of that letter, it is stated:

"We maintain our Main Request (section 2) as well as Auxiliary Requests 1 and 2 (sections 3 and 4). In addition, we file herewith Corrected Auxiliary Requests 1 and 2 for the avoidance of any doubt about the patentee's requests filed with the Response to the Appeal."

VI. The following documents submitted during the first-instance proceedings are cited in this decision:

D1: US 3,013,925
D18: DE 23 48 607 C2

VII. Oral proceedings before the board were held on 18 March 2024.

Appellants I, II and III requested that the decision under appeal be set aside and that the patent be revoked.

The respondent requested that the opponents' appeals be dismissed (main request) or, as an auxiliary measure, that the decision under appeal be set aside and that the patent be maintained as amended according to the claims of auxiliary request 1 or 2, both requests filed with the reply to the statements of grounds of appeal. In addition, the respondent requested that its auxiliary requests 1 and 2 be corrected under Rule 139 EPC.

VIII. Claim 1 as granted reads (the feature numbering used by the board is included in square brackets):

"**[1]** A method for welding profiled elements in plastic material, in particular PVC, comprising the steps of:
[2] - preparing at least two profiled elements (3; 3a, 3b; 60, 61), arranged with respective zones to be welded (4; 62, 63) facing one another;
[3] - making a groove (19) in correspondence to at least one zone to be welded (4; 62, 63) of the profiled elements (3; 3a, 3b; 60, 61), **[4]** said step of making the groove (19) being performed by means of a removal operation on a peripheral edge of at least one profiled

element (3; 3a, 3b; 60, 61);
[5] - heating said zones to be welded (4; 62, 63);
[6] - coupling the zones to be welded (4; 62, 63) to one another, [7] pressing the profiled elements (3; 3a, 3b; 60, 61) one against the other so as to keep the zones to be welded (4; 62, 63) in reciprocal contact;
[8] - said step of coupling the zones to be welded (4; 62, 63) comprising a sub-step of melting the zones to be welded (4; 62, 63) into one another in order to define a welding bead and a sub-step of [9] making a containing compartment (19a) defined by said at least one groove (19); [10] said welding bead being made internally of said containing compartment (19a);
[11] characterised in that said step of coupling the zones to be welded (4; 62, 63) comprises the step of arranging a containing presser (27) in correspondence to said containing compartment (19a) for preventing exit of the welding bead from the compartment itself."

IX. Claim 1 of the respondent's auxiliary request 1 differs from claim 1 as granted in that the following feature 12 is included at the end of the claim:

"[12] wherein said removal creates a step of said peripheral edge, extending along the entire extension of the zone to be welded (4; 62, 63) of said profiled element (3; 3a, 3b; 60, 61)."

X. The correction of auxiliary request 1 requested by the respondent involves including the following feature 4.1 between features 4 and 5 in claim 1:

"[4.1] wherein the removal operation is by milling;"

XI. The parties made the following submissions.

(a) *Patent as granted - Ground for opposition under Article 100(b) EPC*

(i) *Appellants*

The patent did not disclose the invention defined in claim 1 as granted in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Paragraph [0064] of the patent not only disclosed that the purpose of the tools 21 was to shape the grooves 19 but that these were also fundamental for evening out the walls and correcting any cutting errors. In the absence of any such levelling, the zones to be welded would be too irregular and therefore not weldable. Claim 1 as granted, however, also covered embodiments in which no levelling was performed on the zones to be welded. The patent did not explain how the profiled elements could be successfully welded when no levelling was carried out, in spite of the zones to be welded being too irregular and therefore not weldable. The explanations in the patent itself gave rise to serious doubts that the skilled person could carry out the claimed invention. No recourse to the common general knowledge was necessary. The burden to prove that the invention was sufficiently disclosed had shifted to the respondent.

Feature 3 required the groove to be identical to the at least one zone to be welded of the profiled elements. In view of this claim interpretation, the invention defined in claim 1 as granted could not be carried out. Figures 4 and 5 of the patent showed that the groove was adjacent to the zone to be welded and not identical

to it. Moreover, feature 3 contradicted feature 7, which implied that the groove was not identical to the zone to be welded.

(ii) *Respondent*

The patent disclosed the invention defined in claim 1 as granted in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Paragraph [0064] of the patent spoke about the purpose of the tools 21 in a preferred embodiment. This in itself did not teach anything about the subject-matter of claim 1 as granted, which was directed to a method. Dependent claim 7 of the patent indicated that the levelling step was optional. Levelling of cut profiled ends was known in the art and did not need to be performed necessarily when making the grooves. Even in the absence of a levelling step, the method of claim 1 could be carried out and lead to the advantages of the invention (smooth surface, no need for post-processing) even if more molten material was generated. If any, the only adaptation needed was sizing the groove to adapt to the amount of material, which was within the skilled person's capabilities.

