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**Datasheet for the decision
of 11 June 2021**

Case Number: T 0961/17 - 3.2.05

Application Number: 10782540.8

Publication Number: 2499414

IPC: F16L55/165, F16L55/18

Language of the proceedings: EN

Title of invention:

Apparatus and method for installing a liner in a pipe

Patent Proprietor:

Repiper AB

Opponent:

Trelleborg Pipe Seals Duisburg GmbH

Relevant legal provisions:

EPC Art. 54, 108

EPC R. 99(2)

RPBA Art. 12(4)

RPBA 2020 Art. 13(1), 13(2)

Keyword:

Admissibility of appeal - appeal sufficiently substantiated
(yes)

Features of public prior use established beyond reasonable
doubt (yes)

Novelty (no: main request, auxiliary requests 1 to 9)

Admittance (no: auxiliary requests 10 to 12)

Decisions cited:

T 0068/85, T 0222/85, T 0032/10



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0961/17 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 11 June 2021

Appellant:
(Patent Proprietor)

Repiper AB
Flöjelbergsgatan 12
431 37 Mölndal (SE)

Representative:

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Bredgade 30
1260 Copenhagen K (DK)

Respondent:

(Opponent)

Trelleborg Pipe Seals Duisburg GmbH
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47228 Duisburg (DE)

Representative:

Flügel Preissner Schober Seidel
Patentanwälte PartG mbB
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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 17 February
2017 revoking European patent No. 2499414
pursuant to Article 101(3) (b) EPC.**

Composition of the Board:

Chairman

P. Lanz

Members:

O. Randl

C. Brandt

B. Spitzer

T. Karamanli

Summary of Facts and Submissions

- I. The patent proprietor filed an appeal against the decision of the opposition division revoking European patent No. 2 499 414 ("the patent").
- II. Among the documents cited in the decision under appeal, the following are relevant for the appeal proceedings.

Evidence in support of alleged public prior uses:

A1, A2 and A3: sets of offers, order confirmations, packing slips and invoices relating to sales of "Haus-LCR-Packer", issued by Trelleborg epros GmbH to Svensk Röranalys AB in 2007 and 2008 (A1 and A2) and various other clients in 2008 (A3.1 to A3.17)

B1: "Neues Verfahren zur Abzweig-Sanierung in Gebäuden" brochure (short version), published by Trelleborg epros GmbH, dated June 2008

B2: "Neues Verfahren zur Abzweig-Sanierung von Grund- und Fallleitungen in Gebäuden" brochure, published by Trelleborg epros GmbH, dated October 2008

B3: "epros® Drain LCR-B" spare-parts catalogue, dated 26 January 2008

B4.1, B4.2, B4.3: technical drawings issued by Trelleborg epros GmbH, dated 18 January 2008

EV: first declaration in lieu of oath by Mr Andreas Bichler dated 17 December 2014

EV2: second declaration in lieu of oath by Mr Andreas Bichler dated 17 October 2016

Prior-art documents:

D1: US 2004/0144439 A1
D3: US 1,605,782
D4: US 6,276,398 B1
D5: US 6,401,815 B1
D6: WO 2004/079251 A1
D7: WO 93/19322 A1
D14: US 2006/0243337 A1

III. During the oral proceedings before the opposition division, the witness Andreas Bichler was heard. The minutes of the taking of evidence, which was annexed to the minutes of the oral proceedings issued by the opposition division, are referred to as document "WAB".

IV. With the statement of grounds of appeal of 19 June 2017, the following documents were filed:

P1: report issued by SP Technical Research Institute of Sweden, dated 31 March 2017 (4 pages)
P2: invoice of Enterpipe AB for ISAB Rörinfodring AB dated 9 January 2017
P3: signed statement by Repiper AB
P4: epros@DrainLCR-B brochure published by Trelleborg Pipe Seals, version 1.0_2016
P5: epros@DrainLCR-S brochure published by Trelleborg Pipe Seals, version 1.0_2016
P6: EP 2 957 805 A1

V. Together with its reply dated 6 November 2017, the respondent filed the following documents:

F1: expert statement issued by Siebert + Knipschild dated 3 November 2017 (8 pages)

- F2: extract from the Siebert + Knipschild website
- F3: accreditation of Siebert und Knipschild GmbH
by the Deutsche Akkreditierungsstelle
- F4: Extracts from "High Pressure Hoses" catalogue
published by Hydroscand

This triggered a response by the appellant,
dated 25 May 2018, comprising the following documents:

- P7: communication of the EPO relating to amendments of
entries pertaining to the patent proprietor
recorded in the European Patent Register
- P8: three documents describing the Research
Institute of Sweden (RISE)
- P9: documents relating to the accreditation of
SP Sveriges Tekniska Forskningsinstitut by the
Swedish Board for Accreditation and Conformity
Assessment
- P10: US 9,657,883 B2

VI. By letter dated 23 December 2019, the appellant filed
the following additional documents:

- P11: letter of thanks from Seapath Tower to Jesper
Stockfors dated 22 November 2019
- P12: P. Eastman, "Solutions for Vent Stacks
Rehabilitation", 16 December 2019, extracted from
the website pipeliningsupply.com/repiper
- P13a: declaration of Fluxus Relining Supplies AB
- P13b: English translation of document P13a
- P14a: invoice of Fluxus Relining Supplies AB
dated 6 May 2019
- P14b: product information regarding a "Hose for PJS
Fixture Holder, 10m", extracted from the Internet
- P14c: English translation of document P14b

P15: PICOTE OR PIPES Operating & Safety Manual dated
14 November 2019

VII. Finally, in a letter dated 22 December 2020, the
appellant filed the following documents:

P16: declaration of Mr Patrick Hägerström

P17: epros®DRAINLCRB brochure published by Trelleborg
Pipe Seals, release 3.5, dated 2020-09-01

P18: declaration of Mr Bengt Mattson

P19: declaration by Mr Sebastian Schmitz

VIII. The oral proceedings before the board took place
on 11 June 2021.

IX. The appellant (patent proprietor) requested that the
decision under appeal be set aside and that the
opposition be rejected or that the decision under
appeal be set aside and that the patent be maintained
in amended form on the basis of one of auxiliary
requests 1 to 9, filed with the statement of grounds of
appeal by letter dated 19 June 2017, or auxiliary
requests 10 to 12, filed by letter dated 25 May 2018.

The respondent (opponent) requested that the appeal be
rejected as inadmissible or dismissed.

X. Claim 1 of the main request (claims as granted) reads
as follows (the feature references used by the board
are indicated in square brackets):

"[1-1] An apparatus for installing a liner (120) in a
pipe (101) for domestic piping, said pipe including
pipe bends (102a,102b), said apparatus comprising
[1-2] a proximal collar fitting (3) and a distal collar
fitting (4) [1-3] interconnected by a small cross-

sectional area flexible tube or rod (2),
[1-4] an inflatable bladder (110), one end of the inflatable bladder being secured to the proximal collar fitting (3) and the other end of the inflatable bladder being secured to the distal collar fitting (4)
[1-5] with the small diameter flexible tube or rod (2) disposed inside the interior of the inflatable bladder (110), [1-6] a push-pull-turn hose (5) with a proximal end and a distal end, [1-7] said distal end of said a push-pull-turn hose (5) is connected in a releasable way to the proximal collar fitting (3) and [1-8] said push-pull-turn hose (5) is in fluid communication with the interior of the inflatable bladder."

Claim 1 of auxiliary requests 1 to 4 and 9 corresponds to claim 1 of the main request.

Claim 1 of auxiliary requests 5 and 6 differs from claim 1 of the main request by the insertion of the feature "wherein the proximal collar fitting (3) and the distal collar fitting (4) comprises two spaced flanges (13,14)".

Claim 1 of auxiliary requests 7 and 8 differs from claim 1 of auxiliary request 5 in that the expression "the proximal collar fitting (3) and the distal collar fitting (4)" has been replaced by "the proximal collar fitting (3) and/or the distal collar fitting (4)".

Claim 1 of auxiliary request 10 differs from claim 1 of the main request in that the words "having an inner diameter of 35-150 mm and" have been inserted after the words "said pipe" and in that the feature "said push-pull-turn hose (5) being flexible enough to pass

through said pipe bends (102a, 102b)" has been added at the end of the claim.

