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**Datasheet for the decision
of 6 December 2022**

Case Number: T 0728/19 - 3.5.02

Application Number: 12848407.8

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Language of the proceedings: EN

Title of invention:
Linear Conveyor

Patent Proprietor:
Yamaha Hatsudoki Kabushiki Kaisha

Opponent:
Festo SE & Co. KG

Relevant legal provisions:
EPC Art. 100(a), 56
RPBA Art. 12(4)
RPBA 2020 Art. 12(2)

Keyword:

Admittance of document (yes) - admitted in opposition
proceedings

Grounds for opposition - inventive step - does not prejudice
maintenance of patent



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 0728/19 - 3.5.02

D E C I S I O N
of Technical Board of Appeal 3.5.02
of 6 December 2022

Appellant: Festo SE & Co. KG
(Opponent) Rüter Straße 82
73734 Esslingen am Neckar (DE)

Representative: Patentanwälte Magenbauer & Kollegen
Partnerschaft mbB
Plochinger Straße 109
73730 Esslingen (DE)

Respondent: Yamaha Hatsudoki Kabushiki Kaisha
(Patent Proprietor) 2500 Shingai
Iwata-shi, Shizuoka-ken (JP)

Representative: Müller-Boré & Partner
Patentanwälte PartG mbB
Friedenheimer Brücke 21
80639 München (DE)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 2 January 2019
rejecting the opposition filed against European
patent No. 2779432 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman R. Lord
Members: F. Giesen
J. Hoppe

Summary of Facts and Submissions

- I. The present appeal by the opponent (appellant) lies from the decision of the opposition division to reject the opposition against the opposed patent.

The reasons of the opposition division for the decision under appeal were *inter alia* that document

D17: *DE 37 02 248 A1*

was admitted and that the subject-matter of claim 1 as granted involved an inventive step in view of D17 as closest prior art in combination with D1 (US 6 191 507 B1). In the eyes of the opposition division, D17 disclosed features 1.1 to 1.15 but neither disclosed nor suggested features 1.16 to 1.18. (Reference is made here to the feature labelling adopted from the decision under appeal.)

- II. Oral proceedings before the board took place on 6 December 2022 by videoconference, to which the parties consented.

The final requests of the parties were as follows:

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

The respondent (patent proprietor) requested that the appeal be dismissed and that document D17 not be admitted in the proceedings.

III. Claim 1 of the sole request (i.e. as granted) reads as follows:

- 1.1 *"A linear conveyor, comprising:*
- 1.2 *a linear motor stator (7)*
- 1.3 *including a plurality of electromagnets (26)*
- 1.4 *arranged along a predetermined conveyor path (6), and*
- 1.5 *operable to individually undergo electric current supply control with respect to each of predetermined zones;*
- 1.6 *a plurality of conveyor carriages (4)*
- 1.7 *each provided with a linear motor rotor (8),*
- 1.8 *the linear motor rotor (8) being constituted of a permanent magnet (52) and*
- 1.9 *constituting a linear motor in cooperation with the linear motor stator (7),*
- 1.10 *the conveyor carriages (4) being disposed to be movable along the conveyor path (6);*
- 1.11 *a plurality of motor control devices (C) provided in the respective corresponding zones of the linear motor stator (7), and*
- 1.12 *configured to individually perform electric current supply control for the electromagnets (26) with respect to each of the zones; and characterized in that*
- 1.13 *each of the plurality of conveyor carriages (4) is provided with an unique information storing means (55) configured to store predetermined unique information,*
- 1.14 *the linear conveyor further comprises reading means (60) configured to read the unique information stored in the unique information storing means (55), wherein*

- 1.15 *the unique information storing means (55) is configured to store, as the unique information, position correction data for use in correcting a movement error unique to the conveyor carriage (4), and*
- 1.16 *each of the motor control devices (C) is configured to determine, as control data,*
- 1.17 *either the position correction data read by the reading means (60)*
- 1.18 *or process data processed with use of the position correction data for performing electric current supply control for the electromagnets (26) with use of the control data so as to stop the conveyor carriage (4) at a target stop position."*

IV. The arguments of the appellant that are relevant for the present decision can be summarised as follows:

Concerning the admittance of document D17, the appellant chose not to add anything in response to the preliminary opinion of the board.

The subject-matter of claim 1 did not involve an inventive step in view of Document D17.

According to claim 1, the "position correction data" were used to correct a target stop position of a carriage. However, claim 1 left open how the correction of a movement error on the basis of position correction data should be performed. In particular it was left open, what physical quantity the position correction data had to be and how the the goal of stopping at a target position was achieved. Construing the feature

"position correction data" as a purely geometrical tolerance correction was therefore too narrow. Rather, any physical quantity that could have an influence on the braking process of a carriage and on stopping at the target position could be considered to be position correction data. In particular, the position correction data were not specified by the claim to be target position correction data. The claim therefore left open whether the position correction was static or dynamic. It could be static in the sense of correcting the target stop position itself, but it could also be dynamic in the sense of correcting the movement of the carriage up until the target stop position was reached.

In D17, weight data was used to ensure that the carriage stopped at the target position. It did this by determining the braking force needed to bring the carriage to a creep velocity. Objects carried on the carriage were supposed not to tilt upon braking too hard. The weight data could hence be considered to be position correction data within the meaning of claim 1. The weight data was also used to correct a movement error. The only example of a movement error could be found in paragraph [0077] of the opposed patent, according to which it was a correction of the target stop position. However, the patent did not contain any further disclosure as to how the position correction data was stored and used to control the electromagnets in order to correct the movement error. The weight information according to D17 could also be considered unique because the carriages carried one or two or three objects. The weight was therefore individual to each carriage.

It followed that D17 had the same goal of stopping a carriage at a target stop position and used the same

methods of taking into account unique position correction data as claim 1.

- V. The arguments of the respondent that are relevant for the present decision can be summarised as follows:

Document D17 should not be admitted. It was filed after the lapse of the nine month period pursuant to Article 99 EPC. The opposition division was wrong in admitting this document since they eventually decided that the subject-matter of claim 1 as granted involved an inventive step when starting from that document. This demonstrates that document D17 was not *prima facie* relevant.

The subject-matter of claim 1 as granted involved an inventive step in view of D17 as a starting point.

Document D17 did not disclose features 1.15 to 1.18. In D17 the "stop position" of the conveyor cart (A) was determined by the "position" of the electromagnets (10), and the "position" of the electromagnets (10) was fixed so that it could not be corrected. Moreover, the unique information according to D17, *viz.* the weight data, is not for use in correcting a movement error unique to the conveyor cart.

Neither D1 nor JP 2011-98786 A disclosed features 1.16 to 1.18. The combination of D17 with either document therefore could not lead to the claimed subject-matter in an obvious manner.

Reasons for the Decision

1. *Admissibility of the Appeal*

The appeal meets the requirements of Articles 106 and 108 EPC, as well as Rule 99 EPC. It is therefore admissible.

2. *Admittance of Document D17*

2.1 According to Article 12(1)(a) and (b) RPBA 2020, the appeal is based on *inter alia* the impugned decision and the statement of grounds of appeal.

2.2 The impugned decision is based on document D17 and the objection of lack of inventive step based on it. This document was admitted and discussed in the first-instance proceedings. Furthermore, document D17 was re-submitted with the statement of grounds of appeal, which also contains a substantiated objection of lack of inventive step based on it.

2.3 It follows that the board does not have a discretion according to Article 12(4) RPBA 2007 (applicable by virtue of Article 25(2) RPBA 2020) not to take into account D17 or the objection of lack of inventive step based on it.

2.4 Pursuant to Article 12(2) RPBA 2020, the appeal proceedings are a judicial review of the decision under appeal. It follows that the board of appeal can review whether an opposition division committed an error in exercising their discretionary power. It does not have to be decided in the present case whether the finding of an erroneous exercise of the discretion admitting a

document could lead to a retrospective exclusion of that document that is part of the impugned decision, since in the present case the opposition division did not exercise their discretion in an erroneous manner.

- 2.5 When reviewing such a discretionary decision, a board of appeal will examine whether the opposition division applied the correct criteria in a reasonable manner, rather than whether the board would have come to the same or to a different conclusion as that of the opposition division.

In the present case, the opposition division applied the correct criterion of *prima facie* relevance. The arguments of the respondent appear to be merely that document D17 was less relevant than found by the opposition division and that the late filing should therefore have tipped the balance to a different conclusion as regards admittance. The appellant therefore clearly does not argue that the opposition division applied the wrong criteria in exercising their discretion, or that they acted in an unreasonable manner, but only that the weighting attributed by the opposition division to the applied (correct) criteria should have been different. However, it is in the very nature of a discretionary decision that it can lead to a number of different conclusions without any of them "being wrong", as long as the correct criteria are applied in a reasonable manner.

The concept of *prima facie* relevance also does not mean that a late-filed document must necessarily be the most relevant document in the proceedings, or that an objection based on it must eventually be successful. This can ultimately only be verified at the end of the decision process as to the substance, not at the time

of a decision to admit the late-filed document, which is necessarily before the beginning of the substantive discussion. Rather, the concept of *prima facie* relevance can only mean that the late-filed document looks at first sight as though it might influence the outcome. The board agrees with the opposition division that at a first glance D17 had at least the potential to change the outcome, even though ultimately, after the discussion as to its substance, it turned out that it did not.

2.6 Therefore, the board concludes that the opposition division did not exercise their discretion to admit document D17 in an erroneous manner. A retrospective exclusion, even if that were possible given that D17 was part of the impugned decision, would not be justified.

2.7 The above reasons lead to the same conclusion concerning the admittance of the objection of lack of inventive step based on D17 as a starting point for the assessment of inventive step.

3. *Sole Request - Inventive Step*

3.1 The ground for opposition pursuant to Article 100(a) EPC together with Article 56 EPC does not prejudice the maintenance of the opposed patent, because the subject-matter of claim 1 as granted involves an inventive step in view of document D17 as a starting point.

3.2 Document D17 discloses a linear conveyor. The electromagnets controlling the movement of the carriages along the conveyor can take into account

weight information of the carriage in order to determine the appropriate braking force to slow the carriage down to a creep velocity, which will ensure that the carriage is stopped at a target stop position, defined by coils which, when energised, produce a holding force for the carriage.

The appellant's inventive step objections were contingent on the view that this was a disclosure of the features concerning unique position correction data for correcting a movement error unique to the carriage and ensuring that the carriage would stop at a target stop position, i.e. features 1.16 to 1.18. In other words, the appellant's argument is contingent on the assumption that the only distinguishing feature was the use of permanent magnets as linear motor "rotors", i.e. feature 1.8, and that this would have been obvious in view of D1 or JP 2011-98786 A.

3.3 In order to structure the discussion, the board wishes to point out that it follows from the foregoing that the salient point of the discussion was whether feature 1.16 to 1.18 were to be seen as distinguishing features, since the appellant's argument did not contain any explanation as to why their provision would have been obvious in view of the prior art, but merely that they were already known from D17. If this argument is not successful, then the entire objection fails.

3.4 The appellant argued that claim 1 did not define how the position correction data were used. It merely required position correction data to be used in correcting a movement error in a non-defined way in order to control the electromagnets in a non-defined way in order to stop the carriage at the target stop position. D17 disclosed that the station primary coils

C1 and the acceleration and deceleration coils were controlled in a concerted manner so as to achieve the result that the carriage stops at the desired station, i.e. the target stop position, without overshooting it or without objects on the carriage tilting.

According to the appellant, the weight data according to D17 was used in exactly the same manner as the position error correction data in claim 1. With the aid of the braking force determined on the basis of them, the weight data determined the trajectory $s(t)$ of the carriage, i.e. its position as a function of time, which was chosen such that the carriage would reach creep velocity before entering the station so as to reliably stop at the target position.

3.5 This argument does not persuade the board.

Claim 1 uses the expressions "position correction data for use in correcting a movement error unique to the conveyor carriage" as well as a "target stop position". That means it employs expressions used in control theory.

When giving the expressions in the claim their ordinary meaning in their technical context, a "target stop position" is a set value at which the carriage is desired to stop. A "correction of a movement error" in that context would in the board's view be understood by a skilled person as the compensation of a deviation of the carriage's actual position from a set position, such as the target position.

The situation in D17 is different. While it is true, from a fundamental physics point of view, that determining the braking force will also determine the

trajectory of the carriage, *i.e.* its position as a function of time, the board cannot agree that this could be seen as a correction of the carriage's movement within the meaning of claim 1. Rather, the determination of a braking force on the basis of weight data could at most be seen to be the determination of set values for the position of the carriage, but not as a correction of a deviation from those set values. The appellant has not explained in detail, what they considered to be the set values that were corrected. They appear to implicitly consider that D17 discloses set values for the carriage in the sense that for example an empty carriage would require a certain braking force, which defined the set values and that for a loaded carriage the unloaded "set values" would have to be "corrected" on the basis of the additional weight data.

However, this is precisely where, in the board's view, the appellant's argument overstretches the meanings of the expressions of the claim. In D17 there is no correction of a movement "error" involved, as D17 is not concerned with the control of the carriages movement in the sense of correcting deviations of set values. Rather, an appropriate braking force is determined for each carriage weight, but there is not one particular braking force, and hence carriage trajectory, that could legitimately be seen as the set value and the others, corresponding to different carriage weights, as deviations that needed correction.

3.6 Moreover, the board is not persuaded that the weight on a carriage could legitimately be considered to be "unique" information for a carriage within the meaning of feature 1.15, which defines that the unique information is position correction data. The appellant

argued at the oral proceedings that the load on the carriage was unique to a given carriage, but also this overstretches the meaning of the expression in the board's opinion. Unique information about a carriage implies that this information is not just about an ephemeral state of the carriage, but rather about an inherent property of the carriage that does not vary all the time, as the load on it would in service. Unique information in the ordinary sense could serve to identify a carriage, which the weight on it does not.

- 3.7 As explained above, the remainder of the appellant's inventive step objection, be it based on D17 in combination with D1 or JP 2011-98786 A, is contingent on the assumption that the only distinguishing feature is that the linear motor rotor is constituted by a permanent magnet. Since the board considers there to be more distinguishing features, and since the appellant has not presented any argument as to why the above identified distinguishing features would have been obvious, it follows that the inventive step objections do not persuade the board.

4. *Conclusions*

Since the ground for opposition raised by the appellant does not prejudice the maintenance of the patent, the board accedes to the respondent's request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



U. Bultmann

R. Lord

Decision electronically authenticated