The expression "*in correspondence to*" (see feature 3) was not a synonym of "*coinciding*". There was no suggestion of that interpretation in the patent. The skilled reader understood that the groove was made "*at*" the at least one zone to be welded. This understanding was supported by Figures 4 and 5 of the patent.

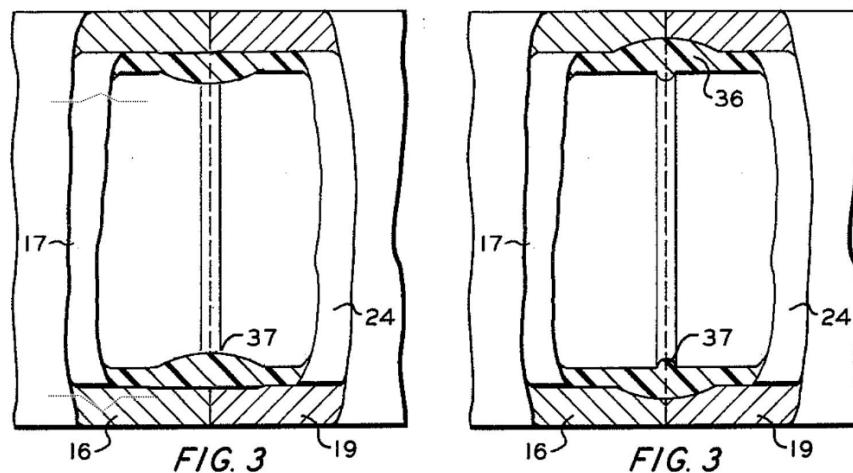
(b) *Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 54 EPC*

(i) *Appellants*

The subject-matter of claim 1 as granted was not new in view of document D1 or D18.

The term "*peripheral edge*" (see feature 4) merely meant "*at the distal end of the profiled elements*" and/or "*in the zones to be welded*". The method disclosed in document D1 used a reamer 38 to make chamfer-shaped grooves ("*bevels*") at 33 into the internal peripheral edges of the profiled elements 17, 24 (see document D1: Figures 2 and 4; column 3, lines 13, 14, 29 and 30). Document D1 thus disclosed feature 4. According to paragraph [0077] and Figure 8a of the patent, the groove 19 may be partially or entirely covered. Thus the groove did not have to be visible. Regarding feature 11, the method disclosed in document D1 provided that containing pressers ("*die clamps*" or "*die molds*" 16, 19) were arranged in correspondence to a containing compartment formed by the grooves ("*bevels*") in the opposing profiled elements 17, 24 to be welded (see document D1: column 3, lines 18 to 21). The term "*in correspondence*" did not necessarily mean that the containing pressers had to cover an opening of the containing compartment. It also encompassed embodiments in which the containing pressers were axially aligned with the containing compartment, regardless of whether the compartment opened to the outside or the inside of the profiled elements. This view was supported by paragraph [0105] and Figures 8a to c and 9a to d of the patent. In the embodiment shown in Figures 8a to c of the patent, it was the protrusion 31, not the

containing presser, that delimited the containing compartment. Figures 7a and b and 9a to d of the patent showed that molten material exited on the inside of the profiles. Feature 11 therefore did not require that no molten material could escape at all. While the containing pressers 16, 19 disclosed in document D1 formed a recess 34 on the inside, the formation of that recess was also envisaged in paragraph [0045] of the patent. The containing pressers 16, 19 of document D1 were suitable for preventing the welding bead from exiting the compartment itself (see document D1: column 3, lines 24 to 28; column 4, lines 1 to 6). The recess 34 was filled with molten material during the pressing. This molten material would otherwise remain on the inner circumference and exit the recess. This was apparent from the following drawings:



The drawing on the left showed modified containing pressers 16, 19. When the pipes 17, 24 were pressed together, all of the molten material flowed radially inwards and emerged from the groove 33. A welding bead was thus formed, which the patent intended to prevent. Therefore, the purpose and effect of the containing pressers in the drawing on the left was not to prevent welding beads. The drawing on the right, on the other

hand, corresponded to Figure 3 of document D1 and showed exactly the opposite. The containing pressers 16, 19 were aligned with the bevels or grooves 33. When the pressers were pressed together, the molten material did not flow radially inwards to exit the groove 33, but radially outwards. The recess 34 provided in the die clamps 16, 19 received exactly that molten material which would otherwise form a welding bead (see document D1: column 3, lines 13 to 17; Figures 2 and 3). The term "*substantially*" in column 3, line 28 of document D1 was understood as referring to the normal process variations associated with the process disclosed in document D1. The object in document D1 was to avoid the formation of the welding bead. The containing pressers disclosed in document D1 thus served to prevent the welding bead from exiting the groove 33. Column 1, lines 12 to 14 of document D1 disclosed that an objectional bead was prevented from forming on the inside of a welded thermoplastic pipe. Whether a technical problem stated in the description of the patent was solved by the method disclosed in document D1 was not a relevant criterion for the assessment of novelty. In view of paragraph [0007] of the patent, feature 11 only required an aesthetically pleasing surface and not the avoidance of any welding bead at all.