Claim 1 of auxiliary request 11 differs from claim 1 of the main request in that the feature "wherein said push-pull-turn hose (5) is flexible enough to go through 90° bends (102a,102b) in a 75 mm pipe" has been added at the end of the claim.

Claim 1 of auxiliary request 12 differs from claim 1 of the main request in that the words "having a branch (122)" have been inserted after "a liner (120)" and in that the feature "said bladder comprising a branch (112)" has been added after "the inflatable bladder (110)".

XI. The relevant submissions of the parties can be summarised as follows.

(a) Admissibility of the appeal

(i) Respondent (opponent)

The appellant must set out in its statement of grounds of appeal the reasons why the contested decision should be set aside. The statement of grounds of appeal must deal with the reasons for the decision under appeal. A causal link must be established between the reasons stated in the statement of grounds of appeal and the alleged incorrectness of the contested decision. These requirements are not met. In the contested decision, it is stated that the subject-matter of granted claim 1 is not new over the public prior use. The statement of grounds of appeal only partially deals with the reasons for the decision of the opposition division. Paragraphs 13.1, 13.5, 13.6, 13.7, 13.8 and 15.1

to 15.3 of the decision are not addressed or are only partially addressed. Furthermore, it is not directly recognisable from the statement of grounds of appeal which elements of the decision are wrong and on which facts the appellant bases its arguments. Consequently, the appeal should be rejected as inadmissible due to insufficient substantiation of the grounds of appeal.

(ii) Appellant (patent proprietor)

The decision of the opposition division comprised the decision not to allow the main request, i.e. to revoke the patent as granted. The statement of grounds of appeal clearly contains substantiated arguments why, in the appellant's view, the opposition division decided incorrectly on the main request. Sections 4, 9 and 10 of the statement of grounds of appeal discuss in detail why a "hose" is different from a "rod". This is a clear indication of the reasons why the decision on the main request must be set aside and fulfils the requirements of Rule 99(2) EPC. The admissibility of an appeal can only be assessed as a whole ("Case Law of the Boards of Appeal of the European Patent Office" ("Case Law"), 9th edition, 2019, V.A.2.6.8). Since reasons have been given why the opposition division's decision on the main request was wrong, the appeal is admissible.

(b) Request to exclude documents D9 to D17 from the appeal proceedings

(i) Appellant (patent proprietor)

Documents D9 to D17 should be excluded from the appeal proceedings for having been inadmissibly filed during the first-instance opposition proceedings as they are not used for substantiating any grounds for opposition.

In its submissions, the opponent simply listed a number of documents that allegedly destroy novelty and/or inventive step of claims 1 to 11 alone or in combination. It provided no reasoning whatsoever to support these allegations. In line with decision T 222/85, these objections must not be admitted into the appeal proceedings as they are not substantiated as prescribed by Rule 76(2)(c) EPC. In decision T 32/10, the board concluded that prior-art documents cited in the grounds of opposition and the grounds of appeal without any explanation as to their significance were filed late. This applies to documents D9 to D17. They were cited in the statement of grounds of opposition and the grounds of appeal, but their significance was not discussed by the opponent or the opposition division. Most of the cited documents have little or no relevance for the issues of novelty and/or inventive step of the patent. A suitable definition of the technical field of the current application would be repairing domestic piping with pipe bends by means of an inflatable bladder and liner. None of documents D9, D12, D13 and D15 relate to liners or inflatable bladders. Document D10 does not relate to domestic piping but oil and gas wells and the sealing of one or several well casings.

(ii) Respondent (opponent)

Documents D9 to D17 were filed within the opposition period. Thus, they were admissibly introduced into the proceedings. They cannot be considered belated. Documents D10 to D13 are printed documents searched in the international search report or in the European examination procedure, and documents D16 and D17 were cited in addition to document D8 and come from the same family. It is natural to file these documents in

addition to other documents when filing an opposition. The opponent had reserved further submissions in the notice of opposition at that time (see page 51, point X), in particular with reference to documents D10 and D14 to D17. Due to the added features taken from the description, it then filed its submissions on the new auxiliary requests in the written statement of 18 October 2016 as a reaction to this and additionally based on document D14. Thus, documents D9 to D17 are to be taken into account in these proceedings.

(c) Admittance of the demonstration of an air push rod and a hydraulic hose during the oral proceedings before the board

(i) Respondent (opponent)

The admittance of the demonstration is governed by Article 13(2) of the current version of the Rules of Procedure of the Boards of Appeal (RPBA 2020) because the demonstration was announced long after the board had summoned the parties to oral proceedings (on 24 June 2020). This new means of evidence, which corresponds to new facts, should not be admitted because it could have been offered with the statement of grounds of appeal or even during the first-instance proceedings. The respondent was incapable of checking whether the rod used for the demonstration was indeed the rod used in the public prior use. The appellant had not provided any cogent reasons why there were exceptional circumstances justifying the late introduction of this evidence. It is not correct that the demonstration of a rod constitutes a reaction to the board's provisional opinion because this matter was the object of lengthy discussions during the first-instance proceedings. When asked by the board, the

respondent explained that the demonstration did qualify as evidence. The respondent had not been given time to inspect this evidence, which came as a surprise. It might be necessary for the respondent's representative to be assisted by a technician. The mere fact that it had been announced that something would be presented is not sufficient to make it possible for the respondent to be prepared.

(ii) Appellant (patent proprietor)

The demonstration is an attempt to respond to the statement on page 27 of the communication pursuant Article 15(1) RPBA 2020 where the board boldly asserted, without any explanation, that the rod of the prior use was a pull-push-turn hose (PPTH). It intends to establish that the air push rods are not PPTHs within the meaning of claim 1. Inventions are real technology, whereas the board's provisional opinion suffers from an overly academic and theoretical approach. The demonstration is not made to constitute any proof but intends to give the board the opportunity to get some impression of real life. The appellant does not claim that the rod used is the same as the rod of the public prior use. The demonstration just gives an example of a rod and a hose. Thus, the board can get a rough idea of the differences involved and understand how the skilled person in this particular field would have understood these terms. It is not to be understood as evidence within the meaning of Article 117 EPC.

(d) Claim interpretation

(i) Appellant (patent proprietor)

According to paragraph [0015] of the patent, "the PPTH

is flexible enough to go through said pipe bends and stable enough to transmit a pushing force to the proximal collar fitting at the distal end of the PPTH and stable enough to transmit rotational force to the proximal collar fitting at the distal end of the PPTH". The name PPTH and the disclosure of the description would have made it clear to the skilled person that the element used has to be stable enough to push hard enough. Paragraph [0089] states that the PPTH "is stable enough to be able to push the lining apparatus 100 through the bends, but at the same time the PPTH 5 is flexible enough to pass through the bends". Claim 1 relates to an apparatus. Consequently, the whole apparatus has to pass through the bends. The skilled person would have been aware that the reference to "domestic piping" means that 90° bends may be involved and that necessarily pipes of relatively small diameters are involved. Paragraph [0091] discloses that "the torsional stability of the PPTH 5 is also sufficient to be able to rotate the lining apparatus 100 to a desired rotational orientation". Thus, the whole combination of elements must be such that it can be pushed, pulled and turned. Figure 8 of the patent shows that the device is capable of being used in 45° and 90° bends.

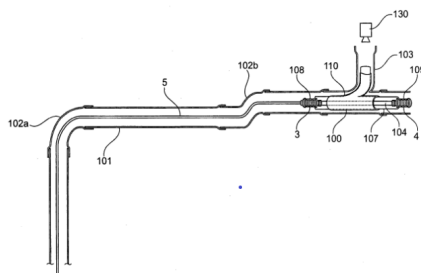


Fig. 8

It is clear in view of this that the rod of the prior art cannot qualify as a PPTH.

The patent comprises examples that make it possible to verify whether an element is a PPTH within the meaning

of claim 1 by following the instructions. There is no need for undue experimentation: routine tests are sufficient to find out. In accordance with T 68/85 (cited in the Guidelines for Examination in the EPO, F.IV.4.10), claims which attempt to define the invention by a result to be achieved "may be allowed if the invention either can only be defined in such terms or cannot otherwise be defined more precisely without unduly restricting the scope of the claims and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description or known to the person skilled in the art and which do not require undue experimentation".

