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**Datasheet for the decision
of 30 November 2018**

Case Number: T 1455/14 - 3.2.05

Application Number: 06114575.1

Publication Number: 1860363

IPC: F16L47/16

Language of the proceedings: EN

Title of invention:

Pipe fitting

Patent Proprietor:

Uponor Innovation AB

Opponent:

Georg Fischer Rohrleitungssysteme AG

Relevant legal provisions:

RPBA Art. 11, 12(4), 13(1), 13(3)

EPC 1973 Art. 54, 56

Keyword:

Procedural violation - Opposition Division's correction of an error
Remittal to the department of first instance - special reasons for not remitting the case
Late-filed evidence - admitted
Novelty (yes)
Inventive step (no)

Decisions cited:

G 0003/14



Beschwerdekammern

Boards of Appeal

Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1455/14 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 30 November 2018

Appellant: Georg Fischer Rohrleitungssysteme AG
(Opponent) Ebnatstr. 111
8201 Schaffhausen (CH)

Representative: Christopher Friedrich Dietz
Gleiss Große Schrell und Partner mbB
Patentanwälte Rechtsanwälte
Leitzstraße 45
70469 Stuttgart (DE)

Respondent: Uponor Innovation AB
(Patent Proprietor) P.O. Box 101
73061 Virsbo (SE)

Representative: Oy Papula
P.O. Box 981
00101 Helsinki (FI)

Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
29 April 2014 concerning maintenance of the
European Patent No. 1860363 in amended form.**

Composition of the Board:

Chairman M. Poock
Members: S. Bridge
J. Geschwind

Summary of Facts and Submissions

- I. The appeal was lodged against the interlocutory decision of the opposition division that the European patent No. 1 860 363 as amended meets the requirements of the EPC.
- II. An opposition was filed against the patent as a whole based on Article 100(a) EPC (lack of novelty, Article 54 EPC and lack of inventive step, Article 56 EPC).
- III. Oral proceedings were held before the board of appeal on 30 November 2018.

The appellant (opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed during the oral proceedings or, in the alternative, on the basis of one of auxiliary requests 1 or 4 filed with letter of 26 February 2014.

- IV. Claim 1 according to the main request reads as follows:

"A pipe fitting comprising:
a plastic body (2) having inner threads (4) and a reinforcement ring (3) around the outside of the plastic body (2);
the reinforcement ring (3) is positioned at a distance (d) from the front end of the pipe fitting (1), wherein said front end is the part of the pipe fitting which first receives the part with male threads inserted into the pipe fitting;

the plastic body (2) is manufactured separately from the reinforcement ring; characterized in, that the reinforcement ring (3) is snapped on the plastic body (2)."

- V. Claim 1 according to the auxiliary request 1 reads as follows (the differences with respect to claim 1 according to the main request have been highlighted by the board):

"A pipe fitting comprising: a plastic body (2) having inner threads (4) and a reinforcement ring (3) around the outside the plastic body (2); the reinforcement ring (3) is positioned at a distance (d) from the front end of the pipe fitting (1), wherein said front end is the part of the pipe fitting which first receives the part with male threads inserted into the pipe fitting; the plastic body (2) is manufactured separately from the reinforcement ring (3); ~~characterized in that~~ and the reinforcement ring (3) is snapped on the plastic body (2); and characterized in, that the material of the plastic body (2) is polyphenylsulphone."

- VI. Claim 1 according to auxiliary request 4 differs from claim 1 according to auxiliary request 1 in that the following features are added at the end of the claim:

- *"the plastic body is made by injection moulding";*
- *"the length of female threads is more than double of the width of the reinforcement ring (3)";*
- *"the plastic body (2) comprises a support rib (6) for supporting the back end (3b) of the reinforcement ring (3)".*

VII. The following documents are referred to in the present decision:

E10: WO 2005/052433 A1;

B2: "*Handbook of Plastics Joining - A Practical Guide*", Plastics Design Library, 1997, ISBN 1-884207-17-0, pages 121 and 122;

Documents in support of an alleged public prior use of the Georg Fischer pipe fitting 727.910.226:

A1': "*PP/PE-Kunststoffrohrleitungssysteme - Lieferprogramm - gültig ab 1. Januar 2001*", Georg Fischer +GF+, pages 18, 20, 33a, last page;

A2: Technical drawing "*Übergangsmuffe*", number 727.910.266, Georg Fischer Fittings, Drawn 29.10.98, Last modified 12.07.01;

A6: Technical drawing "*Verstärkungsring*", number 700.600.381, Georg Fischer Piping Systems, Drawn 11.04.03, Approved 09.10.09;

A6': Technical drawing "*Verstärkungsringe*", number 700.600.381, Georg Fischer Aktiengesellschaft, Drawn 23.3.77, Modification-4 18.5.83;

A7: Affidavit of 26 August 2014 by Mr. Dirk Petry, Director of product engineering of "*Georg Fischer Rohrleitungssysteme AG*".

