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**Datasheet for the decision  
of 24 January 2019**

**Case Number:** T 2323/15 - 3.3.06

**Application Number:** 05817677.7

**Publication Number:** 1836345

**IPC:** D21C11/04, B01D33/21, D21C11/00

**Language of the proceedings:** EN

**Title of invention:**  
METHOD AND APPARATUS FOR THICKENING LIME MUD IN A DISC FILTER

**Patent Proprietor:**  
Andritz Oy

**Opponent:**  
Valmet AB

**Headword:**  
Lime thickening/Andritz

**Relevant legal provisions:**  
EPC Art. 56  
RPBA Art. 12(4), 13

**Keyword:**

Inventive step - (yes)

Late-filed request - submitted shortly before oral proceedings  
- admitted (yes)

Late-filed document - admitted (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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

Case Number: T 2323/15 - 3.3.06

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.06**  
**of 24 January 2019**

**Appellant:** Valmet AB  
(Opponent) Knud Dahls väg 1  
Box 1033  
651 15 Karlstad (SE)

**Representative:** Becker Kurig Straus  
Patentanwälte  
Bavariastrasse 7  
80336 München (DE)

**Respondent:** Andritz Oy  
(Patent Proprietor) Tammasaarenkatu 1  
00180 Helsinki (FI)

**Representative:** Hoffmann Eitle  
Patent- und Rechtsanwälte PartmbB  
Arabellastraße 30  
81925 München (DE)

**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 17 November  
2015 rejecting the opposition filed against  
European patent No. 1836345 pursuant to Article  
101(2) EPC.**

**Composition of the Board:**

**Chairman** J.-M. Schwaller  
**Members:** S. Arrojo  
R. Cramer

## **Summary of Facts and Submissions**

- I. The appeal concerns the decision of the opposition division to reject the opposition against European patent Nr. 1 836 345.
- II. In its grounds of appeal the opponent (from now on "the appellant") contested the decision and requested to revoke the patent as granted on the grounds of Article 100(a) EPC in connection with Article 56 EPC. It also filed three documents, among them D4.
- III. In its reply, the patentee (from now on "the respondent") submitted auxiliary requests 1-8 and requested not to admit the new documents filed by the appellant into the appeal proceedings.
- IV. In a communication to the parties, the Board expressed its preliminary opinion that the newly filed documents should be admitted into the proceedings and that the patent as granted did not appear to comply with the requirements of Article 56 EPC in view of the combination of documents D4 and D3. The Board also indicated that auxiliary requests 1-8 did not seem to overcome the objections under Article 56 EPC.
- V. The respondent replied on 11 December 2018 and filed auxiliary request 9; further it requested to remit the case back to the first instance in case the Board would admit document D4 into the proceedings.
- VI. The appellant requested not to admit auxiliary request 9 as late filed and argued that the request was in any case not inventive in view of the combination of D4 with D3.

VII. During the oral proceedings, which were held on 24 January 2019, compliance of each of the requests on file with Article 56 EPC was discussed starting from the teachings of document D4 (US 4 929 355) taken in combination with D2 (US 5 641 402) or D3 (GB 939 975), and the Board expressed its conclusion that the only request complying with the requirements of the EPC was auxiliary request 9. The other documents were no longer relied upon by the appellant.

In response to this opinion, the respondent withdrew the main request and auxiliary requests 1-8, making auxiliary request 9 its new and only main request.

VIII. By the end of the oral proceedings, the requests on file were the following:

The appellant requested to set aside the decision of the opposition division and to revoke the patent in its entirety.

The respondent requested that the patent be maintained on the basis of the main request, filed as auxiliary request 9 on 11 December 2018.

IX. Claim 1 of the main request underlying the decision reads as follows:

*"An apparatus for treating lime mud slurry, said apparatus comprising a shaft (10) provided with one or more flow channels, a number of filter discs (12) arranged on the shaft (10), the interior of which discs being connected to said one or more flow channels of the shaft (10) for discharging filtrates, and driving equipment (11) for the shaft (10) for rotating the shaft (10) and the discs (12) in the lime mud slurry,*

*devices for feeding the lime mud slurry and devices for removing the thickened lime mud from the apparatus, characterized in that the apparatus has at least two stages and comprises*