The terms "hose" and "rods" clearly refer to different items. Even a child would be able to distinguish them. This is true not only in this technical field but in general. The term "hose" is neither obscure nor rare. Franklin D. Roosevelt used the term in a famous December 1941 speech ("When your neighbour's house is on fire, you'll lend him a hose ...") and expected to be understood by the general American public. Moreover, the Cooperative Patent Classification (CPC) has a class for "hoses", namely F16L11/00, which falls under general class F16L ("Pipes"). The fact that there is a subclass for "hoses" under the general class "pipes" is an indication that they are to be distinguished. There are about 40 subclasses to F16L11/00. Thus, "hoses" is an entire technical field. It would be interesting to hear the "gérant" of these classes on this matter.

In accordance with chapter II.A.3.6 of "Case Law of the Boards of Appeal of the EPO", 9th edition, 2019, unspecified features are permitted "to avoid an undue limitation of the scope of the claim where the person skilled in the art can verify the result by tests

involving nothing more than trial and error". This condition is fulfilled because the specification provides specific examples for suitable, commercially available hoses in paragraphs [0055] and [0056]. Because the device has to be suitable for pipes of various diameters, it would have been clear that a specific definition of the flexibility or the indication of a bending radius would unduly restrict the scope of protection. Therefore, the use of the expression PPTH is justified and would have made it clear to the skilled person how flexible the hose needs to be to fulfil its role.

(ii) Respondent (opponent)

Claim 1 does not define the hose in terms of flexibility or stability, nor does it indicate through which pipes the PPTH has to pass, to which extent it can be bent, etc. Claim 1 only requires that the PPTH be connected in a releasable way to the proximal collar fitting (feature 1-7) and in fluid communication with the interior of the inflatable bladder (feature 1-8). Moreover, the PPTH has to be suitable for pushing, pulling and turning.

Paragraphs [0015] and [0089] of the patent relate to the subject-matter of dependent claim 5. They cannot be used to interpret claim 1.

The content of the various CPC classes is irrelevant. What is decisive is what is disclosed in the patent and how the claim is to be interpreted.

When examining the disclosure of the prior art, it is not the terminology used for the elements but their technical function that is decisive. The air push rod

of the prior use performs all the technical functions that the PPTH, within the meaning of claim 1, is required to perform.

(e) Proof of the alleged public prior use

(i) Appellant (patent proprietor)

The jurisprudence requires there to be an unbroken chain of evidence relating to the alleged prior use with a degree of certainty beyond all reasonable doubt (T 472/92) since all the evidence of the alleged public prior use lies within the power and knowledge of the opponent. However, there are many holes in the chain of evidence brought forward by the opponent.

A prior-art disclosure of an invention must be a single disclosure. If more disclosures have to be combined to disclose the subject-matter of the invention, this is a question of inventive step. Numerous names for the opponent's products have been in use, such as LCR-Packer, House-LCR-Packer, Haus-LCR-Packer, epros DrainLCR-B, LCR-Hauspacker, DrainLCR-B Sanierungsgerät, DrainLCR-B Packer, Epros-LCR-B and LCR-S. Furthermore, the opponent's pipe-liners come in at least two versions, DN100 and DN150, for use with DN 100 pipes and DN 150 pipes. These two types are lumped together into one embodiment throughout the statement of grounds of opposition and associated documents. Nowhere in the evidence brought forward by the opponent relating to devices delivered to Svensk Röranalys (SR) is **LCR-B** Hauspacker mentioned, only LCR-Hauspacker. Considering the existence of **LCR-S**, there is no certainty as to which type of Hauspacker devices were delivered to SR. This is not clear from the article numbers of the sold products either because they disclose nothing more than

the article group and the connecting angle (document WAB, page 24). It is not clear how the many elements contained in their shipping lists actually appeared when assembled, nor how they functioned as pipe-liners, at the priority date of the opposed patent. It is highly improbable that it would be possible to set a time frame for the sales of the "LCR-Hauspacker" without knowing the exact number of items sold. Page 10, last paragraph, to page 11, fourth paragraph, of the statement of grounds of opposition state that at least one "LCR-Hauspacker" was sold to SR between April and October 2007 (see A1), and at least one more was sold between February and April 2008 (see A2). There is much uncertainty regarding not only when devices were sold but also what was sold.

There is no connection between document bundle A, for a sale in 2007, and the brochures B, which bear dates between January and October 2008. These brochures cannot provide reliable information on what was sold in 2007.

Moreover, the witness statement WAB does not sufficiently support the opponent's claim. As an employee of the opponent, the witness had and still has an economic interest in the outcome of the case. Moreover, ten years have passed since the opponent's products were sold to the patent proprietor. It is unlikely that the witness could correctly remember all the details given in the witness statement. Nevertheless, not a single detailed question was left unanswered. Considering the fact that the statement of grounds of opposition does not disclose the number of "LCR-Hauspacker" sold to SR between April and October 2007 and between February and April 2008, it seems this too should be surrounded by at least some uncertainty

for the witness as well. The witness fails to explain why he is sure that the devices were not LCR-S Hauspacker. Hence, the reliability of the witness is to be questioned. His statement that the air push rod "bends quite easily because otherwise it will not be flexible enough, but it does not fall down completely" (document WAB, page 39) contrasts with a picture taken by the patent proprietor:



Photo of an air push rod manufactured by the Opponent.

The witness exaggerates: at the very most the rod bends slightly. Thus, the reliability of the witness statements is questionable.

When asked whether the client had received documents B, the witness simply replied "yes" (document WAB, top of page 18). However, these documents could not have been sent in 2007, i.e. at a date before they were actually created (in 2008). Thus, the witness makes a clearly incorrect statement. This means that he cannot be relied upon. The same holds true for the declaration in lieu of oath (document EV) because in point 3

Mr Bichler states the brochures were sent with all the devices mentioned before, including the devices sold in 2007 mentioned in point 2.1.

(ii) Respondent (opponent)

The patent proprietor has admitted several times that it had purchased several renovation devices (LCR house packers) from the opponent. The corresponding sales are also supported by Annexes A1 and A2. There is already a "single disclosure" by sale in light of Exhibit A1. Furthermore, the opponent has proven that the delivered LCR house packers were already assembled and could be taken out of the delivery box (together with the attached documents, e.g. Annexes B1, B2 and spare-parts catalogue B3) (see in particular document WAB, page 23 to 26, in particular top of page 24 and the paragraph bridging pages 25 and 26; page 26, last paragraph, bottom of page 31). With regard to the article/product designation "LCR packer, LCR house packer, house LCR packer, Drain LCR-B packer", which has changed over the years, the witness convincingly and completely logically explained that the same rehabilitation device, unchanged since 2006, is meant (see in particular document WAB, top of page 4, all of page 6, bottom of page 7 to bottom of page 8, top of page 27; and the decision under appeal, page 11, first paragraph: "marketing restructuring ... different languages").

The credibility of a witness cannot be called into question just because they are an employee. If this were the case, it would no longer be possible for an opponent to provide any witness evidence from employees. However, this is often necessary to prove the public prior use of an own product. As can be seen

from the entire transcript of the witness's testimony, the witness gave very credible, conclusive, logical and extensive evidence of the public prior use.

In addition, for the assessment of the evidence, all submitted documents on the public prior use are to be taken into account, in particular the extensively documented sales of at least 17 remediation devices to a large number of companies in Germany and abroad (see all Annexes A1 to A3), the affidavits (EV, EV2) with the corresponding Annexes B1 to B4 and the further documents (C1 to C3). The designation "LCR-S Hauspacker" was not and is not used since "S" stands for sewer in the sense of buried pipes and "Hauspacker" is used for building pipes ("B" stands for building).

When asserting that the client had received the brochures B (document WAB, pages 17 and 18), the witness was not making a statement relating to one particular sale.

The witness clearly explained that all the systems sold were exactly the same, regardless of the various denominations used (see document WAB, pages 6 to 8, and document EV, points 2.1 and 3 (page 4)). This also applies to the devices sold before 2008. Therefore, it is possible to take into account the brochures B, even though they bear the date 2008. But even the declaration in lieu of oath EV is sufficient to establish this fact.

Point 3 of declaration EV makes a general statement and applies at least to the devices sold from 2008 onwards. Moreover, Mr Bichler made the explicit statement that the devices sold had the same construction since 2006.