Document D18 disclosed all the features of claim 1 as granted. Regarding feature 11, Figure 4d of document D18 showed that a rigid part 49, which served as a presser, pressed the bead 47 into the remaining recess 48. The rigid part 49 moved while the plastic material was still soft. This meant that this process step took place during the step of joining the zones to be welded. The fact that the bead 47 protruded above a wall surface for a short period did not contradict

feature 11. No sequence was defined or claimed for the method steps in claim 1 as granted. Feature 11 merely specified that, at the end of the process, two profiles had been welded and a welding bead prevented. Claim 1 as granted did not specify that the welding bead was prevented from exiting at all times.

(ii) *Respondent*

The subject-matter of claim 1 as granted was new in view of document D1, which did not disclose features 4 and 11. In document D1, the bevels 33 (see document D1: Figure 2) formed on the cylindrical plastic tubes 17, 24 were not "*peripheral*" because they resided on the inner edge of the tube opening and not on the outer edge as required by the term "*peripheral edge of the profiled element*". Hence, feature 4 was not disclosed. The generally recognised meaning of the term "*peripheral edge*" was that of an edge forming the external boundary or surface of a body - in the present case an edge forming the external boundary of the profiled elements. The term "*peripheral*" meant "*towards the periphery*". The peripheral edges were the edges at the outside of the profile. Regarding paragraphs [0007] and [0015] of the patent, the problem addressed by the patent and the solution only related to the visible surface and, hence, the external edges of the profiles, namely the peripheral edges. The broadest technically sensible meaning of "*peripheral*", without any undue limitation by the description, was "*at the outer bounds*". In view of the detailed description of the embodiments in the patent, the grooves could only be formed on the external edges. It was there where they formed the containing compartment and took up the molten material, ready to co-operate with the containing presser to avoid material overflowing beyond

the visible surface (see for example Figures 7a, b and 8a, b of the patent). This was the object of the invention. If the grooves were formed on the internal edges, then the containing compartment would be too, and it would not be possible to arrange a containing presser in correspondence to any such "*internal*" containing compartment in order to prevent the welding bead from exiting the compartment itself. Moreover, when considering the technical solution of the invention, the broadest technically sensible meaning was that the "*peripheral edge*" was on the outer surfaces of the profile and not at some inner surface. Unlike the claimed subject-matter, the device and method of document D1 did not prevent a welding bead from forming on the visible surface of the profile. Document D1 did not aim for an aesthetic outer appearance but aimed at reducing the inner bead which disturbed the flow of liquid through a tube and strengthening the welding bond by avoiding failure from notch sensitivity, which was relevant for a liquid-conveying conduit (see document D1: column 1, lines 39 to 45). A "*peripheral*" edge had to be an edge that at least had continuity with the outward bounds of the profile, i.e. the outer visible surfaces. The skilled person understood a peripheral edge as the edge that would remain visible.

In document D1, the die clamps 16 and 19 were positioned on the wrong side, not "*in correspondence to said containing compartment*" as required by feature 11. These die clamps were not intended to and could not prevent a welding bead from exiting the containing compartment. In document D1, there was no compartment formed by grooves and closed towards the outside as defined in paragraph [0082] of the patent. Feature 11 implied that no welding bead could exit at all. This

followed from the object of the method stated in the patent as granted, which was that post-processing method steps could be avoided. In document D1, a small welding bead 37 was formed (see document D1: column 1, lines 48 and 49; column 2, lines 7 to 10; column 3, lines 23 to 28; column 4, lines 1 to 6; Figure 3). The reason why document D1 spoke only of "*substantially*" no bead on the inner side was that control was brought about by, for example, the amount of pipe protrusion through the clamps, how big the bevels were and how strongly the tubes were pressed together. This was a rather coarse adjustment. The formation of an internal bead could not positively be prevented. While the clamps 16, 19 affected the formation of a welding bead on the inside of the pipes, they could not prevent it. The die clamps 16, 19 did not anticipate feature 11 as they were not suitable for preventing the welding bead from exiting the compartment formed by bevels 33. Some material - even if just a little - still protruded and formed a bead 37. Column 1, lines 12 to 14 of document D1 referred to an "*objectional bead*". This did not mean that no bead was formed at all. For the fluid conducting system of document D1, it was not necessary to completely remove the bead; it just needed to be small. Document D1 did not provide a logical link between the clamps 16, 19 and the fact that "*substantially no bevel*" was formed. The clamps 16, 19 were provided with recesses 34 that took up material flowing outwards. The molten material flowed into the recess 34, forming a bead 36 on the outer visible surface of the tubes.