- first devices for feeding lime mud slurry, which are connected so that the lime mud slurry is fed into a first set (I) of filter discs (12),*
- first discharge devices for discharging the treated lime mud from the first set of filter discs (12),*
- second feeding devices, which are connected to the first discharge devices for leading the lime mud treated in the first set of discs (12) into the second set (II) of discs, and*
- second discharge devices for removing the lime mud treated in the second set (II) of discs (12) from the apparatus,*

*the shaft (10) comprises a shaft pipe, the interior of which is provided with a partition (23) for dividing the interior of the shaft (10) into at least a first (26) and a second compartment (27) separated from each other for discharging the filtrates from the different sets (I, II) of discs (12) separately, and the interior of the shaft (10) is provided with a tube (25) between the partition (23) and an end (24) of the shaft (10), said tube being concentric with but having a smaller diameter than the shaft pipe, for discharging filtrates from different compartments (26, 27) through said end (24) of the shaft (10)."*

## **Reasons for the Decision**

1. Admittance of document D4 (Article 12(4) RPBA)
- 1.1 The Board has decided not to exercise its discretion under Article 12(4) RPBA to hold inadmissible document

D4 and not to remit the case back to the first instance as a result of the introduction of this document.

Document D4 is considered to be *prima facie* more relevant than document D1 (used as closest prior art in front of the first instance) and its introduction is regarded as a reaction to the outcome of the opposition proceedings, in particular considering that the opposition division changed its preliminary opinion expressed in the summons to oral proceedings, according to which Article 56 EPC was not complied with.

- 1.2 The respondent argued that D4 could not be regarded as a more relevant prior art than D1 and that its introduction would equate to starting a new opposition at the appeal stage, so that the case should be remitted back to the first instance department in case D4 was admitted into the proceedings.
- 1.3 These arguments do not convince the Board because D4, unlike D1, discloses a two-stage filtering process with an intermediate re-slurrying of the filter cake, a sequence of steps which corresponds exactly to that proposed in the patent in suit. Therefore D4 is closer.

The Board observes moreover that the double filtering stage disclosed in document D4 was already known from documents D2 and D3 cited during the first instance proceedings. The combination of D1 with these documents (discussed during the first instance proceedings) comprised therefore the same features as the present combination of D4 with D2 or D3. Thus, admittance of D4 cannot be regarded as a major change, let alone a "new opposition case", but rather as a reinforcement of the same factual framework used during the first instance proceedings.

All in all, the Board considers that the only prejudices for the respondent from admitting document D4 into the proceedings are those derived from being confronted with a slightly stronger case based on a substantially similar factual framework as that discussed during the first instance proceedings, a situation which should be expected by any party to an appeal proceedings.

2. Admittance of the main request (Article 13 RPBA)
  - 2.1 The Board has decided to exercise its discretion under Article 13(1) RPBA to admit the main request (filed as auxiliary request 9 on 11 December 2018) into the proceedings, as none of the conditions referred to by Article 13(3) RPBA to reject submissions made after oral proceedings have been arranged apply in the present case.
  - 2.2 The filing of this request is regarded as a legitimate reaction to the negative preliminary opinion expressed by the Board, which diverged significantly from the conclusions reached by the first instance department. For the Board it is therefore clear that the respondent should be given an opportunity to overcome the objections even at this late stage of the proceedings.

Additionally, the Board notes that having admitted document D4 (filed with the statement of the grounds of appeal) into the proceedings as the new closest prior art, it would be contrary to the principle of equal treatment of parties to deny the respondent an opportunity to make a further submission.



3. Main Request - formal issues

3.1 The board notes that claim 1 is based on a combination of claims 6, 7 and 8 as originally filed and as granted. Dependent claims 2 to 11 correspond to claims 9 to 18 as originally filed and as granted. The requirements of Article 123(2) and (3) EPC are thus complied with.

3.2 The appellant raised no objections under Articles 83, 84 or 54 EPC, and the Board sees no reason to question compliance with these Articles.

4. Main request - Article 56 EPC

4.1 Closest prior art

4.2 As explained above, the Board regards document D4 as the closest prior art, as it discloses a system for treating lime mud slurry comprising two filter disc stages (32,34) with an intermediate sludge cistern (33), wherein the filter cake discharged from the first filtering stage (32) is mixed with hot water in the sludge cistern (33), homogenised and directed to the second filtering stage (34) (see column 3, lines 1-14 and figures 1 and 2).