(f) Novelty over the public prior use

(i) Appellant (patent proprietor)

Even if they corresponded to the devices described in documents B1 to B4, the devices sold by the respondent did not comprise all the features of claim 1.

In particular, they do not comprise a PPTH (feature 1-7) and collar fittings (feature 1-2).

PPTH

The devices described in documents B1 to B4 comprise air push rods. Such rods do not qualify as hoses. Both pushing rods and PPTH are hollow conduits with a lumen for fluid communication with the interior of the inflatable bladder. However, **hoses and rods are different technical terms** and describe two different entities in daily use. A hose is defined as:

- a flexible tube for conveying fluids (as from a faucet or hydrant) (Merriam-Webster)
- a flexible tube conveying water, used chiefly for watering plants and in firefighting (Oxford)
- a flexible tube of rubber or plastic through which liquids are conveyed (Wordsmyth)
- a flexible tube for conveying a liquid, as water, to a desired point: a garden hose; a fire hose (Infoplease)
- a flexible tube for conveying a liquid, as water, to a desired point: a garden hose; a fire hose (Dictionary.com)

By contrast, a rod is defined by the above mentioned dictionaries as:

- Merriam-Webster: (1) : a straight slender stick growing on or cut from a tree or bush (2) : osier

(3) : a stick or bundle of twigs used to punish;
also : punishment (4) : a shepherd's cudgel (5) : a
pole with a line and usually a reel attached for
fishing b (1) : a slender bar (as of wood or metal)
(2) : a bar or staff for measuring (3) : scepter;
also : a wand or staff carried as a badge of office
(as of marshal)

- Oxford: a thin straight bar, especially of wood or metal.
- Wordsmyth: a straight, thin, usu. round and inflexible stick, shaft, or bar.
- Infoplease: a stick, wand, staff, or the like, of wood, metal, or other material.
- Dictionary.com: a stick, wand, staff, or the like, of wood, metal, or other material.

It would be difficult, if not impossible, to put out fires or water a garden using a water rod instead of a water hose, even if the rod had a lumen. Similarly, it would be difficult to catch fish using a fishing hose. The claim that a rod is equivalent to a hose is a completely artificial construction which has no connection to reality.

Furthermore, a hose and a rod exhibit **very different material characteristics**. A hose, e.g. a fire hose, can have zero rigidity, whereas a rod will have at least a substantial rigidity and can have infinite high rigidity, e.g. a rigid steel or glass fibre rod. Furthermore, a flexible rod will retain a certain rigidity which serves to straighten the rod back into its general unperturbed straight conformation, i.e. it is resilient. In contrast, a hose has very little tendency to return to a particular shape and is thus not resilient. Therefore, an object recognised by a skilled person as a rod will always have a higher

rigidity and higher resiliency than an object recognised by a skilled person as a hose. A hose, on the other hand, is considered very flexible. A flexible, non-resilient hose and a resilient and rigid rod are shown below.



Sources: <https://en.wikipedia.org/wiki/Hose>



https://en.wikipedia.org/wiki/Fishing_rod

The effect of the varying degrees of rigidity assigned to hoses and rods is most strongly observed when pushing a rod and a hose through a 90° bend. Here the rod, due to its higher rigidity compared with the hose, will push back on the sides of the bend over a much longer resilient stretch than the hose and therefore a pipe bend will pose a much larger obstacle to an air push rod than to a PPTH.

The patent itself distinguishes between the concepts of "hose" and "rod" (besides the PPTH, it mentions a flexible tube/rod), and so does the appellant (see appendixes A3.1, A3.6, A3.8, B1 to B3, P4 and P5). The cited prior art also distinguishes between hoses and rods (see documents D1, D4, D6, D8, D11 and D14). Thus, the skilled person would have clearly understood the difference between a hose and a rod, without the need for supplying an exact value for the bending stiffness. "Hose" and "rod" are not interchangeable denominations used for one and the same entity.

A PPTH functions generally in the same way as an air push rod, but there are significant structural differences. The skilled person must consider axial stiffness (for pushing), torsion stiffness (for turning) and bending stiffness (for being able to push past bends). The greater flexibility of the PPTH makes the hose more resistant to breakage than the air push rod. It is effective in particular in smaller diameter bent piping such as domestic piping. The air push rod is inefficient in such domestic piping (see test reports P1 and F1). The real rods of the prior use do not pass the bends without breaking, regardless of what document D4 says. It is clear that a rod does not have the same quality or degree of effectiveness as a hose when it comes to relining domestic piping comprising pipe bends because its bending stiffness is significantly higher than that of the PPTH.

As the prior use fails to disclose a PPTH, the subject-matter of claim 1 is new in view of the prior use.

Collar fitting

The term "collar fitting" implies that the fitting comprises at least one collar, i.e. a flange. "Collar" and "flange" are synonyms (see dictionaries) and the CPC has class B65D41/0414 for caps "formed by a plug, collar, flange, rib or the like". The prior use device does not clearly show any collar.

(ii) Respondent (opponent)

PPTH

The air push rod of the prior use fulfils all the features that claim 1 requires the PPTH to have.

On page 3 of document B2, there are pictures showing that the packer is pushed through a 45° bend of the pipes by means of the rod. It is apparent that the rod is bent (and therefore flexible) yet stable enough to push the packer. The third picture shows that the packer can also be pulled and turned by means of the rod ("Hochziehen und Drehen"). Document B2 expressly mentions that the packer can be led through bends of 45° and 90° (see page 23, "Bogengängigkeit").

It is not necessarily true that a rod has a higher stiffness than a hose. This depends on what material (mix) it is made of, whether an internal cavity is provided, what the transverse and longitudinal sections look like, etc. Document F4 (Hydroscand hoses), for example, proves that, depending on the desired area of application, different flexible or stiff hoses can be provided and, accordingly, inserts such as steel mesh, wires or glass fibres can be provided.

As can be seen in point 13.7 of the decision under appeal and in the witness testimony WAB (see page 30 and bottom half of page 38 to page 39), the air push rod is a plastic hollow body with glass fibre reinforcement. It is both flexible and sufficiently stable to guide the packer through the bends and turn the packer. Thus, it can be positioned in the correct position in front of the side tube connection. The appellant's arguments based on the terms "rigidity" and

"resilience" are irrelevant as these terms are absent from claim 1. Furthermore, in paragraph [0055] of the patent, there is a broad definition ("flexible enough ... stable enough ..."). The appellant admits that both a hose and a rod may have a certain rigidity on the one hand and a certain flexibility on the other, depending on the design, material, etc.

The test results of document P1 were obtained on false premises and conditions, and the test was not carried out correctly. Thus, no correct conclusions can be drawn from it. In response to test report P1, the respondent commissioned an engineering firm to carry out a test under more reasonable conditions (document F1). Document F1 shows that the system used can be guided through bends of 90° (see the photographs) and that the compressed air push rods can be equated with the PPTH.

The appellant's demonstration during the oral proceedings before the board was not carried out with the rod of the prior use. Moreover, as also stated in document F1, there is a significant difference between passing the whole device through the pipe and introducing the air push rod alone.

Collar fitting

The collar fittings of claim 1 do not necessarily comprise flanges (see Figures 2 and 3 of the patent). The flanges are only mentioned in dependent claim 6. Thus, a fitting comprising a flange is a specific embodiment of a collar fitting. Moreover, the object of the prior use comprises two spaced flanges.

(g) Admittance of the auxiliary requests

(i) Appellant (patent proprietor)

Auxiliary requests 1 to 9

The auxiliary requests comprise a number of different combinations of amendments due to the extensive number of objections filed by the opponent and the many possible outcomes of the proceedings. Auxiliary requests 1 to 9 are convergent. Each constitutes an attempt to overcome one or several of the opponent's objections. Auxiliary requests 1 and 6 comprise the addition of the subject-matter of dependent claims 14 and 15 to independent claim 12. This addition was made in response to point V.2 of the opponent's reply to the statement of grounds of appeal. Auxiliary requests 2 to 4 and 7 to 8 were filed in response to sections V.2, V.3, VIII and IX of the opponent's reply. In auxiliary requests 3 and 5 to 7, a feature was added to independent claim 1 in response to point IX of the opponent's reply. In auxiliary requests 3 and 5 to 8, the subject-matter of dependent claim 6 was added to at least one of the independent claims in response to points VII.1b, VII.2.1, VII.2.2a-4, VIII and IX of the opponent's reply. In auxiliary request 9, the subject-matter of dependent claim 13 was added to independent claim 12 in response to point V.2 of the reply.

