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Datasheet for the decision of 14 June 2022

Case Number: T 0874/18 - 3.2.06

Application Number: 13158355.1

Publication Number: 2775112

IPC: F01N3/04, F01N3/08, F01N3/025, B01D47/06, B01D53/14

Language of the proceedings: EN

Title of invention:
Cleaning system and method for reduction of SOx in exhaust gases

Patent Proprietor:
Alfa Laval Corporate AB

Opponent:
Bilfinger Engineering & Technologies GmbH

Headword:

Relevant legal provisions:
EPC R. 139, 103(1)(a)
EPC Art. 54, 56, 123(2)

Keyword:
Correction of error - obvious error
Admissibility of opposition - (yes)
Admissibility of appeal - entitlement to appeal - (yes)
Novelty - main request (no) - auxiliary request 1 (no)
Inventive step - auxiliary request 2 (yes)
Amendments - added subject-matter (no)

Decisions cited:
G 0001/12, G 0004/88, G 0003/99, T 0960/08

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0874/18 - 3.2.06

D E C I S I O N
of Technical Board of Appeal 3.2.06
of 14 June 2022

Appellant: (Patent Proprietor)	Alfa Laval Corporate AB P.O. Box 73 221 00 Lund (SE)
Representative:	Grünecker Patent- und Rechtsanwälte PartG mbB Leopoldstraße 4 80802 München (DE)
Appellant: (Opponent)	Bilfinger Engineering & Technologies GmbH Alfred-Nobel-Strasse 20 97080 Würzburg (DE)
Representative:	Cohausz & Florack Patent- & Rechtsanwälte Partnerschaftsgesellschaft mbB Bleichstraße 14 40211 Düsseldorf (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 25 January 2018 concerning maintenance of the European Patent No. 2775112 in amended form.**

Composition of the Board:

Chairman	M. Harrison
Members:	M. Dorfstätter
	W. Ungler

Summary of Facts and Submissions

I. An opposition was filed against European patent No. 2 775 112. In the notice of appeal, the name of the opponent was indicated as "Babcock Noell GmbH" whilst in the electronic form (EPA 2300E) it was "Schmitz Cargobull AG".

On the same day as the opposition was filed, the EPO sent a letter of confirmation of receipt, indicating "Schmitz Cargobull AG" as opponent.

In a fax of 18 October 2016 the opponent requested a correction of the name of the opponent, referring to an undocumented telephone conversation with the opposition division on 13 October 2016.

By fax of 20 October 2016 the opponent submitted a corrected version of form 2300 and referred to another undocumented telephone conversation with the opposition division on 18 October 2016.

In a submission dated 9 November 2016 the proprietor objected that the request for correction did not specify which information was erroneous and that the opponent referred to phone calls which were not documented in the file. It further pointed out that the official communications indicated "Babcock Noell GmbH" as the opponent, whilst the patent register still showed "Schmitz Cargobull AG". It argued that the opponent's identity was thus unclear.

On 22 November 2016 the EPO (in the name of the opposition division) issued a "communication indicating deficiencies in the notice of opposition which may be

remedied". In the annex thereto it stated that there was no indication in the file why it was obvious that the mention of the wrong company name was a formal mistake, nor what the reason for the mistake was. The Office indicated that its preliminary opinion was that the identity of the opponent was not clearly established by the end of the opposition period and that the opposition might therefore be inadmissible.

In a letter dated 28 November 2016 the opponent again requested correction of an error under Rule 139 EPC and submitted arguments and evidence concerning the erroneous indication of "Schmitz Cargobull AG" as the opponent.

On 12 January 2017 the EPO issued a "Communication regarding a request for Correction R. 139" in which it stated that in the opinion of the formalities section of the opposition division, the criteria for a correction of EPO form 2300 were satisfied and that the request for correction was allowed.

II. In its interlocutory decision, the opposition division found that the opposition was admissible and that, on the basis of auxiliary request 2, the patent met the requirements of the EPC.

III. Appeals were filed by the opponent and the patent proprietor against this interlocutory decision. As both parties appealed, they will be referred to as "opponent" and "proprietor" respectively in the following.

IV. The following documents are relevant for the present decision:

D1 EP 1 857 169 A1

D7 US 2011/0033359

HRB 23335 excerpt from the commercial register for "Babcock Borsig Steinmüller GmbH", later "Bilfinger Engineering & Technologies GmbH"

HRB 7156 excerpt from the commercial register for "Babcock Noell Nuclear GmbH", later "Babcock Noell GmbH" and again later "Bilfinger Noell GmbH"

V. The proprietor requested that the decision under appeal be set aside, the opposition be rejected as inadmissible and the patent be maintained as granted (main request), in the alternative that the patent be maintained in amended form on the basis of any of auxiliary requests I to XXVI as filed with the statement of grounds of appeal. Furthermore, the proprietor requested that the opponent's appeal be rejected as inadmissible.

VI. The opponent requested that the decision under appeal be set aside and the patent be revoked. Furthermore, the opponent requested reimbursement of the appeal fee.

VII. The Board issued a summons to oral proceedings and a subsequent communication under Article 15(1) RPBA 2020 (in the following referred to as "the Board's communication") containing its provisional opinion, in which it indicated *inter alia* that the opposition and the appeal were considered to be admissible. The Board also noted that novelty and inventive step of the subject-matter of claim 1 of the main request (patent as granted) and auxiliary requests 1 and 2 would have to be discussed. It indicated that further points of discussion would be whether the requirement of Article 123(2) EPC was met by auxiliary request 2 and whether

the opponent's right to be heard had been violated by the opposition division due to a lack of reasoning in the contested decision.

VIII. Oral proceedings were held before the Board on 14 June 2022.

IX. The parties' final requests were the same as their initial requests.

X. Claim 1 of the main request reads as follows (including the feature-by-feature analysis as provided by the opponent):

(a) "Cleaning system (1) for the reduction of SO_x and particulate matter in exhaust gases from a marine combustion engine (104), burner or boiler, the cleaning system comprising:

(b) a first scrubber process loop (100) comprising a first scrubber (102) and a first water circulation tank (101), wherein water from the first water circulation tank is arranged to circulate in the first scrubber process loop (100),

(c) the first scrubber (102) being arranged to receive exhaust gases from the combustion engine (104), burner or boiler and water from the first water circulation tank (101), which water, at least partly, is arranged to be evaporated to water vapor inside the first scrubber (102) by contact with the exhaust gases, whereby the water vapor and the exhaust gases form humid exhaust gases;

(d) a second scrubber process loop (200) comprising a second scrubber (202) and a second water circulation tank (201), wherein water from the

second water circulation tank (201) is arranged to circulate in the second scrubber process loop (200),

(e) a communication (400) between the first and the second scrubber (102, 202) allowing transfer of the humid exhaust gases from the first scrubber (102) to the second scrubber (202);

(f) the second scrubber (202) being arranged to receive water from the second circulation tank (201), which water is arranged to condensate, inside the second scrubber (202), the water vapor in the humid exhaust gases at least partly; and

(g) a communication (300; 300') between the first and the second scrubber process loop (101, 201) allowing a reflux of water from the second scrubber process loop (200) to the first scrubber process loop (100),

(h) the cleaning system being characterized in that it further comprises an arrangement for supply of an alkaline agent (230) to at least the second scrubber process loop (200),

(i) wherein at least 60% and more preferred at least 90% of the total amount of the alkaline agent supplied to the cleaning system (1) is supplied to the second scrubber process loop (200)."

XI. Claim 1 of auxiliary request 1 reads as claim 1 of the main request, but with feature (a) amended as follows (the amendment being underlined for ease of reference):

(a) "Cleaning system (1) for the reduction of SO_x and particulate matter in exhaust gases from a marine combustion engine (104), burner or boiler <u>on board a ship</u>, the cleaning system comprising:"

XII. Claim 1 of auxiliary request 2 reads as claim 1 of the main request, but with feature (a) amended as follows (the amendments being underlined for ease of reference):

(a) "Ship comprising a cleaning system (1) for the reduction of SO_x and particulate matter in exhaust gases from a marine combustion engine (104), burner or boiler on board the ship, the cleaning system comprising:"

Claim 9 of auxiliary request 2 reads as follows (including the feature-by-feature analysis as provided by the opponent):

(A) "Method of reducing SO_x and particulate matter in exhaust gases
(AA) from a marine combustion engine (104), burner or boiler on board a ship
(AB) by using a cleaning system (1), the cleaning system comprising:
(B) a first scrubber process loop (100) comprising a first scrubber (102) and a first water circulation tank (101);
(C) a second scrubber process loop (200) comprising a second scrubber (202) and a second water circulation tank (201);
(D) a communication (400) between the first and the second scrubber (102, 202);
(E) a communication (300; 300') between the first and the second scrubber process loop (100, 200); and
(F) an arrangement for supply of an alkaline agent (230) to at least the second scrubber process loop (200),
the method comprising:

(G) circulating water from the first water circulation tank (101) in the first scrubber process loop (100),

(H) circulating water from the second water circulation tank (202) in the second scrubber process loop (200),

(I) supplying at least 60% and more preferred at least 90% of the total amount of the alkaline agent supplied to the cleaning system (1) to the second scrubber process loop (200),

(J) receiving exhaust gases from the combustion engine (104), burner or boiler, and water from the first water circulation tank (101), in the first scrubber (102), which water, at least partly, is evaporated to water vapor inside the first scrubber (102) by contact with the exhaust gases, whereby the water vapor and the exhaust gases form humid exhaust gases,

(K) transferring the humid exhaust gases from the first scrubber (102) to the second scrubber (202),

(L) receiving water from the second circulation tank (201) in the second scrubber (202), which water condensates, inside the second scrubber, the water vapor in the humid exhaust gases at least partly, whereby SO_x contained in the exhaust gases oxidizes into sulphates; and

(M) providing a reflux of water from the second scrubber process loop (200) to the first scrubber process loop (100)."

Claim 14 of auxiliary request 2 reads as follows:

"Use of the cleaning system according to any of claims 1-8 onboard a ship for the purpose of reduction of SO_x

and particulate matter in exhaust gases from the marine combustion engine (104), burner or boiler."

XIII. The opponent's arguments may be summarised as follows:

Admissibility of the opposition

The opposition was admissible. The name "Schmitz Cargobull AG" in the field "opponent" on the form 2300 was an error. Its correction had been requested without delay as soon as the opponent had become aware of it. The formalities section was competent to decide on the request for correction under Rule 139 EPC while the opposition division had to decide whether the opposition was admissible. The notice of opposition showed the correct name. This was clear from the area of activity of the opponent, which was similar to the one of the proprietor, whilst "Schmitz Cargobull AG" was active in an entirely different field. Together with form 2300, the notice of opposition constituted a single opposition. There was thus no ambiguity as to whether it could have been the intention to file two separate oppositions.

Admissibility of the appeal

The opponent's appeal was admissible. "Bilfinger Engineering & Technologies GmbH" was the successor in title of the opponent "Babcock Noell GmbH" and as such entitled to file the appeal. The succession in title was also indicated in the statement of grounds of appeal. Together with the evidence submitted on the same day, this constituted an implicit request for transfer of the opposition.

Main request - novelty

Claim 1 of the main request was not novel over D7. In particular, D7 also disclosed features (a), (h) and (i). The cleaning system of D7 was suitable for the reduction of exhaust gases, and therefore also for the reduction of exhaust gases from a marine combustion engine, burner or boiler. The latter two were not even defined to be of marine application. The supply line 7 which supplied NaOH to the so-called 'first stage' in D7 constituted 'an arrangement for supply of an alkaline agent to the second scrubber process loop' as defined in the claim. All of the NaOH, and thus 'at least 60% of the alkaline agent' defined previously in feature (h), was 'supplied to the second scrubber process loop.'

Auxiliary request 1 - novelty

Claim 1 of auxiliary request 1 lacked novelty over D7 for the same reasons as for the main request. The additional limitation in feature (a) merely referred to the purpose. The cleaning system of D7 was equally suitable for the reduction of SO_x and particulate matter in exhaust gases from a marine combustion engine, burner or boiler situated on a ship.

Auxiliary request 2 - inventive step

Claim 1 of auxiliary request 2 did not involve an inventive step in view of D1 taken together with the teaching of D7. The subject-matter of claim 1 differed from D1 by features (h) and (i). Feature (i) only referred to the alkaline agent defined in feature (h) and thus did not define that one and the same alkaline agent was supplied dominantly to the second scrubber

process loop. To fulfil the definitions of the claim it was sufficient to supply two different alkaline agents to the system whereby all the alkaline agent that was supplied to the second scrubber process loop was all of one and the same kind. The objective technical problem solved by supplying an alkaline agent to both scrubber process loops was to improve the reduction of SO_x. The skilled person would consider prior art from land based applications including D7 and apply that principle in the marine application of D1.

Auxiliary request 2 - Article 123(2) EPC

The subject-matter of claim 1 of auxiliary request 2 extended beyond the content of the application as filed. A ship was not derivable therefrom, only the use of the system on a ship.

Auxiliary request 2 - refund of the appeal fee due to a substantial procedural violation

The opponent's right to be heard was violated by the opposition division due to a lack of reasoning in the impugned decision with regard to the arguments made in respect of Article 123(2) EPC. There was a clear discrepancy between the minutes and the decision. Whilst the minutes indicated that "[t]he opponent explained in detail why a ship was not directly derivable from the original application", the opposition division stated in the decision that "[t]he opponent did not present any substantive arguments concerning Article 123(2) EPC." Not dealing with the opponent's arguments in the decision constituted a substantial procedural violation. The appeal fee thus had to be refunded.

XIV. The proprietor's arguments may be summarised as follows:

Admissibility of the opposition

The opposition was inadmissible. It was not clear whether the name "Schmitz Cargobull AG" in the field "opponent" on form 2300 was an error or whether it had been intended to file two separate oppositions. Schmitz Cargobull AG could theoretically have had an interest in a separate opposition. The opponent provided no evidence as to why "Schmitz Cargobull AG" appeared on form 2300 although the burden of proof that an error had occurred was shifted to the opponent in this case. Furthermore, the request for correction was not filed without delay. The opponent should have become aware of the error already when receiving the confirmation of receipt of the opposition by the EPO, indicating "Schmitz Cargobull AG" as the opponent. The receiving section was not competent to decide on the request for correction under Rule 139 EPC.

Admissibility of the appeal

The appeal was inadmissible. "Bilfinger Engineering & Technologies GmbH" was not the universal successor in title of the opponent "Babcock Noell GmbH". In the present case the opponent status could only have been transferred by assignment of certain business assets. However no request for a transfer of opponent nor any evidence supporting such a request of transfer of status had been filed. The indication in the statement of grounds of appeal in this regard was not sufficient, in particular as it was contradictory to the denomination of "Babcock Noell GmbH" as the opponent in the opponent's second letter submitted on the same day

as the statement of grounds of appeal. "Bilfinger Engineering & Technologies GmbH" was thus not entitled to file the appeal.

Main request - novelty

Claim 1 of the main request was novel. D7 did not show features (a), (h) and (i). Feature (a) defined a true suitability and not just a hypothetical possibility. The attribute 'marine' referred to all three of the combustion engine, burner and boiler. In the context of the patent it was clear that the cleaning system had to be suitable to be located on a ship. The cleaning system of D7 was not suitable therefor as the large amount of gypsum that was produced could not be stored on a ship. In D7, an alkaline agent was not only supplied to the so-called 'first stage' in the form of NaOH, but also to the preceding stage in the form of $CaCO_3$. The 'total amount of alkaline agent' in feature (h) was thus to be read as the sum of these two agents. However, in D7 the greater part was supplied to the preceding stage and not to the first stage constituting the second scrubber process loop in the sense of features (h) and (i).

Auxiliary request 1 - novelty

The additional definition 'on board a ship' merely stated what was implicit anyway. Claim 1 of auxiliary request 1 was thus novel for the same reason as applied to the main request.

Auxiliary request 2 - inventive step

Claim 1 of auxiliary request 2 involved an inventive step. The subject-matter of claim 1 differed from the

one in D1 by features (h) and (i). Features (f), (h) and (i) had to be read together. It was thus the second scrubber process loop in which both condensation and the greater part of exhaust gas cleaning occurred. The objective technical problem solved by supplying at least 60% of the alkaline agent to the second scrubber process loop was to adapt the process for its use on a ship, to require a smaller footprint and to operate the cleaning system at low cost. The skilled person would not consider D7 as it related to a large-scale land-based coal-fired power station. They would not extract an abstract principle therefrom and they would not apply the limestone-gypsum process in the marine application of D1.

Auxiliary request 2 - Article 123(2) EPC

The subject-matter of claim 1 of auxiliary request 2 did not extend beyond the content of the application as filed. A ship was implicitly disclosed by the claimed use of the cleaning system in relation to a marine combustion engine, burner and boiler, as well as by numerous references to ships throughout the application.

Auxiliary request 2 - refund of the appeal fee due to a procedural violation

The opponent's right to be heard was not violated as it was evident that the opposition division deliberated on the issue of Article 123(2) EPC and considered the opponent's comments. In its decision it also indicated why it found that the requirement of Article 123(2) EPC was met.

Reasons for the Decision

1. *Admissibility of the opposition*

The opposition is admissible. Only a single opposition has been filed. The correct opponent's name at the time of filing the opposition was "Babcock Noell GmbH". The request for correction under Rule 139 EPC was submitted without delay. The formalities section was competent to decide on this request.

1.1 The proprietor's argument, that it was not clear whether the name "Schmitz Cargobull AG" in the text field "opponent" on form 2300 was an error or whether it was intended to file two oppositions, is not accepted, as explained below. It further argued that the burden of proof was shifted to the opponent and that this was a heavy one. This does not however alter the Board's findings, for the reasons also set out below.

As argued by the opponent, the notice of opposition, together with the electronic form 2300E and the payment of the opposition fee, establish a complete set of all necessary acts to file an opposition against a European patent. For the sake of completeness, it is noted that the filing of joint oppositions by the filing of one notice of opposition and the payment of one opposition fee is also accepted in the case law (cf. G 3/99, Headnote point I). Thus, even if there had been the intention of filing the opposition on behalf of two opponents, as argued by the appellant, this would not necessarily have led to the inadmissibility of the present opposition. In its letter dated 28 November 2016 the opponent submitted arguments and evidence supporting its contention that the indication

of "Schmitz Cargobull AG" as the opponent was erroneous.

In summary, the opponent argued therein that the notice of opposition was submitted in the name and on behalf of Babcock Noell GmbH and that it was signed in handwritten form, whilst the electronic form was only filed because this was required by the EPO whenever an opposition is filed by electronic means. In the assessment of the opponent's true intention, the notice of opposition thus outweighed the electronic form. Furthermore, Babcock Noell GmbH operated in the same area of business and was a direct competitor of the proprietor, whilst Schmitz Cargobull AG was a company producing trailers for commercial vehicles, which was remote from the technical field of the contested patent.

As evidence, the opponent submitted a copy of the file in the opponent's own patent management system, from which it was apparent that Babcock Noell GmbH was the client ordering the opposition and to which the draft thereof was sent. A further letter was submitted as proof that the filing of the opposition was reported to Babcock Noell GmbH.

These arguments and the evidence provided were subsequently accepted by the EPO, first when allowing the request for correction by the formalities section in its communication of 12 January 2017, and later by the opposition division in the contested decision, where it found that the opposition was admissible. Also, the Board indicated in its communication that it considered that the true intention was to file an opposition on behalf of Babcock Noell GmbH (see item 3, first paragraph).

Once a party has submitted conclusive proof of its allegations, it has complied with the requirement of the burden of proof. The evidence need not prove the facts with absolute certainty in order to be deemed conclusive; it suffices that it proves that they are highly probable. If a party has discharged its burden of proof, the counterparty seeking to refute the conclusively established facts by way of counter-arguments bears the burden of proving the alleged facts (see Case Law of the Boards of Appeal, 9th edition 2019, III, G 5.2.1). In the present case, the proprietor did not allege any such facts which could cast doubt on the opponent's statement that the indication of the opponent's name on form 2300E was erroneous. It merely referred to the "heavy burden of proof" as required by case law, without indicating which of the opponent's arguments and which of the provided evidence did, in the proprietor's view, not meet this heavy burden. The mere possibility that Schmitz Cargobull AG could theoretically have had an interest in a (separate) opposition against the patent is no more than an unsubstantiated allegation of the proprietor.

As there is no objective reason to doubt any of the opponent's arguments or evidence, the Board concludes that it is sufficiently proven that an error had occurred on the opponent's side when the electronic form 2300E was filled in with the name of "Schmitz Cargobull AG" and that the true intention had been to file the opposition in the name of "Babcock Noell GmbH".

1.2 The proprietor's argument that the request for correction was not filed without delay and that the

opponent should have become aware of the error already when receiving the confirmation of receipt of the opposition by the EPO, indicating "Schmitz Cargobull AG" as the opponent, is also not accepted.

The boards of appeal have developed a large amount of case law as to when a request for correction under Rule 139 EPC (or Rule 88 EPC 1973 respectively) is allowable. In G1/12, the Enlarged Board of Appeal summarised this in four principles (a) to (d), see G1/12, Reasons 37. Principle (d) reads as follows:

> "The request for correction must be filed without delay."

It is clear that such delay can only start once a party has become aware of its error. This was also not contested by the proprietor in the present case. However, the proprietor argued that the opponent should have noticed its error when receiving the confirmation of receipt of the opposition by the EPO, indicating "Schmitz Cargobull AG" as the opponent. The Board does not share that view for the following reasons:

The acknowledgement of receipt contains the basic information on the opposition, in particular the patent number, the filing date, a list of the documents filed and also the name of the opponent. In this context, it must be taken into account that the opponent's representative (or their assistant) received the acknowledgement of receipt immediately after the electronic transmission of the documents. It can therefore be assumed that when having received the acknowledgement of receipt they still had in mind the opponent's name erroneously entered on Form 2300E. Thus, it would be overstretching the due diligence

standards to require the error to be detected by the representative (or their assistant) at that point in time, since the opponent's name indicated in the acknowledgement of receipt was identical with the name entered on Form 2300E.

Furthermore, according to the proprietor, the error should have been detected due to the opposition division's communications informing the parties of the filing of a notice of opposition. The Board does not share that view for the following reasons: The patent proprietor was informed of the filing of a notice of opposition by "Schmitz Cargobull AG" according to Rule 79(1) EPC by communication of 12 August 2016. This communication was sent to the opponent only as an annex to the communication according to Rule 79(2) EPC informing the opponent that no further opposition has been filed. In view of the fact that the communication according to Rule 79(2) EPC was of no procedural significance for the opponent in the present case, there was also no reason for the opponent's representative to check the correctness of the opponent's name indicated in the annex to that communication.

In view of the above, the Board has no reason to doubt the opponent's submission that it only became aware of the incorrectness of the name indicated on Form 2300E on 13 October 2016, when checking the European Patent Register. The Board thus concludes that the request for correction under Rule 139 EPC was filed without delay.

1.3 The proprietor further argued that the receiving section was not competent to decide on the request for correction under Rule 139 EPC. This argument was refuted by the Board in its communication in

preparation for the oral proceedings (see item 3., second paragraph), where the Board stated the following:

> "[I]t is the formalities officer of the opposition division who is entrusted with "decisions concerning the correction of errors in documents filed with the European Patent Office, with the exception of the description, claims and drawings (Rule 139 EPC)", as laid out in Article 2, point 21 of the "Decision of the President of the European Patent Office dated 12 December 2013 concerning the entrustment to non-examining staff of certain duties incumbent on the examining or opposition divisions" (cf. OJ 2014, A6). In that regard it is noted that the formalities officer did not take a decision on the admissibility of the opposition in the present case. On the contrary, the opposition division decided on the admissibility of the opposition (reference is made to points 2.1.1 and 2.1.3.2 of the impugned decision)."

The Board thus considered that both allowing the request for correction and the decision that the opposition was admissible were made by the respective competent authority. The proprietor did not challenge this finding after the Board's communication. The Board thus has no reason to deviate from its preliminary opinion and confirms same herewith.

2. *Admissibility of the appeal*

The appeal is admissible. "Bilfinger Engineering & Technologies GmbH" was entitled to file the appeal.

2.1 As argued by the proprietor, "Bilfinger Engineering & Technologies GmbH" is indeed not the universal successor in title of the opponent "Babcock Noell GmbH". As a consequence, the opponent status can only be transferred by assignment of certain business assets. The Board is satisfied that this happened in the present case, when the business area of environmental technology was transferred from "Babcock Noell GmbH" to "Bilfinger Engineering & Technologies GmbH", as documented in HRB 23335.

2.2 The proprietor referred to T960/08, Reasons 2.2 and G4/88, arguing that for the opponent status to be considered transferred in case of a transfer of business assets, formal requirements had to be fulfilled. The procedural validity of a transfer was dependent on both the submission of a request as well as on the provision of evidence of legal succession. Both were lacking in the present case. The Board however finds differently.

2.2.1 *Alleged lack of a request for a transfer of opponent status*

In its notice of appeal, the opponent explicitly referred to the succession in title from Babcock Noell GmbH to Bilfinger Engineering & Technologies GmbH and submitted HRB 23335 as evidence that the relevant business area of environmental technologies was transferred to them. Together with the opponent's second letter of the same date, including HRB 7156 as further evidence therefor, the Board finds that in the present case this constitutes an implicit request for a transfer of opponent status before the EPO since otherwise the submitted evidence would have no meaning.

The proprietor argued that the subject-field of the opponent's second letter still indicated Babcock Noell GmbH as the opponent. This allegedly showed that Babcock Noell GmbH was still the intended opponent when the appeal was filed. With reference to T960/08 (Reasons 2.2) it further argued that this indication was in contrast to the procedural behavior and thereby detrimental to an implicit request for transfer of opponent status.

This argument is not persuasive. On the day when the opponent's appeal and its second letter were filed, the transfer contract had already been in force and registered in the commercial register. However, the transfer of opponent status before the EPO is only valid once the EPO has accepted it. On that day, the opponent status of Bilfinger Engineering & Technologies GmbH was thus still pending finalisation. The Board is satisfied that the subject-field indicated the opponent as it was on the EPO's file on that day, whilst the business area relating to the appeal had already been transferred. Other than in T960/08, where the appellant contradicted itself when submitting that notwithstanding the transfer of opposition the original opponent remained party to the proceedings, no contradictory behavior is apparent in the mere indication of the opponent as on file at the time when the appeal was filed.

2.2.2 *Alleged lack of evidence for a transfer of opponent status*

Together with the appeal, the opponent provided a copy of HRB 23335, an excerpt of the commercial register initially created for Babcock Borsig Steinmüller GmbH (see column 2, item a) of entry 1). Item b) in column 6

of entry 30 records the acquisition of the business area "Environmental technologies" from Babcock Noell GmbH (the entry was corrected *ex officio* in entry 33, the only difference being the correction of the number under which Babcock Noell GmbH is administrated in the commercial register). Item a) in column 2 of entry 32 documents the change of name of Babcock Borsig Steinmüller GmbH (when already including the business area "Environmental technologies") to Bilfinger Engineering & Technologies GmbH.

The Board is thus satisfied that the business area "Environmental Technologies" of the opponent Babcock Noell GmbH has been transferred to the appellant Bilfinger Engineering & Technologies GmbH. At the oral proceedings, this was as such not contested by the proprietor.

However, the proprietor argued that the opponent Babcock Noell GmbH did not cease to exist and could still have kept the opponent status; from the excerpt of the commercial register it was not discernible which technologies were covered by the terminology "environmental technologies". In particular, it was unclear whether exhaust gas cleaning systems for ships (as was the subject-matter of the patent) formed a part thereof and were transferred, or whether they remained with Babcock Noell GmbH under its new name Bilfinger Noell GmbH.

This is also not persuasive. The terminology "environmental technology" in the commercial register is specific enough to distinguish technology remaining with Babcock Noell GmbH from technology having been transferred. On the one hand, exhaust gas cleaning clearly involves environmental aspects and is therefore

considered as 'environmental technology' by the Board. On the other hand, the business areas remaining with Bilfinger Noell GmbH (as documented in HRB 7156, entry 33, column 2) are nuclear power and magnet technology. It is clear that exhaust gas cleaning is not a part of any of these areas. The Board is thus satisfied that the opponent has sufficiently proven that the business area to which the subject-matter of the contested patent belongs has been transferred to Bilfinger Engineering & Technologies GmbH.

2.3 Therefore, the Board concludes that "Bilfinger Engineering & Technologies GmbH" was negatively affected by the contested decision and entitled to file an appeal as opponent. The opponent's appeal is thus admissible.

3. *Main request - novelty*

The subject-matter of claim 1 is not novel vis-à-vis D7 (Article 54 EPC).

3.1 D7 discloses all features of claim 1 as follows:

3.1.1 Feature (a): "Cleaning system for the reduction of SO_x and particulate matter in exhaust gases from a marine combustion engine, burner or boiler, ..." (see Figure 1, abstract and paragraphs 0001, 0017, 0028 and 0047). It was not disputed that D7 shows a cleaning system that is suitable for the reduction of SO_x and particulate matter in exhaust gases from a combustion engine, burner or boiler. The parties disagreed however on the implications of the attribute "marine".

The proprietor argued that the word "marine" referred to all three claimed possibilities, i.e. to the engine,

the burner and the boiler, and that D7 did not show a marine application at all. The Board accepts that "marine" is to be read in connection with all three terms, since not least grammatically an "a" would be lacking in front of "burner" or "boiler". Anyway this, would not restrict claim 1, and in particular not to a cleaning system located on a marine vessel. Whether the exhaust gases emanate from a "marine" burner or from a burner on land does not change the exhaust gases nor does it therefore necessarily have any impact on the cleaning system itself which is used to treat the gases. Specifically, since the exhaust gases are not defined, in themselves, as being in any way different depending on their particular source, no structural feature could be envisaged that differs in a cleaning system for reducing SO_x and particulate matter in exhaust gases from burners at sea and a cleaning system for reducing SO_x and particulate matter in exhaust gases from a burner on land. The same is true for the combustion engine and the boiler. The Board thus concludes that in the main request, the attribute "marine" does not limit the cleaning system (this being the claimed subject-matter) in any way. Nor does it define a distinguishing feature over the land-based cleaning system of D7. Even if D7 concerns a large-scale coal-fired power plant, the cleaning system thereof is obviously suitable for the reduction of SO_x and particulate matter in exhaust gases, whether they originate from a marine combustion engine, a marine burner or a marine boiler. In this context, the Board notes that the question as to whether it would make technical sense to route exhaust gases from a ship to a land-based cleaning system is not relevant in the assessment of novelty of the cleaning system.

The proprietor's additional argument that the system of D7 was unsuitable for the application on a ship because the use of $CaCO_3$ as proposed in D7 produced a lot of gypsum, is also not accepted. The Board cannot see a limitation in claim 1 of the main request to a ship. Even if, as argued by the proprietor, the context of the patent were the application on a ship, the claims are to be interpreted in their broadest technically sensible way. As there is no definition in claim 1 of the location at all, there is also no need to refer to the description to resolve any lack of clarity of such a definition. The location of the cleaning system on a ship is thus not derivable from claim 1 of the main request.

Features (b) to (g) were not contested and are thus only briefly summarised in the following:

3.1.2 Feature (b): The "first scrubber process loop" is constituted by the so-called "third stage (3)" in D7, referred to in paragraphs 0028 and 0047 as the "preceding stage".

3.1.3 Feature (c): in the so-called "third stage" the water is evaporated to water vapour, whereby the water vapour and the exhaust gases form humid exhaust gases.

3.1.4 Feature (d): The "second scrubber process loop" is constituted by the so-called "first stage (1)" in D7.

3.1.5 Feature (e): The line 8 between the third and first stages in D7 (see e.g. Fig. 1) forms a communication between the first and the second scrubber allowing transfer of the humid exhaust gases from the first scrubber to the second scrubber.

3.1.6 Feature (f): In the so-called "first stage" the water condensates the water vapor in the humid exhaust gases at least partly.

3.1.7 Feature (g): The line 35 forms a communication between the first and the second scrubber process loop allowing a reflux of water from the second scrubber process loop to the first scrubber process loop.

The contentious points were features (h) and (i) in their combination:

3.1.8 Feature (h) is realised in D7 by an alkaline agent (notably NaOH) being supplied to (at least) the second scrubber process loop (i.e. the "first stage") via line 7. There is also a further alkaline agent ($CaCO_3$) supplied to the first scrubber process loop (i.e. the "third stage") via line 32. This is however not in contradiction to the claim wording.

The proprietor argued that in case of any lack of clarity the skilled person would refer to the description of the patent. Paragraph 0021 stated that there was no need to add any alkaline agent to the water in the first scrubber process loop. The skilled person would thus exclude the system of D7 in which process this was done.

This is not persuasive. Even if there were a need to consult the description (which the Board denies in the present case), a general statement in the description that something is not needed does not exclude its application, and even less so limits the claims. The use of a further alkaline agent in the first scrubber process loop is thus not excluded by claim 1, even if it were interpreted in the light of the description.

3.1.9 Feature (i) defines that "at least 60% ... of the total amount of the alkaline agent supplied to the cleaning system is supplied to the second scrubber process loop" (emphasis added by the Board). It was disputed whether the total amount of the alkaline agent was to be interpreted as referring to all of the NaOH supplied to the second scrubber process loop in D7 (which is notably all the NaOH supplied to the cleaning system), or to the sum of all alkaline agents (i.e. $CaCO_3$ and NaOH) supplied to the first and second scrubber process loop in D7. In the latter case, D7 would fail to disclose feature (i), since the greater share of alkaline agent is supplied to the first scrubber process loop in the form of $CaCO_3$. If one considered that the expression "the alkaline agent supplied to the cleaning system" in feature (i) referred to only that alkaline agent as previously defined in feature (h), D7 would also fulfil the condition set up in feature (i), since all of the NaOH is supplied to the second scrubber process loop. All of the NaOH is clearly more than 60% thereof.

The proprietor argued that this way of reading feature (i) made no technical sense. It was allegedly clear that "the total amount of the alkaline agent supplied to the cleaning system" in feature (i) referred to all alkaline agents supplied to the system as a whole, since neither feature (h) nor feature (i) related to a single kind of alkaline agent.

This is also not persuasive. Claim 1 does not exclude the supply of a (further) alkaline agent to anywhere in the system. It allows the supply of a different or of the same alkaline agent to the first scrubber process loop compared to that supplied to the second scrubber

process loop. Feature (i) makes sense technically, also when interpreted as relating to the alkaline agent defined in feature (h). If the same alkaline agent is supplied to both scrubber process loops, feature (i) defines that at least 60% of it is supplied to the second loop. If a different alkaline agent is supplied to the first scrubber process loop, one could regard feature (i) redundant. It is self-evident that at least 60% of the alkaline agent is supplied to the second loop, as this kind of agent is exclusively supplied to the second loop.

Such redundancy in certain constellations does however not lead to feature (i) making technically no sense. The Board sees thus no reason to exclude this technically meaningful interpretation of feature (i).

3.2 As all features of claim 1 are thus present in D7, the subject-matter of claim 1 lacks novelty. The main request is therefore not allowable.

4. *Auxiliary request 1 - novelty*

The subject-matter of claim 1 is not novel vis-à-vis D7 (Article 54 EPC).

As laid out above, the Board sees no limitation of the claimed cleaning system by the origin of the exhaust gases. The further definition in claim 1 of auxiliary request 1, that the marine combustion engine, burner or boiler is "on board a ship" therefore does not imply any limitation of the claimed cleaning system, as its location remains undefined.

The proprietor argued that the cleaning system itself however must now be understood as being on the ship,

because the first clause of the claim starts with "cleaning system" and ends with "on board a ship". However, the Board can see no direct association of the cleaning system with the added wording "on board a ship" because this wording is added after the wording "a marine combustion engine, burner or boiler". It is thus, at best, not unambiguous that the cleaning system itself is also on board the ship.

With respect to novelty, the Board cannot thus conclude differently than for the main request. Auxiliary request 1 is therefore not allowable.

5. *Auxiliary request 2 - inventive step*

The subject-matter of claims 1, 9 and 14 involves an inventive step (Article 56 EPC).

5.1 The parties agreed that the subject-matter of claim 1 differed from the cleaning system of D1 by features (h) and (i). As is clear from paragraph 0032 and figure 3 of D1, sulphur is removed in the first stage "A" by an NaOH-containing scrubbing solution entering via the supply lines 14 and 11. The second stage "B", called the "condensing stage", is provided to condense the flue gases by means of a cooling solution. No alkaline agent is supplied to the second scrubber process loop.

The proprietor pointed out that according to claim 1 under consideration, both the condensation (feature (f)) and the greater part of exhaust gas cleaning (features (h) and (i)) occurs in the second scrubber process loop.

The Board notes however that by adding a further supply of NaOH to the second stage "B" of D1 and supplying the

greater share of NaOH thereto, such a system would be created. The opponent also argued that the share of alkaline agent would also be greater than 60% in the second stage, if the first stage was shut off, for example in an emergency situation and that such emergency systems were commonplace in treatment plants. Likewise, and as argued by the opponent in a further line of argument, it would also be sufficient to supply two different alkaline agents to the system and all of one kind to the second scrubber process loop.

The question to be answered is thus whether it would have been obvious for a skilled person to apply one of these three possibilities. As explained below, the Board finds that none would have been obvious.

The Board notes, first, that a person skilled in the art of cleaning systems on board ships also knows about prior art land applications for cleaning exhaust gases, including D7. There is no reason apparent as to why a skilled person would disregard this knowledge when trying to solve a technical problem on a ship. Likewise, the mere existence of other possible solutions to a problem does not render an obvious choice inventive.

5.2 *Adding the same alkaline agent to the second stage*

Even if a skilled person were to alter the system of D1 by adding a further supply of the same alkaline agent (i.e. NaOH) also to the second stage "B" of D7, they would not find any incentive to switch off only the first stage during an emergency shut-down. Nor would they supply at least 60% of the total amount of NaOH (i.e. supplied to both the first and the second stage) to the second stage during normal operation.

5.2.1 That it was likely that only the first process loop was switched off in an emergency situation is no more than an unsubstantiated allegation. The Board finds that doing so would not constitute a deliberate course of action in order to solve a technical problem as is required in the context of the problem-solution-approach. Furthermore, in a real emergency situation, it is highly likely that an operator would simply switch off the entire cleaning system, in particular when the two stages are arranged in a single shell as in D1.

5.2.2 The opponent's other argument that the skilled person would supply the predominant part of the alkaline agent to the second stage to ensure a high concentration of the agent and thereby an essentially complete separation of SO_x is not accepted. Even though the Board considers supplying NaOH to both stages of D1 a possible course of action, it does not see on which basis the skilled person would allocate different proportions to the two stages to end up at the invention. Without any example in the cited prior art showing the supply of NaOH to two stages (and even less so their mooted relative apportionment) the skilled person is not guided in any way to supply the predominant part to the second stage.

On the contrary, and as was also argued by the proprietor, in D7 the vast majority of the SO_x-content in the flue gas (in absolute terms) is reduced in the preceding stage (by means of a $CaCO_3$ scrub). The skilled person is therefore guided towards reducing the larger part of SO_x in the first stage. When using the same alkaline agent in both stages, there is thus a

strong incentive to use more of it in the first stage than the second stage.

5.3 *Adding a further alkaline agent to the second stage*

The opponent argued that feature (i) only referred to the alkaline agent defined in feature (h) and thus did not define that one and the same alkaline agent was supplied to both stages and that D7 taught the principle of using different alkaline agents in the first and the second stage. The skilled person would thus apply this principle in D1 and allegedly arrive at a ship with a cleaning system, in which 100% of a particular type of alkaline agent would be supplied to any stage under consideration.

This argument is also not persuasive. Without the benefit of hindsight, the skilled person would not extract the abstract "principle" as defined by the opponent from D7. There is only a specific disclosure in D7, showing a first stage of removing SO_x with $CaCO_3$ as the alkaline agent, followed by an NaOH scrub. As also argued by the proprietor, the skilled person would however not use the limestone-gypsum process of D7's preceding stage on a ship. Although the Board considers this process as being in principle suitable for the reduction of exhaust gases emanating from a marine engine, boiler or burner on board a ship, a skilled person would not be motivated to actually install such a system on a ship as claimed in claim 1 of auxiliary request 2.

A skilled person would thus neither extract an abstract principle from D7, nor would they apply the specific limestone-gypsum process in the marine application of D1.

5.4 As regards claim 9, the opponent argued that the method claimed therein differed essentially by the same difference over D1. It further argued that the skilled person would supply at least 60% of the alkaline agent to the second scrubber process loop when looking for a suitable adaptation of the method or based on experiments. This is, however, again, not persuasive. As explained above, with no guidance in the cited prior art as to how the supply should be apportioned to the different process stages, the skilled person has no teaching that at least 60% thereof should be supplied to the second loop. This is only possible with the benefit of hindsight.

5.5 With respect to the use of the cleaning system on board a ship, the opponent did not present any additional arguments. The Board thus concludes that the subject-matter of claim 14 is not obvious in the light of the cited prior art at least since all the limitations of the system according to claim 1 are included.

5.6 Since none of the opponent's lines of argument leads to the conclusion that the subject-matter of claims 1, 9 and 14 is obvious, the Board concludes that the subject-matter of the claims involves an inventive step (Article 56 EPC).

6. *Auxiliary request 2 - Article 123(2) EPC*

Auxiliary request 2 fulfils the requirement of Article 123(2) EPC.

The opponent argued that whilst claim 14 as filed was directed to the use of the cleaning system on a ship, the ship itself comprising such a cleaning system, as

now in claim 1, was not derivable from the application as filed.

This is not found persuasive. It is true that the application as filed did not contain a claim directed to a ship. Also, a ship was not explicitly indicated as being an essential part of the invention. This is however not the relevant standard for the assessment of the content of the application as filed under Article 123(2) EPC. A skilled person reading the application will immediately understand that the use of the cleaning system on a ship will inevitably result in a ship comprising the cleaning system. This does not represent additional information or something only emanating from further considerations by the skilled person, but is inherent to claim 14 as filed.

Furthermore, the entire application is directed to cleaning systems for the reduction of SO_x and particulate matter emanating from a marine combustion engine, burner or boiler (paragraph 0001). A skilled person when reading the application thus understands that the background of the invention is to be found in a marine environment. Paragraphs 0003 to 0007 explain the problems with the reduction of emissions from ships and the regulation of emissions and discharging freshwater used in scrubbing processes over board. "Discharging over board" again clearly refers to a ship. This issue is explained in more detail in paragraph 0039, where explicit reference is made to a ship being in a sensitive area.

It is thus unambiguous that the application as filed discloses the combination of a ship comprising the cleaning system on board in the mind of a skilled

reader. There is no need to explicitly state what is inherent.

The Board can accept the opponent's argument that features may not always, or not simply, be transferred from one category of claim to another (e.g. a method claim to a product claim, or a use claim to a product claim). However, in the present case, the skilled person is left in no doubt that the cleaning system as defined in claim 1 as filed is not only disclosed in use claim 14 as filed together with a ship but also in the context of other parts of the description to relate to the product of a cleaning system on a ship, such that the amendment of the claim to define a ship comprising the cleaning system on board the ship is part of the content of the application as filed as it would be understood by the skilled person.

7. *Refund of the appeal fee*

The opponent's request for a refund of the appeal fee is rejected. Even if the opponent's right to be heard had been violated, the arguments put forward by the opponent with respect to Article 123(2) EPC did not result in the Board setting aside the impugned decision. Indeed, as the opponent's appeal is not allowable, the conditions of Rule 103(1)(a) EPC are not fulfilled and the appeal fee cannot be refunded. The question as to whether a substantial procedural violation had occurred can thus be left unanswered.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

B. Brückner M. Harrison

Decision electronically authenticated