The subject-matter of claim 1 as granted was new in view of document D18, which did not disclose features 4, 9 and 11. As could be seen from the sequence of Figures 4a to d of document D18, when the walls 41 and

42 were pressed together, a bead 47 formed on the outside, protruding beyond the surface. This bead 47 was not prevented from exiting the compartment. The rigid part 49 was not arranged at the recess 48 during the coupling step but was only moved there later when the welding bead 47 protruded over the surface of the walls 41, 42. Its effect was to spread the bead 47 into the adjacent remaining recess 48. The rigid part 49 did not fulfil the functional definition of feature 11.

(c) *The respondent's request for correction of its auxiliary request 1*

(i) *Respondent*

It was obvious that there was a discrepancy between claim 1 of auxiliary request 1 filed with the reply and the corresponding passages of the reply. In its submissions on novelty, inventive step and Article 123(2) EPC, the respondent had consistently referred to the feature of the removal operation being by milling. The respondent's true intention had been clear from the start. It had also been clear what the error was and what the correction had to be. The delay in filing the request for correction was immaterial. The respondent only became aware of the discrepancy in question as a result of the board's communication under Article 15(1) RPBA.

(ii) *Appellant III*

The discrepancy between the claims of auxiliary request 1 filed with the respondent's reply and the corresponding passages of the reply had already been indicated in appellant III's letter dated 17 April 2023. The respondent had filed its request for

correction with the letter dated 16 February 2024, i.e. with a considerable delay. However, a request for correction had to be filed without delay (see G 1/12, point 37 of the Reasons, and T 2058/18). The request for correction should thus be refused.

(d) *The respondent's auxiliary request 1 filed with its reply to the statements of grounds of appeal*

(i) *Appellants*

The respondent's auxiliary request 1 filed with its reply to the statements of grounds of appeal should not be admitted into the appeal proceedings under Article 13(2) RPBA. Maintaining this request in the oral proceedings before the board constituted an amendment to the respondent's appeal case within the meaning of Article 13(2) RPBA.

Claim 1 of auxiliary request 1 lacked clarity because the features of evening out the walls and correcting any cutting errors were missing. These features were essential. Auxiliary request 1 contained amendments taken from the description. The amendments were thus open to an examination of clarity in accordance with decision G 3/14. Claim 2 of auxiliary request 1 was not clear because it referred to the "*preceding claims*" (i.e. plural) while there was only a single preceding claim.

Article 123(2) EPC was violated in view of the expression "*a step of said peripheral edge, extending along the entire extension of the zone to be welded (4; 62, 63) of said profiled element (3; 3a, 3b; 60, 61)*" (see feature 12). On page 9, lines 21 to 28 of the divisional application as filed (see paragraph [0072]

of the published divisional application), on which the patent in suit was based, the above feature was inextricably linked to the following features: the peripheral edges were defined by the head extremities of each profiled element; the groove had a substantially stepped conformation in square, i.e. shaped at 90°; during the removal by milling step, the step was implemented of the retention of the shavings by means of the cutter tool 21 with helical shape and the axial suction which conveyed the removed shavings towards the inside of the chamber 29a. On page 10, lines 6 and 7 of the divisional application as filed (see paragraph [0076] of the published divisional application), feature 12 was inextricably linked to the feature that the groove had a stepped conformation in undercut. Claim 1 of auxiliary request 1 was thus the result of an unallowable intermediate generalisation. In claim 2 of the divisional application as filed, the terms "*developing*" and "*whole development*" were used. The skilled person understood this as defining that a groove was provided and then enlarged, which was different from feature 12 of claim 1 of auxiliary request 1.

Auxiliary request 1 did not meet the requirements of Article 123(3) EPC. Although the scope of claim 1 of auxiliary request 1 was smaller than that of claim 1 as granted, the scope of protection conferred by claim 1 of auxiliary request 1 had been shifted compared with claim 2 as granted.

Moreover, the subject-matter of claim 1 of auxiliary request 1 was not new and did not involve an inventive step.

(ii) *Respondent*

Auxiliary request 1 had already been filed in the opposition proceedings and had been maintained throughout the opposition and appeal proceedings. It thus formed part of the appeal proceedings.

Feature 12 had a basis in claim 2 and on page 9, lines 21 to 28 of the divisional application as filed (see claim 2 and paragraph [0072] of the published divisional application). To interpret claim 2 of the divisional application as filed, the skilled person would have turned to page 9, lines 21 to 28 of the divisional application as filed and would have understood that the term "*developing*" corresponded to "*extending*". The fact that the embodiment disclosed in the description comprised further features was irrelevant since these were not part of claim 2 of the divisional application as filed. The square mentioned in the cited passage referred to a stepped conformation. There was no inextricable link between feature 12 and a square shape of the step. The head extremities of the profiled elements mentioned in the cited passage corresponded to the zones to be welded.