Auxiliary requests 10 to 12

In view of the rather surprising decision of the opposition division to consider an air push rod to be equivalent to a PPTH when evaluating novelty, auxiliary requests 10 to 12 were filed to clarify the differences between an air push rod and a PPTH. The latter are

intimately connected to the tool being suitable for use in domestic piping including a pipe bend. Declarations P11 to P13, P16, P18 and P19 prove that domestic piping including a pipe bend comprise important limitations which not only impede but prevent the use of an air push rod for relining such piping. Auxiliary requests 10 to 12 address the objections relating to the erroneous interpretation of an air push rod being equivalent to a PPTH. Auxiliary request 10 comprises additional limitations of independent claims 1, 12 and 18 by defining the inner diameter range of the pipes and clarifying that the hose is flexible enough to pass through pipe bends. Auxiliary request 11 comprises similar limitations of independent claims 1, 12 and 18 by defining the hose flexibility using a specific combination of pipe diameter and bend angle. Auxiliary request 12 comprises a limitation intimately connected to the turning functionality of the PPTH, a functionality pivotal to the success of the tool in question. If it did not have to accommodate branched liners, the hose could simply be a push-pull hose (not a PPTH).

These auxiliary requests were filed three years before the oral proceedings before the board. The respondent had ample time to comment on them and availed itself of this possibility. The requests constitute an appropriate and necessary response to avoid the revocation of the patent. The amendments involved are of little technical complexity. They do not raise any issues that the board or the respondent cannot be expected to deal with. The requests were also filed in response to the opponent's filing of test report F1 and in particular the very last statement of this report that the respondent's system can be used in pipes of 110 mm with a 90° bend. The amendments clarify that

not only the packer but the entire system, including the PPTH, is capable of passing through such a pipe. It is manifest that these requests are *prima facie* highly relevant for the outcome of the case.

When asked why these requests had not been filed with the statement of grounds of appeal, the appellant explained that it had thought that the decision under appeal was too far off the mark not to be reversed by the board. Consequently, the appellant did not think these requests to be necessary.

(ii) Respondent (opponent)

Auxiliary requests 1 to 9

The patent proprietor filed nine auxiliary claims 1 to 9 with the statement of grounds of appeal. In the statement of grounds of appeal, there are only brief bullet-point comments relating to the alleged original disclosure. No further explanations are given on the auxiliary requests. Even though auxiliary requests 1 to 6 and 8 are identical to auxiliary requests 1 to 6 and 8 from the first-instance proceedings and auxiliary request 7 has only been slightly amended in comparison with auxiliary request 7 from the first-instance proceedings, the patent proprietor did not consider it necessary to address the merits of the auxiliary requests. Moreover, none of the auxiliary requests is *prima facie* allowable.

Auxiliary requests 10 to 12

These requests are not convergent and do not *prima facie* overcome the grounds for opposition raised against the main request. The appellant did not explain

why auxiliary requests 10 to 12 were not filed during the first-instance opposition proceedings or with the statement of grounds of appeal. Contrary to the requirements of Article 13(1) RPBA 2020, the appellant has not provided reasons for submitting the amendment at this stage of the appeal proceedings. The assertion that auxiliary requests 10 to 12 serve as potential fall-back positions if the main request is dismissed due to lack of novelty or lack of inventive step is not sufficient in this respect. The reasons were only given during the oral proceedings before the board. This is too late. Moreover, the requests lack convergence and appear to *prima facie* violate the requirements of Articles 54, 56, 84 and 123(2) EPC. The argument that the requests are a reaction to the respondent's submissions is unacceptable because this would make it possible to indefinitely file amendments. Moreover, all the relevant objections had already been raised during the first-instance proceedings. The fact that the object of the public prior use anticipated the subject-matter of claim 1 cannot have come as a surprise.

(h) Further witness hearings

(i) Appellant (patent proprietor)

Having provided a comparative test and declarations on it, the patent proprietor proposes that the declarants be heard as witnesses. Considering the discrepancies between the witness hearing that took place during the first-instance oral proceedings and the multiple declarations submitted by the patent proprietor which all attest to the opposite with regards to the flexibility of the prior use air push rod, at least one person skilled in the art should be heard by the board.

Reasons for the Decision

1. Admissibility of the appeal

In point V of the respondent's letter of 15 July 2020, it was argued that the appeal was inadmissible because the statement of grounds of appeal did not allow the board to understand for which reasons the decision under appeal was wrong and had to be set aside.

This objection is unfounded. The decision under appeal is essentially based on the finding that the alleged public prior uses were indeed established and that the subject-matter of claim 1 of all requests on file was anticipated by these public prior uses. In the statement of grounds of appeal, the appellant raised doubts concerning these prior uses and provided arguments, among other things, why the subject-matter of claim 1 is new over the prior art. Therefore, the statement of grounds of appeal enables the board to understand why the decision is alleged to be incorrect and on what facts the appellant bases its arguments, without first having to make investigations of its own (see "Case Law of the Boards of Appeal of the EPO", 9th edition, 2019, V.A.2.6.3 b)). If this requirement is met it is not necessary for a statement of grounds of appeal to deal with each aspect of the decision under appeal for the provisions of Article 108, third sentence, and Rule 99(2) EPC to be fulfilled. Moreover, it is uncontested that the appeal meets the further admissibility requirements set out in Articles 106 to 108 EPC and Rules 97 and 99(1)(b) and (c) EPC.

Consequently, the appeal is admissible.

2. Request to exclude documents D9 to D17 from the appeal proceedings

Documents D9 to D17 were filed during the opposition period. Therefore, the opposition division had no discretion not to admit these documents into the proceedings, nor is there any legal basis for the board to exclude them from the proceedings. The question of whether the respondent's objections based on these documents are sufficiently substantiated has no bearing on the admissibility of these documents.

Decision T 222/85 deals with a different question (the admissibility of an opposition) and is thus irrelevant for the current case.

In decision T 32/10, documents cited in both the grounds of opposition and the statement of grounds of appeal were not admitted into the appeal proceedings because their significance was not known until shortly before the oral proceedings in appeal (see point 2 of the Reasons). This board is of the opinion that it is not the admittance of the documents as such but the admittance of objections based on them that must be decided upon in such a case.

Consequently, the appellant's request to exclude documents D9 to D17 from the appeal proceedings cannot be allowed.

3. Admittance of the demonstration of an air push rod and a hydraulic hose

The appellant's offer to carry out a demonstration during the oral proceedings comparing a hydraulic hose as PPTH according to the solution of the patent and an

air push rod allegedly corresponding to prior art solutions in support of its oral submissions constitutes an amendment to the appellant's case but not a request for taking evidence under Article 117 EPC. In fact, the appellant clarified that the air push rod they intended to demonstrate during the oral proceedings had recently been bought and was thus neither the object of the alleged prior use nor was it otherwise state of the art.

In application of Article 13(2) RPBA 2020, which applies in the present case in view of Articles 24(1) and 25(1) and (3) RPBA 2020, the demonstration can be taken into account because there are exceptional circumstances justifying its admittance: the demonstration constitutes a legitimate reaction to the board's preliminary opinion expressed in the communication pursuant to Article 15(1) RPBA 2020, in particular regarding the board's provisional interpretation of the term "push-pull-turn hose".

Consequently, the board decided to allow the appellant to carry out the offered demonstration of an air push rod and a hydraulic hose during the oral proceedings.

4. Claim interpretation

4.1 Feature 1-2: "collar fitting"

The Oxford English Dictionary (OED) defines "collar" (in the field of mechanics) as "a ring, circle, flange, or perforated disk, surrounding a rod, shaft, pipe, etc., for restraining lateral motion; forming a steam-tight or watertight joint, and the like; a short piece of pipe serving as a connection between two pipes, etc.". In view of this definition,

the board cannot endorse the appellant's understanding that the terms "collar" and "flange" are synonymous. In mechanical engineering, the term "fitting" normally designates an element designed to bring together and adjust the different portions of engines or machines.