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

Main request

The skilled person understands the expression "*snapped-on*" used in claim 1 in accordance with the teaching of the textbook extract B2.

Brochure A1', drawing A6 and Affidavit A7 were filed as soon as they became available in response to the objections raised by the respondent one month before the oral proceedings before the opposition division. These documents are not complex and merely confirm the arguments raised during the opposition proceedings with respect to the public prior use and thus should be admitted into the proceedings.

Technical drawing A6 of the reinforcing ring (table 700.600.381) discloses the interior diameter of the ring 700.600.384 (explicitly referenced in pipe fitting drawing 727.910.266) as 27,9 mm, which is the same as the exterior diameter of that part of the pipe fitting in drawing 727.910.266 on which the ring is finally seated after assembly. The reinforcing ring is thus axially pushed onto the pipe fitting which is further confirmed by affidavit A7.

The subject-matter of claim 1 (main request) thus lacks novelty and/or inventive step with respect to the public prior use of the Georg Fischer pipe fitting 727.910.266 in combination with common general knowledge of snap-fittings and their advantages (textbook B2).

Auxiliary request 1

Document E10 was filed during the opposition proceedings in response to a feature concerning the material of the pipe fitting taken from the description and added to claim 1 of auxiliary request 1 which was filed for the first time only one month before the oral proceedings before the opposition division. The appellant thus had no reason to file this document any

earlier. Document E10 should be admitted into the proceedings.

The skilled person does not require an inventive step to use an alternative material to the PP-H of the pipe fitting of drawing A2, especially when the alternative material is known to be suitable for the proposed purpose: The material PPSU is explicitly disclosed in document E10 as being suitable for pipe fittings. The subject-matter of claim 1 according to auxiliary request 1 thus lacks an inventive step.

Auxiliary request 4

The added feature of claim 1 "*the plastic body (2) comprises a support rib (6) for supporting the back end (3b) of the reinforcement ring (3)*" is not clear. Drawing A2 discloses that the seat for the reinforcement ring is bounded by a support shoulder and a support rib - the 2 mm wide elevation R1,5 in the A2:1 enlargement of drawing A2 is considered to be a rib in the sense of the claim. Both the support shoulder and the support rib are suitable for preventing axial movement. Providing a support rib does not require an inventive step from the skilled person.

The two other additional, independent features cannot justify an inventive step either, because they are already disclosed explicitly in the prior art:

- injection moulding is generally known to the skilled person and is disclosed explicitly in document E10 (paragraph [0012]); and
- drawing A2 already discloses the feature that the length of female threads (15 mm, if not 18 mm with run out) is more than double of the width of the reinforcement ring (5 mm).

The subject-matter of claim 1 according to auxiliary request 4 lacks an inventive step with respect to the prior use in combination with document E10.

IX. The arguments of the respondent in the written and oral proceedings can be summarised as follows:

The case should not be remitted to the first instance because of the procedural violations.

Main request

The skilled person understands the expression "*snapped-on*" used in claim 1 in accordance with the teaching of the textbook extract B2. Furthermore, the skilled person can determine from the dimensions and materials used whether a pipe fitting is suitable for snap-fitting a reinforcing ring.

The expression "*nachträglich aufgedrückt*" in prior use drawing A2 does not directly and unambiguously disclose a snap-fit. The following are indirect indications that the prior use Georg Fischer pipe fitting 727.910.226 is not suitable for snap-fitting the reinforcing ring:

- the material polypropylene is softer than polyphenylsulphone;
- the bulge at the front end of the fitting is a continuous circular bulge which requires more effort for sliding the ring over it than a discontinuous bulge would;
- the difference in diameters between the bulge and the groove in which the ring finally rests is 0,8 mm and thus greater than the 0,125 mm which is used in a pipe fitting of the patent proprietor.

In consequence, the Georg Fischer pipe fitting 727.910.226 is not suitable for snap-fitting the reinforcing ring and the subject-matter of claim 1 is thus new with respect to this public prior use.

Late filed documents A1', A6, A6' and A7 should not be admitted into the procedure, because:

- documents A1', A6 and A7 were only filed one day before the oral proceeding before the opposition division;
- there was no reason to this late filing, because the issues relating to the inner diameter of the reinforcement ring had already been raised in point 2.3 of the patent proprietor's letter of 26 February 2014;
- drawing A6 was last amended after the filing date of the patent in suit;
- drawing A6 was first drawn 2 years after the final approval date of drawing A2: drawing A2 can only have referred to an earlier version of drawing A6;
- even if the inner diameter of the ring corresponded to that of drawing A6, this is not sufficient to prove a snap-fitting of the ring;
- affidavit A7 (see especially section 4) does not explicitly disclose the use of snap-fitting and instead merely describes what would happen if the ring were pressed axially onto the body of the pipe fitting according to drawing A2;
- affidavit A7 was made 11 years after drawing A6 and there are no indications of Mr. Petry's role with respect to the drawings A6;
- drawing A6' is even later filed and appears to be very old.

The subject-matter of claim 1 (main request) is thus new with respect to the prior use of the Georg Fischer pipe fitting 727.910.266.

The public prior use of the Georg Fischer pipe fitting 727.910.226 is the closest prior art. The skilled person seeks to solve the problem of finding an alternative, simple way to assemble the ring onto the PP-H pipe fitting of drawing A2. There are numerous means of assembly open to the skilled person other than snap-fitting. The skilled person would need motivation and clear teaching (in terms of dimensions and materials) for selecting a snap-fit but no such teaching has been advanced. The subject-matter of claim 1 is thus based on an inventive step.

Admissibility of document E10

Document E10 has not been substantiated in the grounds of appeal. Document E10 discloses a fitting with external male threads so that there is no need for reinforcement ring, since the purpose of the ring is to reinforce the part having internal female threads. This document is thus irrelevant and should not be accepted to the proceedings.

Auxiliary request 1

Document E10 discloses a PPSU high temperature resistant threaded pipe fitting and therefore forms the closest prior art. The subject-matter of claim 1 differs therefrom in that there is a reinforcement ring and in that the thread is on the inside of the fitting. There is no motivation or teaching for the skilled person to change this arrangement, because there is no risk of splitting the pipe fitting of document E10.

Applying an external ring would be in conflict with the external thread of the pipe fitting of document E10. In consequence, the subject-matter of claim 1 according to auxiliary request 1 is based on an inventive step.

The PP-H material of the Georg Fischer pipe fitting 727.910.226 is softer than PPSU. The corresponding objective problem is thus to improve the hardness of the pipe fitting. The skilled person would not change the PP-H material (drawing A2) into PPSU, because PP-H has a lower melting temperature of about 165°C and is processed at around 200°C. PPSU is an amorphous material which has no clear melting point, has a glass transition temperature of around 220°C and thus must be processed at higher temperatures in correspondingly more expensive equipment. The skilled person could not manufacture the fitting shown in the drawing A2 in PPSU, because the material thickness transitions are not suitable for PPSU and, as such, would result in unacceptable internal stresses. Since the fitting of drawing A2 is intended for welding and PPSU requires higher welding temperatures, the wall thicknesses of the prior use pipe fitting are too thin for welding PPSU. In consequence, the subject-matter of claim 1 according to auxiliary request 1 is based on an inventive step, even when starting from the Georg Fischer pipe fitting 727.910.226.

Auxiliary request 4

Injection moulding the pipe fitting according to drawing A2 would lead to internal stresses in PPSU: thus the skilled person would not consider manufacturing the pipe fitting by injection moulding.

The feature "*the plastic body (2) comprises a support rib (6) for supporting the back end (3b) of the reinforcement ring (3)*" of claim 1 according to auxiliary request 4 is based on granted claim 4 and its clarity thus cannot be questioned. A rib is to be understood as an elevation from the outer surface of the fitting which stops with the end of the rib. To provide support for the ring, the rib must be positioned accordingly. The elevation in drawing A2 at the back end of the groove in which the ring is to be seated forms a shoulder and not a rib. Therefore, the prior use of the Georg Fischer pipe fitting 727.910.226 does not disclose or suggest a rib suitable for supporting the reinforcing ring against axial movement.

In consequence, the subject-matter of claim 1 according to auxiliary request 4 is based on an inventive step.

Reasons for the Decision

1. *Procedural violations*

1.1 According to point 8 of the contested decision, the "*Opposition Division uses its discretion to correct this obvious error*" in the text of claim 1 after the oral proceedings had been closed. However, there is no basis in the EPC for such an alleged discretion of the Opposition Division.

Furthermore, even if the opposition division considered there to be an obvious error, there was no corresponding request according to Rule 139 EPC on the part of the patent proprietor who may not have been aware of the existence of such an error.

This results in a threefold procedural violation, because the written decision is based on a text amended by the opposition division:

- which was not submitted by the patent proprietor [The reasoning of the decision is thus not based on an actual request of the patent proprietor - fundamental procedural violation number 1],
- on which the opponent had had no opportunity to comment [The opponent's right to be heard has been violated - fundamental procedural violation number 2] and
- which does not correspond to the decision announced at the end of the oral proceedings (Minutes, page 4, last paragraph) [The decision as announced at the end of the oral proceedings is not reasoned in writing - fundamental procedural violation number 3].

1.2 According to Article 11 RPBA, a board shall remit a case to the department of first instance if fundamental deficiencies are apparent in the first instance proceedings, unless special reasons present themselves for doing otherwise.

1.2.1 The board concurs with the opposition division that the text submitted by the patent proprietor does appear to contain a linguistic error in the text

*"wherein said front end **of the pipe fitting** is the part of the **pipe** which ..."* (emphasis added by the board).

The text *"said front end **of the pipe fitting** is the part of the **pipe**"* does not make sense, because it simultaneously and inconsistently refers the *"front end"* to two different entities, namely the *"pipe fitting"* and the *"pipe"*.

1.2.2 Since the claim concerns a "*pipe fitting*" and not a "*pipe*", the kind of amendment made by the opposition division would appear to be plausible. In this sense the root cause for the procedural violations appears to be trivial. Thus remitting the case to the first instance would merely needlessly delay the proceedings for all parties.

1.2.3 These procedural violations were not objected to in the grounds of appeal or in the response thereto:

- the appellant's grounds are based on the version of claim 1 as amended by the opposition division: the appellant thus discusses the meaning of a term in claim 1, files new documents and advances arguments concerning novelty and inventive step; and
- the respondent (patent proprietor) refers to the main request filed during the opposition oral proceedings (i.e. the text of claim 1 without the amendments made by the opposition division) and does not comment on the discrepancy between what was actually filed and the differing intention concerning the text of claim 1 in section 5 of the minutes or the differing text of claim 1 appearing in the written decision. The respondent similarly files new documents and advances arguments refuting the case against the lack of novelty of claim 1 made by the appellant.

Neither party requested remittal to the first instance.

1.2.4 The board thus has the above special reasons to believe that the parties are not concerned by the procedural violations and instead wish to have the substantive issues discussed before the board.

1.3 In consequence, the board does not remit the case to the first instance and instead proceeds with the substantive issues discussed by the parties on appeal.

2. *Interpretation of the term "snapped on" from the feature of claim 1 (main request) "the reinforcing ring (3) is snapped on the plastic body (2)"*

2.1 Both parties agreed that the expression "snapped-on" is interpreted by the skilled person in accordance with the textbook definition from extract B2: namely, that "*[i]n snap-fits, a protrusion on one part (hook, stud, bead) is briefly deflected during joining to catch in a depression or undercut molded into the other part. The force required for joining varies depending on the snap-fit design. After the brief joining stress, the joint is vibration resistant and usually stress-free*" (page 121, right hand column, section "SNAP-FITS", 1st paragraph).

2.2 The final feature of apparatus claim 1 is worded in terms of a manufacturing step in that "*the reinforcement ring (3) is snapped on the plastic body (2)*".

It is not clear what concrete technical device features are implied thereby for the claimed pipe fitting, once finally assembled, or how it differs from a pipe fitting in which the reinforcement ring was assembled differently (e.g. by insert moulding; by squeezing the ring radially into place; by thermal shrink fitting, etc.).

2.3 In consequence, the subject-matter of claim 1 is only limited by the feature "*the reinforcement ring (3) is snapped on the plastic body (2)*" in that the claimed pipe fitting (in terms of arrangement, dimensions and

materials) is such that it is suitable for snap-fitting the reinforcement ring (3) onto the plastic body (2).

3. *Public prior use of the Georg Fischer pipe fitting 727.910.226*

3.1 The opposition division considered the alleged public prior use based on the evidence A1 to A5 to have been proven and fully substantiated (contested decision, section 2 and point 2.2 in particular).

This was not contested by the parties on appeal.

3.2 Admissibility of brochure A1', drawing A6 and affidavit A7

3.2.1 According to article 12(4) of the Rules of Procedure of the Boards of Appeal (RPBA), the board may hold inadmissible evidence which could have been presented in the first instance proceedings.

3.2.2 In this respect, the course of the opposition proceedings was essentially as follows:

With the notice of opposition dated 20 September 2012 the appellant advanced the public prior use of the Georg Fischer pipe fitting 727.910.226 based on documents A1 to A5.

In the reply dated 26 February 2013 the respondent considered that the public prior use was not sufficiently substantiated and that none of the documents A1 to A5 show a pipe fitting comprising the features of claim 1.

The opposition division's provisional opinion was favourable to the opponent (annex the summons to oral proceedings of 21 October 2013).

In the further letter dated 26 February 2014 (one month before the oral proceedings before the opposition division) the respondent filed a new main request and five auxiliary requests and further indicated: "*the inner diameter of the metal ring is not mentioned*" (page 4, paragraph 3) and "*the dimensions of the metal ring are not disclosed in the material submitted by the opponent*" (page 4, paragraph 6).

With the letter dated 25 March 2014 (one day before the oral proceedings before the opposition division) the appellant filed document E10 with respect to pipe fittings made of polyphenylsulphone (PPSU).

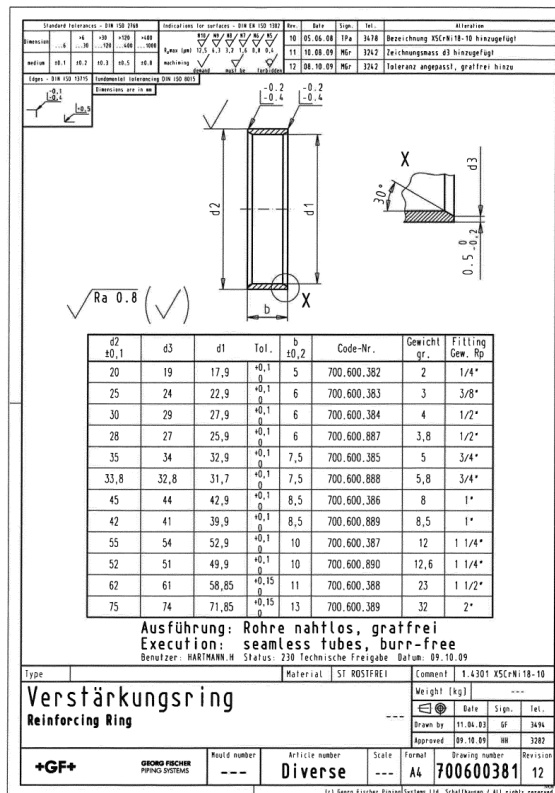
3.2.3 Since the respondent provided the auxiliary requests and new detailed arguments (e.g. concerning the inner diameter of the reinforcement ring of the prior use) only one month before the oral proceedings before the opposition division, the board considers it is only fair to accept brochure A1', drawing A6 and affidavit A7 filed with the grounds of appeal in support of the alleged public prior use (article 12(4) RPBA), especially as the drawing A6 entitled "*Reinforcing Ring*" *prima facie* concerns the contested reinforcement ring and thus constitutes a response to the detailed objections first raised by the respondent in his letter of 26 February 2014.

3.3 Technical drawing A6

However, technical drawing A6 of the reinforcing ring is dated 11 April 2003 and is thus dated after the last

modification date (12 July 2001) of pipe fitting drawing A2.

Since pipe fitting drawing A2 nevertheless already refers to a reinforcing ring drawing number 700.600.381 (i.e. with the same number as the drawing A6), drawing A2 can only refer to an earlier reinforcing ring drawing (also with number 700.600.381 700.600.384) than the CAD-drawing which has been supplied as A6.



Drawing A6

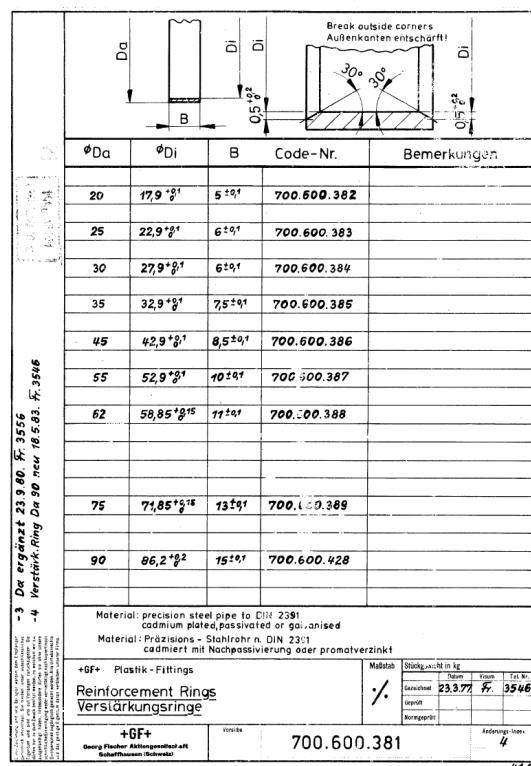
Thus, on closer inspection, drawing A6 cannot be considered relevant for the public prior use of the Georg Fischer pipe fitting 727.910.226 of drawing A2.

3.4 Admissibility of late filed drawing A6'

3.4.1 According to article 13(3) RPBA, amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the board or the other party or parties cannot reasonably be

expected to deal with without adjournment of the oral proceedings.

The board considers that drawing A6' was filed in support of arguments which were already advanced during the opposition proceedings and is sufficiently simple that in itself it does not raise any issues which the board or the other party or parties cannot reasonably be expected to deal with without adjournment of the oral proceedings.



Drawing A6'

In consequence, article 13(3) RPBA does not prevent admitting drawing A6'.

3.4.2 According to article 13(1) RPBA, any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter

submitted, the current state of the proceedings and the need for procedural economy.

The board does not consider that drawing A6' - *prima facie* representing reinforcement rings (title) - is particularly complex so that the complexity of the new subject-matter submitted and the need for procedural economy do not stand in the way of admitting it.

3.4.3 In consequence, the board admits drawing A6' into the proceedings (article 13(1) RPBA).

However, on closer inspection, technical drawing A6' concerns a reinforcing ring made of cadmium plated, passivated or galvanised steel and thus does not concern the stainless steel reinforcing ring referenced in drawing A2. Thus, drawing A6' cannot contribute to clarifying the nature of the prior use reinforcing ring referenced in drawing A2.

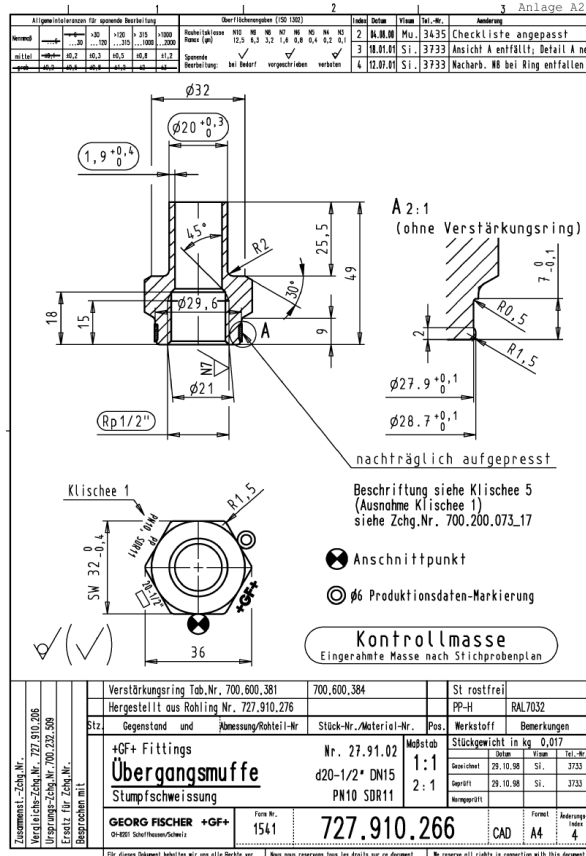
3.5 Conclusions

Neither drawing A6 (too recent) nor drawing A6' (too old) can confirm the configuration of the prior use reinforcing ring referred to in drawing A2.

Affidavit A7 only refers to drawing A6 and is thus not further supported by any evidence concerning the reinforcing ring as referenced by drawing A2.

In consequence, although further documents were filed, there is no further factual development with respect to the situation decided upon by the opposition division with respect to the public prior use of the Georg Fischer pipe fitting 727.910.226.

4. Novelty of the subject-matter of claim 1 with respect to the public prior use of the Georg Fischer pipe fitting 727.910.226



Drawing A2

The opposition division considered the indication "nachträglich aufgepresst" with respect to the reinforcing ring ("Verstärkungsring Tab.Nr. 700.600.381 700.600.384 St rostfrei") on the technical drawing A2 of the pipe fitting 727.910.266 to be ambiguous with respect to the direction (radial or axial) along which the ring was to be subsequently pressed onto the pipe fitting. The opposition division thus concluded that the feature "the reinforcement ring (3) is snapped on the plastic body (2)" (which necessarily implies an axial pressing direction of a suitable ring) is not directly and unambiguously disclosed in the then available evidence A1 to A5 concerning the public prior use (contested decision, section 6.2).

The various attempts of the appellant in terms of drawings A6 and A6' and affidavit A7 to supplement the missing information concerning the reinforcement ring with number 700.600.381 700.600.384 contemporary with drawing A2 having failed, there have been no further factual developments with respect to the situation decided upon by the opposition division with respect to the public prior use of the Georg Fischer pipe fitting 727.910.226. The board thus sees no reasons to depart from the conclusions already reached by the opposition division.

The subject-matter of claim 1 (main request) is new with respect the public prior use of the Georg Fischer pipe fitting 727.910.226 (drawing A2) (article 54 EPC 1973).

5. *Inventive step of the subject-matter of claim 1 (main request)*

5.1 Closest prior art

It was not disputed between the parties that the public prior use of the Georg Fischer pipe fitting 727.910.226 constitutes the closest prior art.

5.2 Differences

The subject-matter of claim 1 (main request) differs therefrom in that the reinforcement ring is snapped on the plastic body.

5.3 Technical effect of difference

According to the patent in suit the advantages are:

- *"Manufacturing the body and the reinforcement ring separately provides the advantages that the pipe fitting is easy to manufacture and it is easier to make the structures and forms of the body and reinforcement ring with the desired properties"* (patent in suit, paragraph [0008]);
- *"Thus, it is easy to manufacture the plastic body 2 and reinforcement ring 3 such that they have all the desired properties"* (patent in suit, paragraph [0018]).

5.4 Objective technical problem

The corresponding objective technical problem is thus to make the pipe fitting easy to manufacture.

5.5 Obviousness

The skilled person is generally familiar with different methods of assembly. According to the extract from textbook B2, the skilled person is not only familiar with snap-fittings but associates the following technical effects with such fittings: *"Snap-fiting [sic] is an economical, rapid, and popular assembly method, and its use is increasing due to the trend toward elimination of separate fasteners in order to simplify manufacturing costs"* (page 121, right hand column, section "SNAP-FITS", 2nd paragraph).

Thus the skilled person starting from the pipe fitting according to the public prior use and seeking an easy way to manufacture the pipe fitting would consider using a snap-fitting - because it is known to simplify manufacturing - as part of his routine work without requiring an inventive step.

The fact that the skilled person is necessarily also familiar with many other means of assembly - as argued on behalf of the respondent - does not change the fact that using a known means of assembly for its known advantages is part of routine work of the skilled person and thus does not require an inventive step. Similarly, the fact that snap-fits require a certain amount of attention to engineering design (Textbook B2, page 121, right hand column, section "SNAP-FITS", 2nd paragraph) is not a sufficient reason for justifying an inventive step, since the skilled person will be familiar with the design requirements for a snap-fit.

5.6 The subject-matter of claim 1 (main request) is not based on an inventive step (article 56 EPC 1973).

6. *Auxiliary request 1*

6.1 Admissibility of document E10

Document E10 was filed by the appellant with the letter dated 25 March 2014 (one day before the oral proceedings before the opposition division) with respect to pipe fittings made of polyphenylsulphone (PPSU). This document thus appears to be a reaction to the new main request and five auxiliary requests filed by the respondent (letter of 26 February 2014, i.e. one month before the oral proceedings before the opposition division), in which polyphenylsulphone was being claimed for the first time in the auxiliary requests.

No decision concerning document E10 was necessary (opposition decision, point 3) during the opposition proceedings, as the contested decision only concerned the main request.

Since document E10 was explicitly filed during the opposition proceedings with respect to the material of the pipe fitting which corresponds to the only added feature of auxiliary request 1, the board cannot see any reason not to admit this document, since it constitutes a legitimate reaction to an auxiliary request based on a feature taken from the description.

In consequence, document E10 is admitted into the proceedings (article 13(1) RPBA).

6.2 Document E10 discloses a pipe fitting with an external thread (paragraph [0009], figure 1) made by injection moulding (paragraph [0012]) of plastic such as polyphenylsulphone PPSU (paragraphs [0008] and [0011]) but does not disclose any reinforcement rings.

6.3 Inventive step of claim 1 (auxiliary request 1)

6.3.1 Closest prior art

The parties did not agree on which of the public prior use of the Georg Fischer pipe fitting 727.910.226 and document E10 constitutes the closest prior art.

The pipe fitting of document E10 exhibits more differences (see point 6.2 above) than the public prior use of the Georg Fischer pipe fitting 727.910.226 (see point 4. above).

Therefore, the board considers that the public prior use of the Georg Fischer pipe fitting 727.910.226 constitutes the closest prior art.

6.3.2 Differences

In addition to the snap-fitting (see point 5.2 above) the subject-matter of claim 1 (auxiliary request 1) differs from the public prior use of the Georg Fischer pipe fitting 727.910.226 in the choice of polyphenylsulphone as the material of the plastic body.

6.3.3 Technical effect

The patent in suit only mentions polyphenylsulphone in paragraph [0001] amongst a list of alternative materials without indicating any particular advantages therefore. The patent in suit does not disclose any technical link between the snap-fitting and the choice of polyphenylsulphone, nor can the board determine any such link. These two differences are thus independent of one another.

6.3.4 Objective technical (partial) problem

The objective technical problem corresponding to the choice of polyphenylsulphone is thus to specify an alternative material for the plastic body.

The respondent's focus on the higher hardness of polyphenylsulphone with respect to the PP-H of the prior use pipe fitting cannot be followed, because the hardness of the pipe fitting material is not addressed in either the patent in suit or in document E10, nor do either of these documents consider a particular level of hardness to be particularly desirable or otherwise advantageous.

6.3.5 Obviousness

The skilled person starting from the public prior use of the Georg Fischer pipe fitting 727.910.226 and seeking an alternative material for the plastic body would learn from document E10 that polyphenylsulphone is a material which is suitable for pipe fittings (see point 6.2 above). The skilled person does not require an inventive step when using a particular material such as polyphenylsulphone for an application (pipe fittings) for which it is known to be suitable.

The fact that the detailed dimensions of the known PP-H pipe fitting of document A2 need to be adapted to the different, particular, known properties (e.g. higher processing temperatures and higher hardness than PP-H) of polyphenylsulphone (e.g. to permit welding or avoid internal stresses during moulding) forms part of the routine work of the skilled person when choosing a material for a pipe fitting and thus, contrary to what was advanced on behalf of the respondent, cannot justify an inventive step.

6.3.6 In consequence, the subject-matter of claim 1 (auxiliary request 1) is not based on an inventive step (article 56 EPC 1973).

7. *Auxiliary request 4 - inventive step*

7.1 Closest prior art

The public prior use of the Georg Fischer pipe fitting 727.910.226 again constitutes the closest prior art (see point 6.3.1 above).

7.2 Differences

With respect to inventive step, the parties only discussed the following additional feature of claim 1 (auxiliary request 4): "*the plastic body (2) comprises a support rib (6) for supporting the back end (3b) of the reinforcement ring (3)*".

This feature is based on granted claim 4 and its clarity (article 84 EPC) thus cannot be questioned in opposition (G 3/14, OJ EPO 2015, 102). According to the respondent, the term "*rib*" is understood as an elevation from the outer surface of the fitting which stops with the end of the rib. This definition was not questioned by the appellant and the board sees no reason to depart from it.

It was not contentious between the parties that an elevation disclosed in drawing A2 at the back end of the groove in which the ring is to be seated forms a support shoulder and not a support rib. This disclosed shoulder is suitable for supporting the reinforcement ring against axial movement.

7.3 Technical effect of this difference

The patent in suit does not disclose any particular technical effect for this feature.

7.4 Corresponding objective technical problem

The board thus concludes that the corresponding objective technical problem is to provide an alternative to the support shoulder for the reinforcement ring.

female threads versus $7 - 2 = 5$ mm for the maximum available space for the reinforcement ring).

- 7.7 No synergistic effect was advanced for any combination of the technical differences and the board cannot identify one either.

Furthermore, the use of injection moulding for manufacturing a plastic body is considered obvious for the skilled person skilled in the design of plastic components (see also point 6.3.5 above).

- 7.8 In consequence, none of the independent differences justifies an inventive step (points 5.5, 6.3.5, 7.5 and 7.7 above).

- 7.9 Conclusion

The subject-matter of claim 1 according to auxiliary request 4 lacks an inventive step (article 56 EPC 1973).

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:



N. Schneider

M. Poock

Decision electronically authenticated