The requirements of Article 123(3) EPC were met since auxiliary request 1 did not lead to an extension of the protection conferred by the patent.

The subject-matter of claim 1 of auxiliary request 1 was new and involved an inventive step.

(e) *Remittal*

Appellants I and III were in favour of a remittal because they considered an examination at two instances appropriate in the case in hand. Appellant II had no comments. The respondent argued against remittal for reasons of procedural economy, since all parties and the board had expressed their views on auxiliary request 1 with regard to novelty and inventive step; the opposition division had expressed its views on these issues in its communication annexed to the summons.

Reasons for the Decision

1. Patent as granted - Ground for opposition under Article 100(b) EPC

1.1 Claim 1 and paragraph [0064] of the patent as granted

Appellant II sets out that paragraph [0064] of the patent not only disclosed that the purpose of the tools 21 was to shape the grooves 19 but that these were also fundamental for evening out the walls and correcting any cutting errors. In the absence of any such levelling, the zones to be welded would be too irregular and therefore not weldable. Claim 1 as granted, however, also covered embodiments in which no levelling was performed on the zones to be welded. The contested patent did not explain how the profiled elements could be successfully welded when no levelling was carried out, in spite of the zones to be welded being too irregular and therefore not weldable.

According to established case law (see "*Case Law of the Boards of Appeal of the European Patent Office*", Tenth Edition, July 2022 - hereinafter: "Case Law" -, II.C. 9), a successful objection of insufficient disclosure presupposes that there are serious doubts, substantiated by verifiable facts. In *inter partes* proceedings, the burden of proof initially lies with the opponent, who must establish, on the balance of probabilities, that a skilled person reading the patent, using common general knowledge, would be unable to carry out the invention. If the opponent has discharged its burden of proof and so conclusively established the facts, the patent proprietor then bears the burden of proving the alleged facts.

The mere fact that claim 1 as granted covers different embodiments from the specific embodiment addressed in paragraph [0064] of the patent as granted does not give rise to serious doubts that the skilled person, using their common general knowledge, would be able to carry out the invention defined in claim 1 as granted. For embodiments in which the zones to be welded are too irregular and therefore not weldable, paragraph [0064] of the patent discloses how the walls can be evened out and cutting errors corrected. Even for such embodiments, the patent as granted thus discloses the claimed invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Appellant II's submissions thus do not give rise to serious doubts that the skilled person is able to carry out the claimed invention. The burden of proof in this regard has therefore not shifted to the respondent.

1.2 *Feature 3*

Appellant III submits that feature 3 required the groove to be identical to the at least one zone to be welded of the profiled elements. In view of this claim interpretation, the invention defined in claim 1 as granted could not be carried out. Moreover, feature 3 contradicted feature 7, which implied that the groove was not identical to the zone to be welded.

However, in the board's view appellant III has not convincingly demonstrated that the skilled person would construe the expression "*in correspondence to*" (see feature 3) to mean that the groove and the zone to be welded were identical. Nor would the skilled person choose such an interpretation as it would, as acknowledged by appellant III, be inconsistent with other features of claim 1 as granted (i.e. feature 7).

1.3 *Summary on the ground for opposition under Article 100(b) EPC*

The ground for opposition under Article 100(b) EPC does not prejudice the maintenance of the patent as granted.

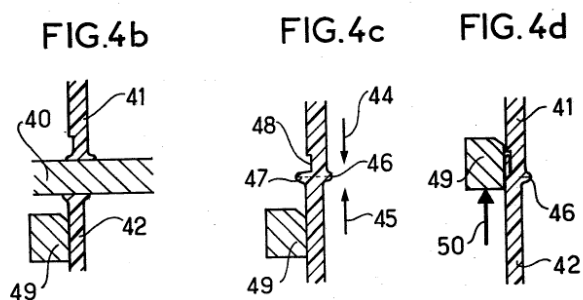
2. **Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 54 EPC**

2.1 *Novelty in view of document D18*

Appellant III submits that the subject-matter of claim 1 as granted was not new over document D18. The respondent, however, takes the view that features 4, 9 and 11 were not disclosed in document D18.

In contrast to appellant III's view, feature 11 does not merely specify that, at the end of the process, two profiles have been welded and a welding bead prevented. Claim 1 is directed to a method for welding profiled elements in plastic material. Feature 11 specifies that the step of coupling the zones to be welded comprises the step of arranging a containing presser in correspondence to said containing compartment for preventing exit of the welding bead from the compartment itself. The issue in hand thus does not hinge on whether the final product (i.e. the combination of the welded profiled elements) comprises a welding bead outside the compartment; the question is whether document D18 discloses arranging a containing presser for preventing the welding bead from exiting the compartment.