Feature 1-3 requires that the collar fittings be connected by a tube or rod. As can be seen from feature 1-4, each end of the inflatable bladder is secured to a collar fitting. Feature 1-7 adds that the distal end of the PPTH is connected in a releasable way to one of the collar fittings.

Thus, the "collar fitting" of claim 1 is understood to designate an element connected to and surrounding the tube or rod to which the bladder can be secured.

The appellant argued that "collar fitting" should be more narrowly understood, namely as an elongated hollow body with a flange arranged at right angles to the hollow body, usually at an end of the elongated body. However, this limitation is taken from embodiments disclosed in the patent and has no counterpart in the wording of the claim. In the absence of a universal understanding of the expression "collar fitting" in the art, it is not appropriate to narrowly interpret the expression just because the description discloses specific embodiments. On the contrary, the expression must be given the broadest technically meaningful interpretation.

4.2 Feature 1-3

4.2.1 "interconnected"

The OED defines the verb "interconnect" as "to connect

each with the other", the verb "connect" being defined as "to join, fasten, or link together". Thus, the fittings are interconnected by the tube or rod if the tube or rod links them together.

4.2.2 "flexible tube or rod"

The patent does not offer a definition of the terms "tube" or "rod".

The OED defines "tube" as "a hollow body, usually cylindrical, and long in proportion to its diameter, of wood, metal, glass, or other material, used to convey or contain a liquid or fluid, or for other purposes; a pipe". The word "rod" is defined by the same dictionary as "a stick of wood or bar of metal".

Both terms appear to designate a body with two dimensions that are similar and small compared to the third dimension. The main difference between a tube and a rod is that a tube is always hollow whereas a rod normally is not or at least does not have to be.

The OED defines the adjective "flexible" as "capable of being bent, admitting of change in figure without breaking; yielding to pressure, pliable, pliant". In the context of the invention, the flexibility of the tube or rod must be such that it can pass through the pipe bends mentioned in feature 1-1.

The use of the expression "flexible tube or rod" in the patent is in line with these definitions.

4.3 Feature 1-6: "push-pull-turn hose" (PPTH)

The patent does not provide a definition for this

expression.

The OED defines the word "hose" as "a flexible tube or pipe for the conveyance of water or other liquid to a place where it is wanted". The term "hose" as such does not allow conclusions to be drawn on the level of flexibility of the object designated as such. Some hoses are extremely flexible (e.g. fabric fire hoses), whereas others may be quite rigid (e.g. steel-reinforced hydraulic hoses).

A relevant piece of information regarding the PPTH is found in paragraph [0010] of the patent:

"... The flexible but stable push-pull-turn hose provides for a tool to push and position the bladder arrangement effectively. The flexibility of the push-pull-turn hose allows the push-pull-turn hose to pass through narrow and bended [*sic*] pipe and its stability allows it to transmit sufficient push- and rotation force to the bladder arrangement."

Thus, a PPTH is a flexible tube or pipe sufficiently flexible to pass through pipe bends (i.e. completely inflexible hoses are excluded) and sufficiently rigid to transmit forces both along the longitudinal axis of the hose (push-pull) and in a direction of rotation around that axis (turn).

5. Alleged public prior uses

In point 13 of the decision under appeal, the opposition examined the alleged public prior uses. In its annex to the summons to oral proceedings before the opposition division, the opposition division noted

that several of the alleged prior uses were substantiated but not adequately proven and that it was necessary to hear the witness Mr Bichler in this respect. The witness was heard at the oral proceedings (see document WAB). Subsequent to this hearing, the opposition division concluded that the prior uses had been proven beyond any reasonable doubt (point 13.9, last paragraph, of the decision under appeal).

It is uncontested that the opponent had sold devices for installing a liner in a pipe to Svensk Röranalys before the priority date. However, there were two main points of contention, namely (1) whether it was proven beyond reasonable doubt that the devices sold had the features described in documents B1 to B4 and (2) whether these devices anticipated the subject-matter of claim 1.

5.1 Proof of what exactly was sold

The appellant argued that the chain of evidence presented by the respondent was incomplete and could not establish what exactly had been sold beyond all reasonable doubt. The appellant's objections raised during the written procedure can be summarised as follows.

- The respondent had lumped together several different products (namely, pipe-liner versions DN100 and DN150) into one embodiment.
- There was no certainty as to which type of Hauspacker (namely, LCR-B or LCR-S) was delivered to Svensk Röranalys.
- The respondent did not show how the many elements contained in the shipping lists actually "appeared" when assembled and how they functioned.

- As the exact number of items sold was unknown, there is uncertainty about what was sold.

These objections are unpersuasive for the following reasons.

- The assertion that the respondent unduly lumped together different products such as the DN100 and DN150 versions is unfounded.
- As was explained by the respondent, the LCR-B and LCR-S products are designed for different uses. The "B" (or "building") variant is to be used in fall pipes (see e.g. document B1, page 2, first sentence), whereas the "S" (or "sewer") variant is for underground pipes. There is no doubt that the Hauspacker delivered to Svensk Röranalys was of the B type (see e.g. document A1.2: "LCR-Hauspacker für Falleitungssanierung").
- The items contained in the shipping lists are clearly identified, and there is enough information to determine how these items functioned.
- The exact number of items sold is irrelevant in so far as it has been persuasively demonstrated that at least one item had been sold and delivered.

Regarding the witness testimony, the appellant pointed out that:

- the witness had and still has an economic interest in the outcome of the case
- as ten years had passed since the sale, it was unlikely that the witness could remember all the details given in the witness statement
- the witness failed to explain why it was certain that the devices sold were not of the LCR-S type

- at least one statement of the witness appears exaggerated. This casts doubt on the reliability of the other statements.

These objections raised against the witness testimony do not raise significant doubts about the reliability of the witness for the following reasons.

- The mere fact that a witness is employed by the respondent does not *ipso facto* disqualify their testimony, in particular when the testimony serves to corroborate and put in perspective elements established by means of other evidence.
- The appellant has not identified specific elements which the witness should not have been able to remember. It is true that the testimony was given about ten years after the facts under consideration, but these facts occurred shortly after the witness started to work for the opponent company (on 1 January 2007). It is therefore not implausible that the witness could remember certain elements because they were mentioned in his job interview (WAB, page 16, antepenultimate paragraph) or related to specific trade fairs he attended (WAB, page 27, last paragraph). There are also details the witness was not able to remember (WAB, page 38, penultimate paragraph).
- There was no reason for the witness to explain how he could be sure that the devices sold were not of the LCR-S type because the written evidence clearly demonstrates that they were of the LCR-B type.
- The statement concerning the push rod on page 39: "Es hat noch so viel Steifheit, es verbiegt sich ganz leicht, weil sonst wird es nicht flexibel genug sein, aber es fällt nicht komplett runter." is no exaggeration. On the contrary, it seems to

correctly describe what the photo taken by the appellant shows (see page 8 of the statement of grounds of appeal). In the eyes of the board, the most natural interpretation of the witness statement "... es verbiegt sich ganz leicht ..." is that the rod bends slightly (which is apparent from the photograph) and not that the rod can be easily bent (which may be wrong), as the appellant appears to have understood.

The appellant also pointed out that both the declaration EV and the witness testimony contained the incorrect assertion that the brochures B1 to B3, issued in 2008, had been sent when the devices had been sold to Svensk Röranalys in 2007. The board does not share this point of view. First, the statement on page 18 of document WAB that the client had received the brochures is a general statement and does not specifically refer to the sale in 2007. The same holds true for the last sentence of point 3 of document EV. The first sentence of this paragraph does not refer to documents B1 to B3 as having been sent in 2007 but only states that all the devices sold had the configuration described in documents B1 to B4. This is something the witness repeatedly affirmed. Thus, there is no erroneous assertion in documents EV and WAB that would cast a doubt on Mr Bichler's trustworthiness as a witness.

Consequently, the board endorses the opposition division's finding that the public prior uses had been proven beyond any reasonable doubt and that a device with the features described in documents B2 to B4 had been made available to the public.

5.2 Novelty of the subject-matter of claim 1 over the public prior use

As a device for installing a liner in a pipe with the features described in documents B2 to B4 was made available to the public before the priority date of the patent by sale, the question arises whether this device constitutes subject-matter anticipating the subject-matter of claim 1.

The appellant argued that the packer in accordance with documents B2 to B4 did not comprise collar fittings (feature 1-2) and a PPTH (feature 1-6).

NB: In the written proceedings, the appellant had pointed out that feature 1-3 was not disclosed either, but this assertion was not maintained during the oral proceedings before the board.

5.2.1 Collar fittings (feature 1-2)

The argument that the object of the public prior use did not comprise a collar fitting is based on a narrow interpretation of feature 1-2 that the board cannot endorse (see point 4.1 above). When the term is given its broadest technically meaningful interpretation, it encompasses the end elements 5 and 16 shown in document B3. Consequently, this feature cannot distinguish the object of claim 1 from the device sold.

5.2.2 PPTH (feature 1-6)

It is uncontested that the air push rod (document B2, page 6: *Luftschiebestange*) of the device sold by the respondent is suitable for pulling, pushing and turning

the packer in domestic pipes. This is directly and unambiguously disclosed in document B2, pages 3 and 4.

In point 12.1.1 (b) of the communication pursuant to Article 15(1) RPBA 2020, the board expressed its provisional opinion that the air push rod of the prior use also qualified as a hose because:

- the terms "rod" and "hose" have a certain semantic breadth and there is a region of overlap
- the push-pull-turn rod of the prior use appeared to be a flexible tube or pipe sufficiently flexible to pass through pipe bends and sufficiently rigid to transmit forces both along the longitudinal axis of the hose (push-pull) and in a direction of rotation around that axis (turn)

The appellant contested this view. Its core argument is that the rod of the prior use is not a hose and, consequently, cannot constitute a PPTH. In this context, the appellant developed several lines of arguments.

(a) Semantic argument

First, the appellant argued that the rod of the prior use could not possibly be considered a "hose" because "hose" and "rod" are different concepts, as is well known to the skilled person and the public at large.

The board is well aware that the concepts "hose" and "rods" are not interchangeable and that there are rods that cannot reasonably be called hoses and *vice versa*. However, the question to be answered by the board is not whether and to what extent the concepts of "hose" and "rod" are interchangeable. The question to be answered is whether the object referred to as an "air

push rod" (*Luftschiebestange*) in document B2 qualifies as a PPTH within the meaning of claim 1 or, to put it another way, whether it falls within the scope of the expression PPTH. What really matters in this context is not how the element is referred to in document B2 but what the skilled person would have understood the technical properties and functions of this element to be. Based on this understanding, it needs to be examined whether the element falls within the scope of the expression PPTH. This can only be ascertained based on the wording of the claim and its context. Consequently, what the general public would have understood by "hose" is irrelevant for the question at issue. Also, the mere fact that the element is called a "rod" in document B2 does not entail that it cannot be a hose within the meaning of the patent.

The argument that documents P4 and P5 consistently use the term "rod" is without avail because the question to be answered by the board is not whether the air push rods of documents P4 and P5 are indeed rods but whether they qualify as PPTH within the meaning of claim 1. The same holds true for documents D4 and D14, which both describe an inflatable packer and distinguish a "control rod" or "push-rod" for pushing the packer through the conduit, and a "hose" through which the bladder is inflated. This terminology does not entail that the air push rod of the prior use cannot constitute a PPTH within the meaning of claim 1.

(b) Common understanding

The arguments that even a child would be able to distinguish a hose from a rod and that Franklin D. Roosevelt expected to be understood when referring to a hose in one of his speeches are both based on the

observation that there is some sort of intuitive understanding of what a hose is. However, this sort of intuitive concept or archetype is not decisive when dealing with patent claims because the purpose of such claims is to precisely define what is claimed in an objective way and not to provide some intuitive mental picture of what is referred to. To put it another way, the literary genre of patent claims is different to the literary genres of political speeches and children's books, and so are the conventions that need to be observed therein.

(c) Impossibility of a precise definition

The appellant also relied on decision T 68/85. The deciding board examined whether it was permissible to use functional features ("... in an amount producing a synergistic herbicidal effect") in the field of chemistry. It found this to be legitimate if the claimed subject-matter could not be defined more precisely without limiting the scope of the invention, provided that the functional features are sufficiently clear for the expert to reduce them to practice without undue burden, if necessary with reasonable experiments (see point 8.4 of the Reasons).

This decision has no direct bearing on this case because feature 1-6 is not a purely functional feature. However, the appellant used this decision by analogy, arguing that it was legitimate to define the invention in this way because a precise definition of the distinguishing feature was impossible or would unduly limit the scope of the invention. The argument appears to be similar to the additional argument based on decisions cited in chapter II.A.3.6 of "Case Law of the Boards of Appeal of the EPO", 9th edition, 2019, on

whether and to what extent "unspecified" features may be permitted.

However, the *ratio decidendi* of these decisions is not applicable to this case. The very core of the invention appears to lie in the discovery that the devices of the state of the art, which the inventor had purchased, could be improved by using elements of greater flexibility (such as the hoses mentioned in paragraphs [0055] and [0056] of the patent) than the known air push rods. In such a situation, it is necessary to carefully define the distinguishing feature(s). It is not sufficient to rely on using a concept ("hose") which may evoke certain associations in the general public (such as the typical flexibility of a garden hose) but which does not bear closer scrutiny because there are very different types of hoses, not all of which correspond to the stereotype.

(d) Hidden features

The appellant argued that the skilled person would have understood from the reference to "domestic pipes", which often comprise 90° bends, that the PPTH of claim 1 has to be such that it can pass through 90° bends in pipes with the smallest diameter used in domestic pipes. The board cannot endorse this argument because it adds to the claim. The drafter of the patent could have limited the claim accordingly, or at least provided fall-back positions, but they chose not to do so. Claim 1 as it stands does not impose any such limitation on the PPTH. Not all domestic pipes have 90° bends or diameters that cannot be handled by the air push rods of the prior use. Thus, it is not possible to consider this limitation to be implicit in claim 1.

(e) Test reports

The parties heavily relied on test reports P1 and F1 and drew conflicting conclusions from these reports.

Report P1 compares air push rods similar to the ones comprised in the device of the public prior use to Hydroscand Deltaflex hoses. Both were inserted (without a packer) into plastic pipe systems comprising a 90° bend with internal diameters of 296 and 102 mm, and the normal contact forces were measured. It turned out that the air push rod could not be guided through the smaller pipe. In both cases, the contact forces were found to be considerably larger for the air push rods.

Report F1 makes the same comparison using different pipes of diameters 110 and 315 mm. It confirmed that the air push rod alone could not be guided through the smaller-sized pipe but that the complete system (rod + packer) could be guided through. Again, the contact forces were found to be considerably larger for the air push rod.

Both test reports consistently establish that one specific type of hoses, namely the Hydroscand Deltaflex 4 CT 3/8" hoses, performs better than the air push rods under the chosen test conditions. However, this finding has no bearing whatsoever on the question the board has to answer, i.e. whether the air push rods are PPTHs within the meaning of claim 1. To qualify as a PPTH, an element does not necessarily have to perform as well as a Hydroscand Deltaflex hose since claim 1 requires nothing of this nature.

(f) Guidance through examples

The appellant also pointed out that the patent comprises examples that make it possible to verify whether an element is a PPTH within the meaning of claim 1 by following the instructions without the need for heavy experimentation. This argument is unpersuasive because, as a matter of principle, specific examples cannot replace a definition. Such examples arguably fall within the scope of claim 1, but they cannot delimit its contours.

(g) CPC classes

The appellant also relied on the CPC classes, according to which hoses (class F16L11/00) are part of the general class of pipes (F16L) but form a considerable technical field in themselves. However, these observations are without relevance for the question to be decided by the board. The CPC classes are the result of a historical process. They provide a possible way of classifying technical objects, but they are in no way unique or normative. Therefore, as a rule, the fact that a given object is (or is not) part of a given class does not make it possible to conclude that it cannot be part of another, distinct class.

(h) Conclusion on feature 1-6

None of the appellant's arguments was found persuasive. Therefore, the board maintained its provisional opinion that the air push rod of the prior use qualifies as a PPTH within the meaning of claim 1.

5.3 Conclusion

The subject-matter of claim 1 is anticipated by the object of the public prior use. Consequently, the subject-matter of claim 1 is not new within the meaning of Article 54(1) and (2) EPC, and the main request cannot be allowed.