This document fails to disclose "a single filter disc apparatus having two different filtering stages and a shaft pipe provided with a partition forming two compartments, the interior of the shaft being provided with a tube between the partition and an end of the shaft, said tube being concentric with but having a smaller diameter than the shaft pipe, for discharging filtrates from the different compartments through said end of the shaft."

#### 4.3 Problem solved

According to the patent in suit (paragraph [0007] the problem being solved by the invention is "to provide a method and an apparatus for treating lime mud (...) so that clean lime mud is produced economically and consuming less space compared to known methods."

#### 4.4 Solution

The solution according to claim 1 is to provide two filter disc stages within a single apparatus and a shaft pipe, the interior of which is provided with a partition (23) for dividing the interior of the shaft (10) into at least a first (26) and a second compartment (27) separated from each other for discharging the filtrates from the different sets (I, II) of discs (12) separately, and the interior of the shaft (10) is provided with a tube (25) between the partition (23) and an end (24) of the shaft (10), said tube being concentric with but having a smaller diameter than the shaft pipe, for discharging filtrates from different compartments (26, 27) through said end (24) of the shaft (10).

#### 4.5 Success of the solution

For the Board it is clear that both the provision of two stages of filtering discs within the same filter apparatus and the design of the shaft to discharge the filtrates separately from the same end of the shaft would successfully solve the problem of reducing the space requirements of the apparatus and the associated costs.

The Board therefore concludes that the solution proposed in claim 1 successfully solves the above-mentioned problem.

4.6 Obviousness of the solution

4.6.1 The Board has concluded that none of the prior art documents teaches or suggests a solution based on a shaft configuration as proposed in claim 1.

4.6.2 Documents D2 and D3 propose double-stage filter disc apparatuses with shafts designed to discharge the filtrates from each of the filtering stages independently.

Document D2 teaches the following shaft configuration (see column 2, lines 36-44; figures 1-2): "The tubular shaft 14 is divided [...] into two chambers 26 and 28 axially separated by a partition wall 24 arranged to the slide member 22. The axial division of the interior of said tubular shaft 14 into two also results in that both ends of the tubular shaft 14 are provided with conduits in connection with the valve members, by means of which conduits the separate chambers may be connected to a suction source or to a source for medium removing a pulp cake."

Document 3, on the other hand (see figures 1 and 3), teaches a shaft 5 divided in two compartments by a partition wall 4, the shaft being arranged so that the filtrate from one sector enters one compartment and exits the apparatus from one end of the shaft (i.e. the left side of figure 3) while filtrate from the other sector enters collector tubes 3, flows into the second compartment 6 and is discharged from the opposite end of the shaft.

Thus, neither document D2 nor document D3 teaches or suggests a solution based on a concentric tube having a smaller diameter than the shaft so that the filtrates are discharged through the same end of the shaft. There is therefore no information in the prior art which could lead the skilled person to the solution defined in the subject-matter of claim 1.

4.6.3 The appellant argued that the solution proposed in claim 1 merely represented a design alternative and was therefore not inventive.

This argument is not convincing because the solution proposed in claim 1 does not only successfully solve the underlying technical problem, but also offers a number of advantageous technical effects with respect to the shaft designs proposed in documents D2 and D3. Firstly, while in D2 and D3 the partition walls divide the shaft in axially extending compartments so that the filtrates must be discharged from opposite sides of the shaft, the arrangement defined in claim 1 gives rise to two radially extending compartments with which the filtrates can be discharged from the same end of the shaft (see figures 1 and 2 of the patent in suit), which contributes to the compactness of the apparatus.

Secondly, the arrangement of an inner concentric pipe in the shaft according to the invention is clearly more simple and therefore less costly than the arrangement of several individual collector tubes (see ref. 3 in figures 1 and 2) as proposed in D3.

Thirdly, while in D2 the partition wall 24 is part of a sliding member 22 (i.e. provided with sliding seals) arranged within the rotating shaft, the concentric

arrangement according to claim 1 renders such operationally complex solutions unnecessary because the filtrate discharge tubes can rotate together with the shaft while discharging the filtrates.

- 4.7 The Board therefore concludes that the subject-matter of claim 1 complies with the requirements of Article 56 EPC. Since claims 2-11 are dependent on this claim, their subject-matter also complies with the requirements of Article 56 EPC.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in amended form on the basis of the claims of the main request, filed as auxiliary request 9 with letter of 11 December 2018, and a description to be adapted.

The Registrar:

The Chairman:



D. Magliano

J.-M. Schwaller

Decision electronically authenticated