Figures 4b to 4d of document D18 show that a welding bead 46 is formed and exits the compartments defined by the recesses 48:



The rigid part ("*starres Teil*") 49, which appellant III identifies as the containing presser, is not configured for preventing the welding bead from exiting the compartment, as required by feature 11. In the method disclosed in document D18, the soft plastic compound leaves the recess 48. The rigid part 49 is then operated to spread the soft plastic compound into the

remaining recess 48 (see document D18: column 4, lines 30 to 33) after it has exited the recess.

According to appellant III, claim 1 as granted did not specify that the welding bead was prevented from exiting at all times. The issue, however, is that document D18 does not disclose that the rigid part 49 is arranged to prevent the welding bead from exiting the recess at any time.

The board concludes that document D18 does not disclose at least feature 11. The subject-matter of claim 1 as granted is therefore new in view of document D18. In this situation, the question of whether document D18 discloses features 4 and 9 can be left open.

2.2 *Novelty in view of document D1*

It is under dispute between the parties whether document D1 discloses features 4 and 11.

2.2.1 The skilled person considers an edge located at a distal end of the profiled element to be a peripheral edge. In Figures 2 and 4 of document D1, grooves are created by bevelling the ends (i.e. the peripheries) of the pipes 17 and 24. The bevelling involves a removal operation on an edge of the profiled element that is located at the left-most periphery (i.e. at a distal end or outer bound) of the pipe 24 in Figures 2 and 4 and the right-most periphery of the pipe 17 in Figure 2. Feature 4 is thus disclosed in document D1.

The question of whether the pipe disclosed in document D1 has additional peripheral edges on which a removal operation may be performed is irrelevant to the issue in hand. Even if the embodiments disclosed in the

patent involve a removal operation on different peripheral edges from the removal operation disclosed in document D1, this does not imply that the removal operation disclosed in document D1 is not performed on a peripheral edge of the profiled elements. The scope of a claim should not be limited by implying into it features which appear only in the description of the drawings (see also Case Law, II.A.6.3.4).

The respondent refers to paragraphs [0007] and [0015] of the patent and sets out that the problem addressed by the patent and the solution only related to the visible surface and, hence, the external edges of the profiles, namely the peripheral edges.

However, even if it were accepted that the (subjective) technical problem stated in the patent was not solved in document D1, this would not imply that document D1 does not disclose the subject-matter defined in claim 1 as granted.

Contrary to the respondent's submission, the above view is not based on a claim interpretation that is not technically sensible. The above interpretation of the term "*peripheral edge*" is consistent with the respondent's view that the broadest technically sensible meaning of "*peripheral*" was "*at the outer bounds*". The respondent has not convincingly demonstrated that the skilled person would understand that the peripheral edge mentioned in claim 1 as granted must necessarily be either an edge that at least has continuity with the outer visible surfaces or an edge that remains visible.

2.2.2 The method disclosed in document D1 involves arranging a containing presser (i.e. die clamps 16, 19 shown in

Figures 2 and 3 of document D1) in correspondence to the containing compartment (i.e. the recesses in the ends of the pipes resulting from the bevelling at 33) for preventing the welding bead from exiting the compartment itself, as defined in feature 11.

As disclosed in column 3, lines 24 to 28 with reference to Figure 3 of document D1:

"The mold formed by recesses 34 in die clamps 16 and 19 is shown filled with plastic material indicated at 36 and forming an outside bead around the junction of pipes 17 and 24, with substantially no bead at 37".

In document D1, the welding bead is prevented from exiting the recesses 33 formed at the ends of the pipes 17, 24 by arranging die clamps 16, 19 having appropriately configured recesses 34. The function of the recesses 34 is also illustrated in the drawings submitted on page 12 of appellant III's statement of grounds of appeal and reproduced above (see point XI.(b)(i)). When the pipes 17, 24 are pressed together, the molten material flows into the recess 34 provided in the die clamps 16, 19. Without the recess 34, the molten material would flow radially inwards and out of the groove formed by the bevels 33, forming a welding bead on the inside of the joint pipes. The skilled person thus understands that the arrangement of the die clamps 16, 19 on the outside of the pipes at the same longitudinal position as the groove formed by the bevels 33 (as shown in Figures 2 and 3 of document D1) prevents the welding bead from exiting that groove. For these reasons, feature 11 is unambiguously and directly derivable from document D1.

The respondent submits that document D1 did not disclose a compartment formed by grooves and closed towards the outside as defined in paragraph [0082] of the patent.

However, as set out above, the scope of a claim should not be limited by implying into it features which appear only in the description. Neither feature 11 of claim 1 as granted nor claim 1 as granted as a whole excludes the possibility that a bead is formed on the outer visible surface of the profiled elements. Although in document D1 a bead is formed on the outer visible surface of the tubes, this does not imply that this document does not disclose feature 11 of claim 1 as granted.

According to column 3, line 28 of document D1, there is "*substantially no bead at 37*". The respondent submits that the reason why document D1 spoke of "*substantially*" no bead was that the control was brought about by the amount of pipe protrusion through the clamps, which was a rather coarse adjustment.

The respondent's argument is not convincing. The skilled person understands the term "*substantially*" in the cited passage of document D1 as referring to the normal process variations associated with the method disclosed in document D1. The passages in column 1, lines 48 and 49, column 2, lines 7 to 10 and column 4, lines 1 to 6 of document D1 do not give rise to a different interpretation of the term "*substantially*". Column 1, lines 12 to 14 of document D1 explicitly discloses that the method and means disclosed in that document are for preventing an objectional bead from forming on the inside of a welded thermoplastic pipe. From the cited passages, the skilled person understands

that the method disclosed in document D1 prevents a welding bead from forming on the inside of the welded pipe. Whether the method disclosed in document D1 is difficult to control is irrelevant to the issue in hand. The skilled person also understands that reference numeral 37 is used in column 3, line 28 of document D1 to illustrate where in Figure 3 the bead is prevented from forming. For the reasons set out above, the effect of preventing the bead from forming results from the arrangement of the die clamps 16, 19 providing the recesses 34. Feature 11 is thus disclosed in document D1.

2.2.3 The subject-matter of claim 1 as granted is not new in view of document D1.

2.3 *Summary on the ground for opposition under Article 100(a) in conjunction with Article 54 EPC*

Since the subject-matter of claim 1 as granted is not new in view of document D1, the ground for opposition under Article 100(a) in conjunction with Article 54 EPC prejudices the maintenance of the patent as granted.

3. **The respondent's request for correction of auxiliary request 1**

By letter dated 16 February 2024, the respondent requested a correction of its auxiliary request 1 filed with its reply under Rule 139 EPC. It explained that it had been obvious that there was a discrepancy between claim 1 of auxiliary request 1 filed with the reply and the corresponding passages of the reply.

In decision G 1/12, OJ EPO 2014, 114, point 37 of the Reasons, the Enlarged Board summarises the principles established by the boards of appeal, in particular the Legal Board of Appeal, regarding corrections under Rule 139, first sentence, EPC. It sets out, *inter alia*, that a request for correction must be filed without delay (see also decision T 2058/18, point 3.5.1 of the Reasons).

Appellant III correctly observes that the discrepancy at issue had already been indicated in its letter dated 17 April 2023 (see point 4.1 of that letter). The respondent, however, filed its request for correction by letter dated 16 February 2024, i.e. about ten months later, and thus with a considerable delay. This view is not changed by the respondent's submission that the discrepancy in question had only come to its attention with the board's communication under Article 15(1) RPBA. The respondent could and should have recognised this discrepancy at the latest from appellant III's letter dated 17 April 2023.

In view of the above, the respondent's request for correction of auxiliary request 1 under Rule 139 EPC is refused.

4. The respondent's auxiliary request 1 filed with its reply to the statements of grounds of appeal

4.1 *Objection raised by appellant I against the admittance of auxiliary request 1 under Article 13(2) RPBA*

Appellant I submitted that the respondent's auxiliary request 1 filed with its reply to the statements of grounds of appeal should not be admitted under

Article 13(2) RPBA. Maintaining this request constituted an amendment to the respondent's appeal case within the meaning of Article 13(2) RPBA.

The respondent filed auxiliary request 1 with the reply to the statements of grounds of appeal. It maintained this auxiliary request throughout the appeal proceedings. In point 1 of its letter dated 16 February 2024, the respondent explicitly stated:

"We maintain our Main Request (section 2) as well as Auxiliary Requests 1 and 2 (sections 3 and 4)."

The respondent also maintained its auxiliary request 1 at the beginning of the oral proceedings before the board (see page 2 of the minutes).

Maintaining auxiliary request 1 filed with the respondent's reply therefore does not constitute an amendment to the respondent's appeal case within the meaning of Article 13(2) RPBA. The objection raised by appellant I against the admittance of this request therefore has to fail.

4.2 *Objections under Article 84 EPC*

4.2.1 Appellant III contended that claim 1 of the respondent's auxiliary request 1 lacked clarity because the features of evening out the walls and correcting any cutting errors were missing. In appellant III's view, these features were essential. The respondent's auxiliary request 1 contained amendments taken from the description and was therefore open to an examination of clarity.

In accordance with decision G 3/14 (OJ EPO 2015, A102), in considering whether, for the purposes of Article 101(3) EPC, a patent as amended meets the requirements of the EPC, the claims of the patent may be examined for compliance with the requirements of Article 84 EPC only when, and then only to the extent that the amendment introduces non-compliance with Article 84 EPC. Appellant III, however, has not convincingly shown that the amendment to claim 1 of the respondent's auxiliary request 1 as compared with claim 1 as granted introduced the above lack of clarity (which is allegedly due to missing essential features). Even if it were accepted that essential features were missing from claim 1 of auxiliary request 1, these features would also be missing from claim 1 as granted.

Following the principles set out in decision G 3/14, claim 1 of auxiliary request 1 cannot be examined for compliance with the requirements of Article 84 EPC as requested by appellant III.

- 4.2.2 Appellant III contends that claim 2 of the respondent's auxiliary request 1 was not clear because it referred to the "*preceding claims*" (i.e. plural) while there was only a single preceding claim.

Given that there is only one claim (i.e. claim 1) that precedes claim 2 of auxiliary request 1, the skilled person understands the statement "*according to any one of the preceding claims*" in claim 2 as referring to preceding claim 1. Logically, no other interpretation is possible. The wording in claim 2 of auxiliary request 1 is therefore clear and unambiguous.

- 4.2.3 Appellant III's objections raised under Article 84 EPC against auxiliary request 1 therefore fail.

4.3 *Objection under Article 123(2) EPC*

Appellant III submits that Article 123(2) EPC was violated in view of the following underlined expressions used in feature 12 of claim 1 of the respondent's auxiliary request 1:

"wherein said removal creates a step of said peripheral edge, extending along the entire extension of the zone to be welded (4; 62, 63) of said profiled element (3; 3a, 3b; 60, 61)"

As a basis for this feature, the respondent refers to claim 2 and page 9, lines 21 to 28 of the divisional application as filed on which the patent is based.

Appellant III submits that, on page 9, lines 21 to 28 of the divisional application as filed, feature 12 was inextricably linked to the feature that the obtained groove 19 had a substantially stepped conformation in square, i.e. shaped at 90°. However, page 10, lines 6 and 7 of the divisional application as filed (see paragraph [0076] of the published divisional application), also cited by appellant III, discloses an embodiment in which the groove 19 has a stepped conformation in undercut, which extends along the entire extension of the zone to be welded 4. Reading these passages of the divisional application as filed, the skilled person understands that the step may extend along the entire extension of the zone to be welded, while the step need not necessarily have a conformation in square or in undercut. Feature 12 is thus not inextricably linked to either of these conformations.

The specification that the peripheral edges are defined by the head extremities of each profiled element 3 (see page 9, lines 21 to 23 of the divisional application) is not included in the description of the embodiment disclosed on page 10, lines 6 and 7 of the divisional application as filed. Moreover, the skilled person understands from the divisional application as filed as a whole that the zones to be welded may be made up by the head extremities of the profiled elements. However, there is no inextricable link between the specification that the step extends along the entire extension of the zone to be welded and the specification that the peripheral edges are defined by the head extremities of each profiled element.

Nor is there any clear (let alone inextricable) link between the feature that the step extends along the entire extension of the zone to be welded (see feature 12) and the specification that during the removal by milling step, the step is implemented of the retention of the shavings by means of the cutter tool 21 with helical shape and the axial suction which conveys the removed shavings towards the inside of the chamber 29a.

The objection under Article 123(2) EPC raised by appellant III against claim 1 of auxiliary request 1 thus fails.

4.4 *Objection under Article 123(3) EPC*

Appellant III submits that the respondent's auxiliary request 1 did not meet the requirements of Article 123(3) EPC.

The legal notion of "*protection conferred*" in Article 123(3) EPC refers to the totality of protection established by the claims as granted and not necessarily to the scope of protection within the wording of each single claim as granted (see Case Law, II.E.2.2). According to decision G 2/88 (see OJ EPO 1990, 93), it is the totality of the claims before amendment in comparison with the totality of the claims after the proposed amendment that has to be considered.

The only independent claim 1 of the respondent's auxiliary request 1 differs from the only independent claim 1 as granted in that it includes an additional limiting feature (feature 12). Consequently, the protection conferred by the patent as amended according to the respondent's auxiliary request 1 is limited - not extended - when compared with the protection conferred by the patent as granted.

Therefore, the respondent's auxiliary request 1 meets the requirements of Article 123(3) EPC.

5. **Remittal of the case to the opposition division for further prosecution**

Appellants I and III were in favour of a remittal while the respondent argued against it.

Claim 1 of auxiliary request 1 differs from claim 1 as granted on account of feature 12, which was taken from the description of the divisional application as filed (see point 4.3 above). In the decision under appeal, the opposition division had considered the subject-matter of claim 1 as granted to be new and inventive. The board came to a different conclusion (see point 2.2

above). Hence feature 12 becomes relevant for the assessment of novelty and inventive step of the subject-matter of claim 1 of auxiliary request 1. The impact of feature 12 on novelty and/or inventive step has, however, not been addressed in the decision under appeal and therefore requires a first detailed and comprehensive examination. These circumstances take precedence over the desire for procedural efficiency.

In this situation, the board exercised its discretion under Article 111(1), second sentence, EPC, taking into account Article 11 RPBA, and concluded that it is appropriate to remit the case to the opposition division for further prosecution.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated