

Internal distribution code:

- (A) [] Publication in OJ
(B) [] To Chairmen and Members
(C) [] To Chairmen
(D) [X] No distribution

**Datasheet for the decision
of 13 November 2013**

Case Number: T 1148/10 - 3.2.01
Application Number: 03019644.8
Publication Number: 1493643
IPC: B61C 7/04, B60L 11/00
Language of the proceedings: EN

Title of invention:
Railway car drive system

Patent Proprietor:
Hitachi, Ltd.

Opponent:
Siemens Aktiengesellschaft

Headword:
-

Relevant legal provisions:
RPCR Art. 12(4)
EPC Art. 104, 113
EPC R. 103(1)

Relevant legal provisions (EPC 1973):
EPC Art. 54(1), 56

Keyword:
"Admission of new facts (yes)"
"Novelty (main request: yes)"
"Inventive step (main, auxiliary request: no)"
"Substantial procedural violation (no)"
"Reimbursement of appeal fee (no)"
"Apportionment of costs (no)"

Decisions cited:
G 0010/91, T 1002/92

Catchword:
-



Case Number: T 1148/10 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 13 November 2013

Appellant: Siemens Aktiengesellschaft
(Opponent) Wittelsbacherplatz 2
D-80333 München (DE)

Respondent: Hitachi, Ltd.
(Patent Proprietor) 6-6, Marunouchi 1-chome
Chiyoda-ku
Tokyo 100-8280 (JP)

Representative: Beetz & Partner
Patentanwälte
Steindorfstrasse 10
D-80538 München (DE)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
18 March 2010 concerning maintenance of
European patent No. 1493643 in amended form.

Composition of the Board:

Chairman: G. Pricolo
Members: C. Narcisi
T. Karamanli

Summary of Facts and Submissions

I. European patent No. 1 493 643 was maintained in amended form by the decision of the Opposition Division posted on 18 March 2010. Against this decision an appeal was lodged by the Opponent on 25 May 2010 and the appeal fee was paid at the same time. The statement of grounds of appeal was filed on 7 July 2010.

II. Oral proceedings were held on 13 November 2013. The Appellant (Opponent) did not attend the oral proceedings; it had advised the Board already with letter filed on 29 October 2013 that it would not attend the oral proceedings. The Appellant had requested in writing that the decision under appeal be set aside and that the European patent be revoked. The Appellant likewise requested the reimbursement of the appeal fee. The Respondent (Patentee) requested that the appeal be dismissed (main request) or, alternatively, that the decision be set aside and the patent be maintained in amended form on the basis of the claims according to the auxiliary request, filed during the oral proceedings of 13 November 2013. Further it requested that the Appellant (Opponent) be charged "with the costs of the Patent holder related with the cancellation of the flight-tickets" in respect of the oral proceedings before the Opposition Division.

III. Claim 1 of the main request reads as follows:

"A railway car drive system comprising:
- a first railway car (1) mounting a power generation means (10), a power converter (20) and a driving motor;
and

- at least a second railway car (2) mounting a power converter (20) and a driving motor wherein a power storage means (50) is mounted on either said first (1) or said second (2) railway car, or both said first (1) and second (2) railway cars, characterized in that said second railway car (2) uses said power generation means (10) as power source and by further comprising a power management means (100) for controlling the power generated by said power generation means (10) and the storage quantity of said power storage means (50) so as to minimize the power capacity of said power generation means (10), wherein said power management means (100) is disposed in every car (1,2,3...) so as to control each said power generation means (10), the power converter (20) and said power storage means (50) independently."

Claim 1 of the auxiliary request differs from claim 1 of the main request by the following amendments: the wording "at least a second railway car (2) mounting a power converter" is replaced by "a plurality of second railway cars (2) each mounting a power converter"; the wording "wherein a power storage means (50) is mounted on either said first (1) or said second (2) railway car, or both said first (1) and second (2) railway cars, characterized in that said second railway car (2) uses" is replaced by "wherein a power storage means (50) is mounted on only said second (2) railway cars, or both said first (1) and second (2) railway cars, characterized in that said second railway cars (2) use".

IV. The Respondent's arguments may be summarized as follows:

The subject-matter of claim 1 of the main request is new and inventive over E3 (US-A1-2002/0174798). As it turns out, several features of claim 1 are not known from E3. Firstly, E3 does not disclose the feature "at least a second railway car (2) mounting a power converter (20) and a driving motor" (hereinafter designated as feature 3, according to the subdivision of the claimed features in the Appellant's statement of grounds of appeal, page 5). Actually, the embodiment of figure 3 of E3 does not show that railway car 202 includes a converter. Secondly, the feature "that said second railway car (2) uses said power generation means (10) as power source and" (hereinafter designated as feature 5, see above) is not disclosed in E3, given that according to E3 the power from the power generation means 102 is not fed to the driving motors of the second car(s) 202 but is instead merely used to feed the driving motors 108 of the locomotive 100 (see figure 1). In figure 2, driving motors 208 are fed by the energy capture and storage device 204, and in addition to that, in figure 3 driving motors 308 are fed by a supplementary diesel engine 302 and not by the power generation means 102 (see sections [0038], [0051] of E3). As a consequence, a power management means as described in the remaining features of claim 1 (designated as features 6 to 11 according to the Appellant's statement of grounds of appeal, page 5) is likewise not known from E3, since E3 only describes an energy management system for controlling the storage and regeneration of energy, and not the generation of energy (see E3, [0054]). Therefore, for instance, the features "further comprising a power management means

for controlling" (feature 6 of claim 1) "the power generated by said power generation means (10) and" (feature 7 of claim 1) are not disclosed in E3. Finally, the energy management system of E3 does not intend to minimize the power capacity of the power generation means since there is no simultaneous control of the power generated by said power generation means and the storage quantity of said power storage means. Hence a combined control as required by said features 6,7 and by the remaining features of claim 1 is not derivable from E3.

The subject-matter of claim 1 also involves an inventive step over E3. The skilled person would not have any incentives to consider implementing an individual energy management for each railway car. E3 does not give any hint in this direction. Moreover, according to E3 the energy management system 506 gathers present and anticipates future train position information via the position identification system 510. Present and/or anticipated track topographic and profile conditions (track situation information) are stored in database 508. This information is essentially similar for all railway cars forming the train. Thus there is no reason why the skilled person should consider to provide this information together with an energy management system individually for each car. This all the more so as E3 does not even teach to optimize power generation capacity to minimize the size and weight of the power generation means.

The above arguments also apply to the subject-matter of claim 1 of the auxiliary request. The additional amendments introduced into claim 1 further increase the

flexibility of the use of each railway car by allowing an independent energy management. These features also allow a more efficient energy management due to an improved assessment of needed storage capacity made on an individual basis. Finally, these features equally contribute to an improved and more even or uniform distribution of the load on the track and on the rails.

The Opponent should be charged with the costs incurred by the Patentee resulting from the cancellation of the flight tickets. The Patentee's behaviour amounts to a procedural abuse since its communication stating that it would not participate in the oral proceedings was filed too late. The cancellation of the oral proceedings by the Opposition Division forced the Patentee to cancel the tickets, thus giving rise to costs.

V. The Appellant's arguments may be summarized as follows:

The Opposition Division's decision not to admit the submissions including a new line of arguments (filed with fax dated of 23 February 2010) relating to novelty, based on E3, and inventive step, based on documents E1 (EP-A2-755 088), E2 (US-A-4 702 291) and E3 (as well as on E4 to E6), was incorrect and these submissions should therefore be admitted to the appeal proceedings. In effect, these submissions were filed within the prescribed time limit before the scheduled date for oral proceedings before the Opposition Division. No new facts were used, since documents E1, E2 and E3 had already previously been introduced into the opposition proceedings. Moreover, these submissions were filed in response to the communication of the

Opposition Division and to the amendments to claim 1 by the Patentee. Moreover, the ground of opposition based on novelty was presented in the notice of opposition in relation with E1.

The subject-matter of claim 1 of the main request is not new or at least not inventive over E3. E3 discloses all of the features of claim 1, possibly with the only exception of the feature "wherein said power management means (100) is disposed in every car (1,2,3...)" (see feature 10 of claim 1, according to the Appellant's subdivision of the claimed features in the statement of grounds of appeal, page 5). Particularly, as to the disputed feature 3 (see above, point IV) E3 discloses undoubtedly a power converter 304, 306 (see figure 3, paragraph [0049]) included in said second railway car 202, given that railway cars 301 and 202 may constitute a single integral railway car according to an embodiment of E3 ([0049], column 5, last eight lines). Further, concerning feature 5 (see above, point IV) E3 states that the power generation means 102 of the first railway car (see figures 1, 3) feeds power to the power storage means 204 ([0035], lines 8-12; [0052], lines 7-12) of the second railway car, which stored energy is then used to power driving motors 208 (or 308, according to the embodiment of paragraph [0049]) (see [0047], lines 13-15). In relation to claimed features 6, 7, 8 and 9 (see above, point IV) E3 describes a power management system 500 (figure 5) which is provided with data relating for instance to track topography and speed (E3, [0056]), size and weight of the railway car, power capacity and electrical load. The power management system 500 controls storage, generation and regeneration of energy

(E3, [0054], lines 1-3), specifically the use of stored energy (it may determine that it is more efficient to completely use all of the stored energy or alternatively it may determine not to use stored energy, if a higher demand is upcoming) (E3, [0057]), and it may be configured to interface with engine controls. The power management system 500 is also designed to determine whether storage means 204 is charged by electric power from the power generation means or from dynamic braking (E3, [0061]). Thus the power storage and power transfer requirements are determined (E3, [0057]). Additionally, referring to the embodiment of figures 8A to 8D, illustrating an embodiment of the energy management system 500 according to figure 5, it is clearly confirmed that said system 500 controls the power generated by said power generation means 102 (see E3, [0087], [0088]). Consequently, features 6,7,8 and 9 are known from E3. Finally, features 10 and 11 of claim 1 (see above) are likewise known from E3. Indeed, E3 discloses that the power management means 500 controls the power generation means 102 (see E3, figures 5, 8A-8D, [0087], [0088]), the inverter 106 (see [0062], lines 7-10) and the power storage means 204 ([0058], [0059]) independently and a power management means is provided on each car (see [0050], lines 6-10; [0055], lines 1-4).

In the alternative, if it were considered that E3 does not disclose that a power management means is disposed in every car, then this difference cannot involve an inventive step. The skilled person starting from E3 would face the technical problem of improving the power management such that it is better suited for operating

and managing the functions of each individual car and such that that flexibility in the use of the railway cars is increased. The solution would be obvious for the skilled person, an independent power management system having anyway to be provided on locomotive cars, given that these are frequently used separately. Thus the skilled person would implement this obvious technical measure on each railway car.

The reimbursement of the appeal fee is equitable, for the Appellant's right to be heard was violated. The Opposition Division did not admit to the proceedings the arguments (submitted by fax on 23 February 2010) relating to inventive step based on document E3 and the skilled person, and on E3 combined with E1 or E2 (as well as based on E4 to E6), although documents E1 to E3 had already been previously introduced into the proceedings and although these arguments were submitted timely in reply to the summons to the oral proceedings. Further, these arguments were submitted in response to amendments to claim 1 by the Patentee and to a negative provisional opinion of the Opposition Division on the Opponent's requests. Finally, the ground of opposition based on lack of novelty of the subject-matter of claim 1 with regard to E3 was also not admitted by the Opposition Division, notwithstanding the fact that novelty was put forward as a ground of opposition in the notice of opposition with respect to E1.

Reasons for the Decision

1. The appeal is admissible.

2. The Board, exercising its discretion under Article 12 (4) RPBA (Rules of Procedure of the Boards of Appeal), decided to admit to the appeal proceedings the submissions relating to novelty and inventive step based on document E3. The Board considered that these submissions were filed in response to a negative preliminary opinion of the Opposition Division, i.e. stating that it could not share the Opponent's view. These submissions were likewise filed after previous amendments of claim 1 by the Patentee (see letter dated 9 February 2009), wherein the amendments were at least partly based on the description of the patent specification (hereinafter designated as EP-B). Therefore, the Board estimated that under these circumstances the Opponent should have been given the opportunity to amend its case already during opposition proceedings. Moreover, document E3 had already been discussed by the Opponent in combination with E1 in the notice of opposition, in relation to the alleged lack of inventive step of the subject-matter of claim 1. Additionally, E3 is also acknowledged in EP-B (see [0002]) as representing the closest prior art. Hence it could be safely assumed that the disclosure of this document was well-known to the Patentee, as well as to anyone acquainted with the case in point as detailed as early as in the notice of opposition. Consequently, neither the legal nor the factual framework of the case is substantially altered by the admission of the submissions (or new facts) relating to E3 to the appeal proceedings and in conclusion, not least because of

this last reason, the admission of these submissions was warranted under these circumstances.

It is noted that the Respondent did not object during the oral proceedings to the admission of the aforesaid submissions relating to E3 to the appeal proceedings, but stated that anyway these submissions were considered to be not relevant and would not prejudice the maintenance of the patent as amended. Accordingly, the Respondent essentially reiterated its opinion already set out in writing (see filing of 22 November 2010), stating that the Opposition Division correctly exercised its discretionary power pursuant to Article 114(1) EPC and properly assessed the relevance of the new submissions.

3. The subject-matter of claim 1 of the main request is new over E3.

With respect to the disputed features 3, 5, and 6 to 11 (the Appellant's nomenclature on page 5 of the statement of grounds of appeal is used; see points IV and V above) of claim 1 the following remarks apply. Concerning feature 3 it is noted that E3 discloses a first car 100 and a second car 200 (see figures 1 to 3), wherein according to E3 (see [0049]) the second and the third car 300 may form a single integral car including both cars 202, 301 shown in fig. 3. Thus, this single car evidently includes a power converter 304, 306 and a driving motor 308 (see figure 3, [0049]), and this single car represents a second car according to feature 3 of claim 1.

As to feature 5 (see points IV, IV above) of claim 1 it emerges clearly from E3 ([0035], [0052]) that power generation means 102 supply energy to power storage

means 204, such that said second car uses said power generation means as a power source. It is noted in particular, that feature 5 and claim 1 do not require that the energy from power generation means be supplied by a direct connection to the driving motor of the second car.

In relation to features 6 to 9 (see points IV, V above) of claim 1 it is first generally remarked that the power management system 500 (E3, figure 5) "operates in the same general manner as system 400 of fig. 4" (E3, [0055]) and that no explicit location is indicated in E3 for system 500, although possible locations are indicated in respect of system 400 (see [0050]). This latter aspect is however not relevant to features 6 to 9. The control functions implied by features 6 to 9 are nonetheless known from E3, for the system 500 indeed controls the power generated by said power generation means 102. In effect, this is derived for instance from the fact that the system 500 may determine "to completely use all of the stored energy, even though present demand is low" (e.g. if a dynamic braking region is coming up), or "not to use stored energy, despite present demand" (e.g. if a heavier demand is upcoming) (see [0057]). These options entail that the power generated by said power generation means 102 and the storage quantity of said power storage means are controlled by the system 500. In addition, these examples also demonstrate that said power generation means 102 are clearly controlled by the system 500 (see features 10, 11 below) since in each of the two described situations determining whether to use or not a given amount of stored energy equivalently implies determining whether a corresponding amount of energy is generated or not.

This is necessarily so, since present demand has to be met, which demand is given as the sum of power delivered by the power storage means 204 and the power generation means 102. The control function performed by the power management means 500 over the power generation means 102 is unambiguously confirmed by the block diagram of figure 5 and by paragraphs [0087], [0088] and related figures 8A to 8E. According to paragraph [0063] the figures 8A to 8E illustrate aspects of a power management system to be implemented in the system 500 of figure 5. Lastly, the aforesaid options mentioned in relation to the two described situations (see [0057]; see above) clearly demonstrate that the power management system 500 aims at minimizing power capacity of said power generation means (feature 9 of claim 1) by increasing efficiency. In respect of features 10 and 11 it has already been shown (see hereinbefore) that the power management means 500 control the power storage means. The same holds for the power storage means 204 and the converter 104, 106, which are both controlled by the power management system 500 (see [0058], [0059]; [0062]). However, E3 does not disclose that power management means are provided on each car since paragraph [0055] does not state that the same location is provided for system 500 as for system 400 (E3, [0050]). Further, paragraph [0050] refers to a "separate energy tender vehicle" 202 but not to an "energy tender vehicle" including as an integral part "second engine vehicle 301" (E3, [0049]). It is therefore concluded that the only difference between claim 1 (see second alternative: "power storage means mounted on said second railway car") and E3 resides in that power management means are disposed in every car and that the

subject-matter of claim 1 is new over E3 (Article 54(1) EPC 1973).

4. The subject-matter of claim 1 of the main request is nonetheless not inventive over E3. In effect, the skilled person starting from E3 would face the technical problem of improving the power management such that it is better suited for operating and managing the functions of each car and such that that flexibility in the use of the railway cars is increased. The skilled person would recognize that E3 already proposes a solution to this problem since in paragraph [0050] it is stated that "the energy storage and generation system 400 could be implemented, for example, as part of a separate energy tender vehicle **and** (emphasis added)/ or incorporated into a locomotive". Contrary to the Respondent's view the system 400 clearly also includes a power management system, as is obvious from paragraph [0052] in connection with figure 4 and with paragraph [0055] (see lines 1-5). Providing a power management system in each car would be advantageous in that an improved individual energy management of each car would be obtained, thus increasing energy efficiency, and in that independent or individual use of each car would be possible. The use of varying number of cars in the composition of a train would also become easier and more flexible. The Board cannot see that the skilled person would allegedly refrain from implementing said technical measure because this would mean including a position identification system (such as a GPS) in each car, as stated by the Respondent. Indeed, it clearly lies within the capabilities of the skilled person to decide whether a position identification system is

needed on each car or merely on a single car (e.g. the locomotive). In particular it is evident that the wording of claim 1 does not stipulate that the power management means installed in each car have in all respects exactly the same technical characteristics. Secondly and alternatively, knowing the exact position of each car, especially in a train having a high number of cars, would in principle make energy management more efficient, for the storage capacity of each car would be individually determined and managed, taking also into account track topographic and profile conditions if need be. Either way, the inclusion of a GPS system in the system 500 of E3 would not hinder the skilled person from arranging a power management means on each railway car. For these reasons the subject-matter of claim 1 (see second alternative: "power storage means mounted on said second railway car") is not inventive over E3 and the usual capabilities of the skilled person (Article 56 EPC 1973).

5. The subject-matter of claim 1 of the auxiliary request lacks an inventive step over E3. The subject matter of claim 1 (see first alternative: "a power storage means is mounted on only said second railway cars") of the auxiliary request differs from the railway car drive system of claim 1 of the main request (see second alternative: "power storage means mounted on said second railway car") in that a plurality of second cars (thus a single second car is excluded) are provided. Envisaging the composition of a train consisting of a plurality of second cars would be obvious for the skilled person, for instance in order to increase the number of passengers, and such a measure is generally known. Moreover, as already outlined above (see

point 4), the implementation of such a measure would not imply any additional difficulties which would prevent the skilled person from adopting it. Consequently, taking likewise into account the reasons given in relation to lack of inventive step of claim 1 of the main request, the subject-matter of claim 1 of the auxiliary request does not imply an inventive step.

6. The Board does not share the Appellant's view that a substantial procedural violation has occurred, which would justify the reimbursement of the appeal fee. In effect, the Board does not see that the Appellant's right to be heard (Article 113(1) EPC) was violated. The Opponent's submissions were filed after the nine months period stipulated by Article 99(1) EPC. The Opposition Division considered these submissions as new facts (see impugned decision, page 4, fourth paragraph), since these implied a change in the Opponent's line of arguments. The Opposition Division also regarded these submissions as late filed, despite the fact that these were filed after the claims had been amended by the Patentee (see above, points V and 2) and after a negative preliminary opinion of the Opposition Division on the Opponent's case. Thus, pursuant to Article 114(2) EPC the Opposition Division had, in its view, a discretionary power to disregard these submissions. The Opposition Division then exercised its discretion on the basis of a *prima facie* examination of the new facts as to their relevance. This criterion is mentioned *inter alia* in the decision of the Enlarged Board of Appeal G 10/91 (OJ EPO 1993, 408; see Reasons, point 16) and in the decision of the Technical Board of Appeal T 1002/92 (OJ EPO 1995, 605). The Opposition Division discussed the Opponent's submissions (see impugned

decision, pages 4, 5) and found that these did not prejudice, on a prima facie basis, the maintenance of the patent as amended and for these reasons the submissions relating to E3 and E1 (as well as in relation to further documents E4 to E6) were not admitted to the proceedings. It ensues that the Opponent's submissions were duly considered by the Opposition Division as regards their admissibility and therefore the Opponent's right to be heard was not violated in that respect. Thus the Opposition Division did not act in breach of Article 113(1) EPC. The fact that the Opposition Division may have erred in regarding the Opponent's submissions as late filed would rather constitute an error of judgement. However, an error of judgement does not imply a substantial procedural violation. The Appellant's request for reimbursement of the appeal fee is therefore refused (Rule 103(1) (a) EPC).

7. The Respondent's request for apportionment of the costs is refused (Article 104 EPC). Requesting oral proceedings pursuant to Article 116 EPC is a fundamental right of the parties. In this case the Opponent has advised the Opposition Division and the Patentee on 9 March 2010, i.e. at least two weeks before the scheduled date for the oral proceedings, that it would not attend the oral proceedings. Contrary to the opinion of the Respondent, the Board cannot identify any objective elements justifying the conclusion that a notice of two weeks is too short and that the Opponent should have reasonably been aware that by cancelling the oral proceedings with such short notice it would have necessarily caused costs to the Patentee. In fact, costs due to cancellation of flight

tickets depend on the applicable airline fare rules and on the time of booking, and these are factors that involve a subjective component. Moreover, the possibility that oral proceedings are cancelled cannot be excluded a priori and should be taken into account when booking flight tickets. Thus, the Board cannot see that the Opponent's conduct involves a procedural abuse. Moreover it is noted that the Patentee also had requested oral proceedings. Under these circumstances, the Board judges that the Opponent cannot be held responsible for the costs incurred by the cancellation of the oral proceedings by the Opposition Division.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.
3. The Appellant's request for reimbursement of the appeal fee is refused.
4. The Respondent's request for apportionment of the costs is refused.

The Registrar:

The Chairman:

A. Vottner

G. Pricolo