6. Auxiliary requests

6.1 Admittance

6.1.1 Auxiliary requests 1 to 9

The appellant filed auxiliary requests 1 to 9 with its statement of grounds of appeal.

Auxiliary requests 1 to 6 and 8 are identical to auxiliary requests 1 to 6 and 8 which the opposition division decided upon. As such, they are taken into account in the appeal proceedings.

Auxiliary requests 7 and 9 were filed for the first time with the statement of grounds of appeal. According to Article 12(4) RPBA 2007, which applies in this case under Article 25(2) RPBA 2020, the board is empowered to hold these requests inadmissible if they could (and should) have been presented in the first-instance proceedings. Although these requests could in theory have been presented in the first-instance proceedings, the board, exercising its discretion under Article 12(4) RPBA 2007, decided to admit them into the appeal proceedings.

6.1.2 Auxiliary requests 10 to 12

Auxiliary requests 10 to 12 were filed in a letter dated 25 May 2018. In view of Article 25(1) RPBA 2020, their admittance is governed by Article 13(1) RPBA 2020. The appellant justified the filing of these requests as follows:

"... in view of the rather surprising decision of the opposition division to consider an "air push rod" to be equivalent to a "PPTH" when evaluating novelty, the patent proprietor feels compelled to file auxiliary requests clarifying the differences between said "air push rod" and said "PPTH", which differences are intimately connected to the tool being suitable for use in "domestic piping including pipe bends ..." (see appellant's submission of 22 December 2020, paragraph bridging pages 3 and 4)

This explanation is unpersuasive because auxiliary requests 10 to 12 were filed only together with the written response (dated 25 May 2018) to the opponent's reply (dated 6 November 2017) to the statement of grounds of appeal. Had the requests been a reaction to a surprising finding of the opposition division, they could have been filed together with the statement of grounds of appeal. Moreover, the board notes that the opposition division had already considered that the air push rods of the prior art qualified as PPTHs in its provisional opinion annexed to the summons to oral proceedings dated 13 June 2016 because it found claim 1 to lack novelty over the prior art (see point 5 of the opposition division's provisional opinion). Therefore, the opposition division's decision cannot have come as

a surprise to the patent proprietor (now the appellant).

During the oral proceedings before the board, the appellant explained that auxiliary requests 10 and 11 had been filed in reaction to the filing of test report F1 by the respondent. However, test report F1 was filed in reaction to the appellant's filing of test report P1 and essentially confirms the findings of the latter. Therefore, the filing of test report P1 cannot justify the filing of auxiliary requests 10 and 11.

In particular, the very last sentence of document F1 (stating that both the prior-art system and the invention were found to pass through 90° bends in pipes with diameters of 110 and 315 mm) cannot be considered to justify the filing of auxiliary request 10, whose claim 1 requires that the PPTH pass through a bend of a pipe with a diameter between 35 and 150 mm.

Moreover, the board notes that the new auxiliary requests 10 and 11 raise new objections under Articles 84 and 123(2) EPC and fail to provide a clear structural limitation of the claimed subject-matter. Regarding auxiliary request 12, it is observed that it was uncontested during the oral proceedings before the board that the bladders of the devices forming the object of the public prior use had a branch. It is thus not apparent how the amendment to claim 1 of auxiliary request 12 could overcome the lack of novelty of the subject-matter of claim 1 of the main request.

The appellant also argued that auxiliary requests 10 to 12 should be admitted because they were *prima facie* relevant for the outcome of the appeal. This criterion for the admissibility of requests is unknown to the

board. Nevertheless, in view of the fact that the decision under appeal revoked the patent, a request could only be *prima facie* relevant for the outcome of the appeal if it was *prima facie* allowable. However, this is not the case for auxiliary requests 10 to 12, as has been noted above.

In view of all this, the board, exercising its discretion under Article 13(1) RPBA 2020, decided not to admit auxiliary requests 10 to 12 into the proceedings.

6.2 Allowability of the admitted auxiliary requests

6.2.1 Auxiliary requests 1 to 4

Claim 1 of auxiliary requests 1 to 4 is identical to claim 1 of the main request, the subject-matter of which lacks novelty (see point 5.2 above), Article 54(1) and (2) EPC.

Consequently, these requests cannot be allowed.

6.2.2 Auxiliary requests 5 and 6

Claim 1 of auxiliary request 5 differs from claim 1 of the main request in that the proximal collar fitting and the distal collar fitting must comprise two spaced flanges.

The opposition division was of the opinion that this additional feature could not distinguish the subject-matter of claim 1 from the object of the public prior use. It justified this finding as follows:

"The epros DRAIN LCR-B comprises also the additional features. In B3, items 5 and 16, B4.1 and B4.3, the two flanges of the collar fittings ("end element winding box side" / "Wickelbox-Körper" and "end element lockside" / "Endkopf -LCR-B-Zugseite") can be unambiguously identified." (see point 18.1 of the decision under appeal)

The appellant did not contest this finding, nor can the board see any manifest error. Therefore, the subject-matter of claim 1 of auxiliary request 5 lacks novelty over the public prior use (Article 54(1) and (2) EPC).

Consequently, this request cannot be allowed.

The same applies to auxiliary request 6, whose claim 1 is identical to claim 1 of auxiliary request 5.

6.2.3 Auxiliary request 7 and 8

Claim 1 of auxiliary requests 7 and 8 differs from claim 1 of auxiliary request 6 in that the expression "the proximal collar fitting ... and the distal collar fitting" has been replaced by "the proximal collar fitting ... and/or the distal collar fitting". Compared with auxiliary request 6, this amendment broadens the scope of claim 1 and cannot, therefore, restore novelty over the public prior use.

Consequently, the subject-matter of claim 1 of auxiliary requests 7 and 8 lacks novelty over the public prior use (Article 54(1) and (2) EPC).

It follows that these requests cannot be allowed.

6.2.4 Auxiliary request 9

Claim 1 of auxiliary request 9 is identical to claim 1 of the main request, the subject-matter of which lacks novelty (see point 5.2 above), Article 54(1) and (2) EPC.

Consequently, this request cannot be allowed.

7. Further witness hearings

With the letter dated 22 December 2020, the appellant offered three persons to be heard as witnesses before the board and also filed declarations P16, P18 and P19 prepared by these persons and a copy of brochure P17. It was proposed that the witnesses be heard on the contents of the declarations, the circumstances surrounding Mr Hägerström's acquisition of brochure P17, and the characteristics of different relining tools and the state of the relining market.

As can implicitly be taken from the board's communication pursuant to Article 15(1) RPBA 2020, the board did not consider a taking of evidence by hearing the offered witnesses to be necessary and expedient.

With the letter dated 16 April 2021, the appellant reaffirmed its request that the witnesses be heard. According to the appellant, it was essential that at least one person skilled in the art be heard considering the (alleged) discrepancies between the witness testimony (document WAB) which took place during the oral proceeding before the opposition division and the declarations submitted by the appellant on the flexibility of the prior use air push rod. It was also requested that, should the board not

be willing to hear the offered witnesses, the previous witness hearing (document WAB) be disregarded.

In its communication dated 6 May 2021, the board informed the parties that, even in view of the appellant's letter of 16 April 2021, it was not intended that the witnesses be heard at the oral proceedings scheduled for 11 June 2021. If necessary, the admittance of these declarations and offers to hear witnesses into the proceedings in view of Article 13(2) RPBA 2020 would be discussed.

During the oral proceedings before the board, there was no manifest need to hear the witnesses because neither the contents of the declarations P16, P18 and P19, the circumstances surrounding Mr Hägerström's acquisition of brochure P17, nor the characteristics of different relining tools and the state of the relining market became relevant. Also, the appellant did not reiterate its request to have the proposed witnesses heard, even when asked whether it wanted to bring forward any further issues regarding the public prior use or had further requests. Therefore, the board saw no need to formally decide on this matter.

8. Overall conclusion

Neither the appellant's main request nor its auxiliary requests 1 to 9 are allowable.

Auxiliary requests 10 to 12 are not admitted.

Therefore, none of the appellant's request is allowable.

Consequently, the appeal has to be dismissed.

Order

For these reasons it is decided that:

1. The appeal is admissible.
2. The appeal is dismissed.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated