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**Datasheet for the decision
of 15 December 2010**

Case Number: T 2149/08 - 3.2.06

Application Number: 99973489.0

Publication Number: 1153167

IPC: D07B 1/06

Language of the proceedings: EN

Title of invention:

Tension member for an elevator

Patentee:

Otis Elevator Company

Opponents:

Schindler Aufzüge und Fahrtreppen GmbH
SCHINDLER S.A.

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)

Relevant legal provisions (EPC 1973):

EPC Art. 84, 83

Keyword:

"Article 123(2) EPC, Article 84 EPC 1973 and Article 83 EPC
1973 - requirements fulfilled"

Decisions cited:

T 0296/93

Catchword:

-



Case Number: T 2149/08 - 3.2.06

DECISION
of the Technical Board of Appeal 3.2.06
of 15 December 2010

Appellant: Schindler Aufzüge und Fahrtreppen GmbH
(Opponent OI) Ringstrasse 54
D-12105 Berlin (DE)

Representative: Ernicke, Hans-Dieter
Patentanwälte
Dipl.-Ing. H.-D. Ernicke
Dipl.-Ing. Klaus Ernicke
Schwibbogenplatz 2b
D-86153 Augsburg (DE)

Appellant: SCHINDLER S.A.
(Opponent OII) San Joaquin, 15
ES-50080 Saragoza (ES)

Representative: Verriest, Philippe
Cabinet Germain & Maureau
12, rue Boileau
BP 6153
FR-69466 Lyon Cedex 06 (FR)

Respondent: Otis Elevator Company
(Patent Proprietor) 10 Farm Springs
Farmington
CT 06032-2568 (US)

Representative: Klunker . Schmitt-Nilson . Hirsch
Patentanwälte
Destouchesstraße 68
D-80796 München (DE)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
12 September 2008 concerning maintenance of
European patent No. 1153167 in amended form.

Composition of the Board:

Chairman: P. Alting van Geusau
Members: M. Harrison
W. Sekretaruk

Summary of Facts and Submissions

I. The appellants (opponent OI and opponent OII) each filed an appeal against the opposition division's interlocutory decision dated 12 September 2008, according to which European patent No. 1 153 167 in its amended form was found to meet the requirements of the European Patent Convention. Each appellant requested revocation of the patent.

As part of its decision, the opposition division found that the intervention of opponent OII filed during opposition proceedings was admissible.

II. With its response of 7 September 2009, the respondent (proprietor) requested that the appeals be dismissed and that the intervention of appellant/opponent OII be found inadmissible. The respondent cited *inter alia* the following documents:

P5: Lawsuit for ruling of non-infringement, filed by appellant/opponent OII at the Court in Milan and served to the respondent on 30 November 2006.

P5A: English translation of P5.

P6: Invalidity action, filed by appellant/opponent OII on 14 November 2007.

P6A: English translation of P6.

P7: Excerpt from Schindler Holding Ltd's Financial Statements 2006, cover page, pages 2, 11, 77 and 78.

- P8: Request for costs filed at the Landgericht Düsseldorf.
- III. The Board issued a summons to oral proceedings followed by a communication stating its provisional opinion. In particular, the Board opined that the intervention by appellant/opponent OII was admissible, and that the requirements of Article 123(2) EPC and Article 84 EPC 1973 were not fulfilled.
- IV. With its letter of 19 November 2010, appellant/opponent OII provided English translations of the following previously filed documents related to proceedings before the Zaragoza Commercial Court:
- E1: "Diligencia de presentacion" (A notice of lawsuit) at the Zaragoza Commercial Court, dated 29 November 2007, in Spanish.
- E2: Order dated 10 April 2008 and stamped 11 April 2008 from the Zaragoza Commercial Court, in Spanish, regarding serving of a lawsuit on 29 November 2007.
- E3: Pages 63 to 65 of the served summons relating to the lawsuit of 29 November 2007, in Spanish.
- V. With its submission of 24 November 2010, the respondent filed amended claims in a series of auxiliary requests.
- VI. During the oral proceedings of 15 December 2010, the appellants confirmed their requests for revocation of the patent.

The respondent replaced all its previous requests by a single request for maintenance of the patent in an amended form on the basis of the following documents: claims 1 to 4 and description pages 2 to 7, dated 15 December 2010, together with Figures 1 to 9 as granted.

VII. Claim 1 of the sole request reads as follows:

"1. Elevator system comprising a car (14), a counterweight (16), a machine (20), a rotatable traction sheave (24), a deflector pulley and a tension member (22),
2.1 the tension member (22) interconnecting the car (14) and the counterweight (16), with one end attached centrally to the car (14) and the other end attached centrally to the counterweight (16),
2.2 the tension member (22) suspending the car (14) and the counterweight (16) as a 1:1 suspension and for providing the lifting force to the car (14),
2.3 the tension member (22) being engageable with and driven by the traction sheave (24) in order to raise and lower the car (14),
2.4 the tension member (22) being engaged with the sheave (24) such that rotation of the sheave (24) moves the tension member (22) and thereby the car (14) and the counterweight (16), with the geared or gearless machine (20) being engaged with the sheave (24) to rotate the sheave (24),
2.5 and the tension member (22) extending vertically from the one end to the traction sheave (24), then over the traction sheave (24) and over the deflector pulley, and then extending vertically to the other end,

4 the tension member (22) having a width w , a thickness t measured in the bending direction, and an engagement surface (30) defined by the width dimension of the tension member (22),

5 wherein the tension member (22) has an aspect ratio, defined as the ratio of width w relative to thickness t , greater than one,

6 the tension member (22) having a load carrying cord (26) encased within a coating layer (28),

6.1 wherein the load carrying cord (26) is formed from a metallic material and the coating layer (28) is formed from a non-metallic material,

6.2 wherein the load carrying cord (26) is formed from strands (200, 210) of wires (202, 204, 206, 208);

6.3 wherein the cord (26) is formed from a center strand (200) and six outer strands (210) laid around the center strand (200),

6.4 each of the strands (200, 210) is formed from a center wire (202, 206) and six outer wires, wherein each of the center wires (202, 206) has a larger diameter as compared to the outer wires (204, 208) of the respective strand (200, 210),

6.5a wherein the largest diameter wire, having a diameter of 0.21 mm is the center wire (202) in the center strand (200),

6.5b the smallest diameter wires, each having a diameter of 0.175 mm, are the outer wires (208) in the outer strands (210), wrapped around the respective center wire (206),

6.5c the outer wires (204) located around the center wire (202) of the center strand (200) each have an intermediate diameter of 0.19 mm, and

6.5d the center wires (206) in the outer strands (210) each have an intermediate diameter of 0.19 mm,

6.7 wherein the cord (26) is formed from strands (200, 210) and the strands (200, 210) are formed from wires (202, 204, 206, 208) such that there are spaces between the outer strands (210), spaces between the outer wires (204) of the center strand, and spaces between the outer wires (208) of the outer strands (210);

7 wherein the tension member (22) further includes a plurality of the load carrying metallic cords (26) spaced relative to one another, and

8 wherein the coating layer (28) encapsulates the plurality of spaced metallic cords (26) and fills said spaces between the outer strands (210) and between the outer wires (204, 208), and

9 wherein the traction sheave (24) has a diameter of around 100 mm and less."

VIII. The arguments of appellant/opponent OI may be summarised as follows:

The requirement of Article 123(2) EPC was not met because:

(i) the position of the deflector pulley was not defined in claim 1, whereas it was only disclosed in the filed application as being below the traction sheave; this was also required to ensure a required wrap angle around the traction sheave;

(ii) the claim defined "a" deflector pulley and "a" tension member, although only one of each were disclosed;

(iii) since the basis of claim 1 was Figure 1, the machine had to be restricted to a geared machine, but claim 1 included a gearless machine.

Claim 1 further lacked clarity contrary to Article 84 EPC 1973, because the term in feature 9 "around 100 mm" was imprecise. Although the feature was in the granted claim, that feature was in relation to wires with a diameter of "0.21 mm and less", the claim had now been amended to other values.

Since the deflector pulley position was not defined nor the wrap angle, an objection of insufficiency also arose under Article 83 EPC 1973, because the claim allowed any wrap angle to be used around the traction sheave even though at very low wrap angles the system could not function to drive the car and counterweight.

There were no objections to either novelty or inventive step of the subject matter of the claims.

IX. The arguments of appellant/opponent OII may be summarised as follows:

The proprietor's infringement action in Zaragoza bearing a date of 23 November 2007, but served later, was the first proceedings against opponent OII falling under Article 105(1)(a) or (b) EPC. P5/P5a, P6/P6a filed by the respondent related to actions which were neither infringement proceedings in accordance with Article 105(1)(a) EPC nor proceedings which were made in response to a request of the proprietor to cease alleged infringement as required by Article 105(1)(b) EPC. The EPC required that a "request" to cease alleged infringement was made and this should be explicit. E1 to E3 and the English translations of same were further evidence of the institution of said infringement proceedings.

Appellant/opponent OII was a separate legal entity to appellant/opponent OI, and was thus a third party in accordance with Article 105(1) EPC. Any financial connection between opponents OI and OII was irrelevant.

Article 123(2) EPC was contravened since there was no disclosure of a traction sheave of "around 100 mm and less" together with the wire diameters of features 6.5a to 6.5d defined in the claim; the claimed wire diameters related to the Figure 8 embodiment, whereas the traction sheave diameter was only disclosed in relation to the description of Figure 2 (see page 13) and Figure 6 (see page 11). In relation to Figure 6, the maximum wire diameter for use of a pulley of "around 100 mm" diameter was 0.20 mm, with other wires being 0.175 mm, whereas the claim now defined a larger diameter of 0.21 mm for the central wire of the central strand and intermediate wires of 0.19 mm, which were thus larger.

X. The respondent's arguments may be summarised as follows:

The intervention of appellant/opponent OII was inadmissible. The three-month period under Rule 89(1) EPC had not been met by the intervener, which filed its intervention on 22 February 2008, because the intervention had not been filed from the first action of those specified in Article 105(1)(a) and (b) EPC, but instead only from the infringement proceedings instituted against the intervener on 28 November 2007. An intervention could only admissibly be filed from the first action, as established in e.g. T 296/93, Reasons 2.5. The intervener had already instituted an

action for declaration of non-infringement of the present patent in Milan on 30 November 2006; infringement proceedings in Spain were known to be pending at the latest with the Zaragoza court order of 21 September 2007 which had followed from the verification proceedings, and the intervener had instituted an invalidity action with regard to the present patent in Barcelona on 14 November 2007. The relevant lawsuits in Milan and Barcelona were found in P5/P5a and P6/P6a.

The proceedings in Milan and Barcelona had each been instituted because the intervener was aware that it might be sued for infringement. The verification proceedings in Zaragoza were equivalent to or even more than a "request of the proprietor to cease alleged infringement". The intention of the EPC was to provide a party with a legitimate interest (which was a condition in many national states in order that proceedings for a ruling of non-infringement could be instituted) to enter EPO proceedings. A formal request to cease alleged infringement was not required if it was clear that a party had been informed by the proprietor that it had a serious intent not to tolerate infringement whereby the party believed that the proprietor would sue it for infringement. In Milan for example, the present intervener had stated in the lawsuit that it was "almost certain" that the proprietor would undertake further measures against it. Likewise the verification proceedings in the Zaragoza Court instituted on 28 July 2006 by the proprietor would be understood as a request of the proprietor to cease alleged infringement. The nullity action in Barcelona was merely an attempt to pre-empt an

infringement suit, but also clearly showed that the intervener was aware that it was under threat of infringement proceedings.

Even if the proprietor's infringement action in Zaragoza were to be considered to be the first action in accordance with Article 105(1) EPC, the intervener had failed to file evidence within the three-month period proving that such an action had been started against it as required by Article 105(1) EPC. Only an unsigned copy of a writ dated 23 November 2007 was filed in time. E1 was filed on 18 April 2008, after expiry of the three-month time limit. This was the only evidence proving that the writ dated 23 November 2007 was received by the court on 28 November 2007.

Further, the intervention was inadmissible because it had not been filed by a "third party" in the sense of Article 105(1) EPC, since the intervener was not independent of opponent OI. The intervener was instead part of the same business group, both opponents OI and OII being owned and controlled by the same holding company (see P7). Also, both OI and OII were licensed to operate by a company, namely the patent department, which indemnified each in the case of a patent dispute, as evidenced by P8. This was thus an attempt by the Schindler group "to abuse the opposition procedure by late filing an additional opposition in the name of a different subsidiary company" which was controlled by the same indemnifying party responsible for patent matters.

As regards Article 123(2) EPC, the claim now included all features which were disclosed in combination in the

application as filed; any further more detailed aspects shown in Figure 1 regarding the suspension of the car and counter weight were not required, not least since Figure 1 was schematic. There was thus no reason to define the position of the deflector pulley as being below the traction sheave since the necessary wrap angle, which depended on many factors, would determine the position of the deflector pulley. Likewise there was no need to define only one deflector pulley and one tension member since the particulars of any lift construction would determine whether another pulley or an additional tension member were required and this would be recognised by a skilled person as standard practice in lift construction. As regards the objection to "geared or gearless" to define the machine in the claim, both of these possibilities were disclosed on page 7, lines 17 to 20. The traction sheave diameter of around 100 mm was disclosed with regard to Figure 6, but the embodiment of Figure 8 followed on directly from that part of the description and related to an even more flexible rope; the same applied to page 13 where a traction sheave diameter of "100 mm or less" was disclosed.

As regards the objection to lack of clarity of the expression "around 100 mm", this was anyway used in the granted claim and the more limited definition of wire diameter in the present claim did not alter its meaning.

Concerning the objection under Article 83 EPC 1973, the skilled person would have no difficulty in determining the required wrap angle for any particular arrangement falling within the claim scope as part of his normal

activities; it was not necessary to define the position of the deflector pulley.

The subject matter of claim 1 also involved an inventive step. The closest prior art was:

E4: GB 2 162 283

It was not possible to arrive at the subject matter of claim 1 without using an inventive step; the subject matter of claim 1 solved the problem of providing a reduced traction sheave diameter when starting from E4. The appellants had also made no arguments to the contrary.

Reasons for the Decision

1. *Admissibility of the intervention*

1.1 The intervention by opponent OII was filed on 22 February 2008. This had annexed thereto an unsigned copy of an infringement suit dated 23 November 2007 together with an English translation thereof. This is not in dispute.

1.2 The three-month time limit in Rule 89(1) EPC for filing the notice of intervention is met, only if it is proven that proceedings had been instituted in accordance with Article 105(1) EPC.

1.2.1 The date of drafting of the infringement lawsuit in Zaragoza bearing a date of 23 November 2007 is at first sight the earliest date on which the lawsuit could

possibly have been filed, unless the lawsuit had been post-dated. The subsequent filing of the intervention on 22 February 2008 and payment of the fee on the same day were thus within three months of, seemingly, the earliest possible date.

- 1.2.2 It can be left undecided whether an unsigned copy and translation alone provide insufficient evidence for proving the date of institution of proceedings, or indeed whether proceedings were instituted at all. In the present case opponent OII later filed evidence to that effect on 18 April 2008, in the form of E1. The respondent also agreed that the earliest possible date of institution of proceedings was proven by E1.
- 1.2.3 Since, according to Rule 89(2) EPC, Rule 76 and 77 EPC are also applicable to interventions, and since it is stated in Rule 77(2) EPC that any deficiency which is not a deficiency under Article 99(1) or Rule 76(2) EPC can be remedied within a period specified, it follows that opponent OII indeed filed E1 in good time because no period under Rule 77(2) EPC had yet been set by the EPO for doing so.
- 1.2.4 Although E1 is in Spanish and was not filed with a translation into one of the official languages of the EPO, the respondent had acknowledged that E1 was evidence showing that the lawsuit had been filed at the earliest on 23 November 2007. A translation was thus not required, although translations of E1 to E3 were indeed filed by way of appellant/opponent OII's submission of 19 November 2010, in response to the Board's mention of this in its communication sent prior to oral proceedings.

1.3 The infringement action in Zaragoza bearing a date of 23 November 2007 was the first proceedings falling within the terms of Article 105(1) EPC.

1.3.1 Article 105(1) EPC states:

"Any third party may, in accordance with the Implementing Regulations, intervene in opposition proceedings after the opposition period has expired, if the third party proves that

(a) proceedings for infringement of the same patent have been instituted against him, or

(b) following a request of the proprietor of the patent to cease alleged infringement, the third party has instituted proceedings for ruling that he is not infringing the patent."

1.3.2 Contrary to the respondent's submissions, none of the court actions according to P5/P5a, P6/P6a, nor the verification proceedings in Zaragoza (of which a copy was not anyway filed in the appeal procedure), is an action under Article 105(1) EPC which would have caused the three-month time limit for filing an intervention to end earlier.

1.3.3 P5/P5a is a lawsuit brought by opponent OII against the respondent, requesting *inter alia* nullification of the European patent number 1 153 167 (see item 4, on e.g. page 5 of P5a) and a declaration that the products of opponent OII (see item 5 on page 13 of P5a) did not infringe this patent. However, neither of these claims

constitutes proceedings under Article 105(1) EPC, because the law suit is not a proceedings for infringement instituted against opponent OII as in Article 105(1)(a) EPC, nor is the lawsuit a proceedings instituted by opponent OII "following a request of the proprietor of the patent to cease alleged infringement" as in Article 105(1)(b) EPC.

1.3.4 Nowhere in P5/P5a is there any statement indicating that the intervener had been requested to cease alleged infringement. On page 3, it is stated that "It is likely...that (*the respondent*) will undertake further judicial measures". Additionally on page 4, it is stated that "in consideration of the assumed behaviour by (*the respondent*) in Germany and France, the grounds subsist also to fear the now (*the respondent's*) suits in Italy on the aforementioned patent titles against (*opponent OII*)". However, none of these statements concerns a proceedings for infringement instituted against opponent OII, nor does any of these statements imply a request of the proprietor of the patent to cease alleged infringement in Italy. Instead, the statements merely indicate that the lawsuit of opponent OII was an attempt to pre-empt any action of the proprietor in which it might request the ceasing of alleged infringement.

1.3.5 As regards the fact that a verification procedure in Zaragoza had been instituted earlier, which was not contested as such by appellant/opponent OII, the respondent supplied no evidence which would indicate that these verification proceedings would constitute an "equivalent or even more than" a request to cease alleged infringement, as it had argued in its written

submissions. This was also mentioned in the Board's communication prior to oral proceedings and no new evidence was supplied by the respondent in response thereto.

1.3.6 Instead, in its letter of 24 November 2010, the respondent argued that the rationale of the "request" mentioned in Article 105(1)(b) EPC was to allow a party with a legitimate interest to enter the EPO proceedings and that this was so because in many countries a legitimate interest had to be shown before a lawsuit for a declaration of non-infringement could be filed. However, the respondent has merely put this forward as an argument, without providing any evidence which would support its interpretation of the alleged intent of Article 105(1)(b) EPC when it was drafted. The Board thus sees no reason to alter its provisional opinion.

Further, the respondent's argument that a "request" need not be in writing and that it should merely be understood as a serious intent not to tolerate patent infringement which would result in the third party understanding that the proprietor would sue it for patent infringement, is also entirely unsupported by any evidence to that effect. Merely because a possibility, or even a likelihood, exists that a proprietor may sue a potential infringer, there is no evidence on file which would allow the Board to equate this to be a "request ... to cease alleged infringement." Also, the actions undertaken in other countries by the respondent also against other companies in the same group as opponent OII do not constitute a request by the proprietor of the patent to cease alleged infringement.

1.3.7 P6/P6a relates to the lawsuit for nullity filed in Barcelona, but this however gives no indication that the respondent had started an infringement proceedings against opponent OII according to Article 105(1)(a) EPC, nor that the nullity suit is equivalent to a request for a non-infringement ruling and was made following a request of the proprietor to cease alleged infringement under Article 105(1)(b) EPC. Again, the respondent has provided no evidence which shows that a request to cease alleged infringement had been made.

1.4 The respondent argued further that opponent OII was not a "third party" in accordance with Article 105(1) EPC. The Board however finds otherwise.

1.4.1 P7 and P8 were supplied as evidence by the respondent to demonstrate that because opponent OII belonged to the same group of companies as opponent OI, opponent OII should not be understood as independent, nor a "third party" in the terms of Article 105(1) EPC.

1.4.2 P7 indeed appears to show that opponents OI and OII are within the same group of companies, but provides no information which could lead to a finding that each is not a separate legal entity. The Board finds that the terminology "Any third party" in Article 105(1) EPC cannot be given an interpretation other than that each party must be a separate legal entity. This was also mentioned in the communication sent to the parties in preparation for oral proceedings, and the respondent did not then contest the fact that each party was a separate legal entity, nor did it provide evidence to the contrary.

1.4.3 P8 also adds nothing to the foregoing, since it merely shows that the company (Inventio AG) which forms the patent department was able to claim costs for one of the subsidiaries of the holding group. The presumption that opponents OI and OII may be licensees of the patent department company which may further indemnify opponents OI and OII in respect of actions against it by third parties holding intellectual property rights, does not serve to undermine the status of opponent OI and opponent OII as being separate legal entities.

1.4.4 The respondent's allegation that allowing the opponent OII to intervene was an attempt to abuse the opposition procedure is not followed by the Board. The fact that opponent OII may intervene at all lies entirely within the sphere of responsibility of the respondent, by its choice to institute proceedings against opponent OII during opposition proceedings.

1.5 The Board thus finds, based on the evidence and arguments provided by the parties, that the intervention during opposition proceedings was admissible.

2. *Article 123 EPC*

2.1 The subject matter of claim 1 is clearly and unambiguously derivable from the content of the application as originally filed in accordance with Article 123(2) EPC.

2.1.1 In particular, the features of the elevator system against which objections were originally raised, namely

the disclosure of the suspension of the elevator and counterweight in relation to features 1 and 2.1 to 2.5, are unambiguously derivable from Figure 1 together with the description on page 7, lines 11 to 20. Concerning the features of the cord construction as defined by features 6 to 8, these are derivable unambiguously from Figure 8 of the filed application together with the description thereof on page 12, line 13 to page 13, line 7 (which erroneously refers to Figure 9 instead of Figure 8). Feature 9, regarding the traction sheave diameter of "around 100 mm and less", is disclosed on e.g. page 11, lines 22 to 25 and page 13, lines 25 to 27.

2.1.2 Although Figure 1 discloses specific details of the arrangement, the inclusion of further details in relation to the features of the claim as now on file is not required, since it is evident that Figure 1 is schematic and that a skilled person would not consider certain elements of the structure to be functionally linked to other elements. For example, whilst Figure 1 shows a motor support comprising sets of beams arranged in a certain manner, a skilled person would not regard the provision of such a beam construction arrangement as being functionally relevant in terms of the subject matter defined in present claim 1, since a skilled person would immediately recognise that other arrangements would be equally suited and that this would depend on the exact shaft structure. However, with regard, for instance, to the 1:1 structure depicted, and in relation to the definition in the claim of a sheave diameter of "around 100 mm and less", the use of a deflector pulley in addition to the traction sheave is indeed functionally related to the

central attachment of the tension member to the elevator car and the position of the counterweight.

- 2.1.3 Appellant/opponent OI objected that the position of the deflector pulley below the traction sheave was not defined in claim 1 and that this was moreover required to ensure a required wrap angle around the traction sheave. However, whilst the presence of a deflector pulley is required in view of the suspension and attachments disclosed when considering the use of around 100 mm sheave diameter or even smaller, the actual position of the deflector pulley would be unambiguously recognised by a skilled person to be a matter of mere suitability depending on the particulars of the lift system and indeed the building and its shaft. Similarly, depending on the material of the rope and the structure of the traction sheave, the wrap angle would need to be made to meet the necessary drive and safety requirements in place for any particular system. Thus the Board finds that whilst Figure 1 discloses a position of a deflector pulley below and to one side of the traction drive sheave, the exact location of the deflector pulley in this regard would be unambiguously understood by a skilled person to be a matter of choice depending on the particular elevator system and its surroundings where it is installed. In this regard it should also be understood that features 2.4 and 2.5 already define a rather precise relationship of the deflector pulley and traction sheave in relation to the vertical extension of the tension member from those to the counterweight and elevator car respectively, whereby for example wrap angles of very low amounts would hardly be conceivable and anyway not of relevance since a skilled person must

always provide a structure which gives a required wrap angle for the arrangement to function appropriately.

Similarly, whilst Figure 1 only depicts a single tension member and a single deflector pulley, and the claim defines "a" tension member and "a" deflector pulley, it is self-evident to a skilled person that more of each may be required in accordance, in particular, with not only the precise lift system arrangement but also the load requirements put on the lift system and even local area requirements for the country concerned.

- 2.1.4 In regard to the objection of appellant/opponent OI that the machine in claim 1 should be restricted to a geared machine because this is explicitly described as being such in Figure 1, the description on page 7, lines 17 to 20 however states that the shown configuration is for illustrative purposes only and that gearless machines may be used. The objection of appellant/opponent OI is thus unfounded.
- 2.1.5 The objection of appellant/opponent OII that there is no disclosure of a traction sheave of "around 100 mm and less" together with the wire diameters of features 6.5a to 6.5d defined in the claim, is found unconvincing by the Board.

Whilst the description of a sheave diameter of "around 100 mm" is disclosed in relation to the embodiment of Figure 6 which has different wire sizes, the sheave diameter is related to the flexibility of the rope, which is largely determined by the wire size in the various strands in the cords of the rope. The

embodiment of Figure 8, as also defined in claim 1, however employs a cord structure which has even greater flexibility than that of Figure 6 since wire-to-wire contact and strand-to-strand contact is even further reduced (see e.g. page 12, lines 3 to page 13, line 7, whereby it is to be noted again that the Figures referred to should be Figures 7 and 8 and not Figures 8 and 9 as stated). Similarly, while the disclosure of a sheave with a diameter of "100 mm or less" is disclosed on page 13, lines 24 to 27 which is a part of the description related to Figure 2, Figure 2 itself is merely a more detailed representation of the drive sheave which may be used in Figure 1 (see e.g. page 7, lines 21 and 22). Moreover, when considering that the cord structure in Figure 8 is more flexible than that in Figure 6, due to the reduced contact, and that the structure in Figure 6 already allows a sheave diameter of around 100 mm, it is self-evident to a skilled person that the cord structure defined in claim 1 is suitable for the sheaves with the diameter of "100 mm or less" mentioned on page 13. Thus, an unambiguous disclosure exists for the combination of feature 9 of claim 1 together with the combination of features 6 to 8, when the whole disclosure is considered by a skilled person.

- 2.2 In regard to Article 123(3) EPC, no objections were raised by the appellants in this regard, and since the scope of protection of the claim is restricted compared to that of the claim as granted, the Board can also find no objection in this regard.

3. *Article 84 EPC 1973*

3.1 Appellant/opponent OI objected that claim 1 lacked clarity due to the expression "around 100 mm" used to define the diameter of the traction sheave. However, this terminology was used already in the granted claim and the amendments made to the claim with regard to the specific wire sizes (and numbers of said wires and the strands) used in each cord do not give rise to a situation which affects the clarity of the term originally present in the claim. To allow an objection to lack of clarity which does not arise out of the amendments made to the claim would thus be tantamount to allowing an objection of lack of clarity to the claim as granted, which is however not a ground of opposition. The objection is thus not allowable.

3.2 The Board notes that the numbering of the features in claim 1 lacks a feature numbered 3 and a feature numbered 6.6 which might normally be expected to be present in the feature numbering sequence used in the claim. However, since no party raised any objection to this and since feature numbering is not excluded, albeit unconventional, and since the features in the claim follow a logical sequence and are grouped appropriately, the Board finds no reason to consider the claim to lack clarity in this regard.

4. *Article 83 EPC 1973*

Appellant/opponent OI objected that the subject matter of claim 1 contravened the requirements of Article 83 EPC 1973 because the position of the deflector pulley was not defined, which in turn meant that over the

whole scope of the claim this could allegedly result in a situation where an insufficient wrap angle around the traction drive sheave pulley could be present if the deflector pulley were to be located at a different location, for example at a position higher than the traction sheave. However the Board finds this argument unconvincing, since it is well within the bounds of the normal skill of a skilled person in the art of elevator system design to position the deflector pulley appropriately such that a sufficient wrap angle will be achieved; this would be a normal requirement put on the lift design when ensuring adequate traction is achieved in various loading situations. Whilst theoretically the claim encompasses the possibility of the deflector pulley being at a position higher than the traction sheave, whereby only a very small wrap angle might occur, the skilled person is limited in the positioning of the deflector pulley by the implicit requirement to provide sufficient wrap angle for the system to function and this is dependent not least on the frictional force between the belt and the traction sheave; a position of the deflector pulley which resulted in insufficient frictional force due to insufficient wrap angle for the situation concerned would thus be rejected as inappropriate by a skilled person.

Thus, in regard to the objection brought forward and the arguments in support thereof, no contravention of Article 83 EPC 1973 is found to be present.

5. *Novelty and inventive step*

5.1 No objections were made by the appellants to the novelty and/or inventive step of the subject matter of current claim 1.

5.2 When considering E4 to be the closest prior art, as submitted by the respondent, this discloses an elevator system using a flat belt (see e.g. Figure 3) as a winding rope, whereby the rope has an aspect ratio greater than one and includes a number of cords placed side-by-side and which are encased by a covering material in a moulded construction. No details of the belt cords are disclosed. According to E4, depending on the number of ropes used, the winding drum diameter could be reduced to around 1.07 m.

5.3 The objective problem to be solved by the features of claim 1 when starting from E4 may be regarded as the provision of an elevator system having a reduced traction sheave diameter (see also paragraphs [0016] to [0018] of the patent as granted). This problem is solved by the features in claim 1, in particular by the cord construction defined therein which allows the elevator system to operate with traction sheave diameters of around 100 mm or less.

5.4 The appellants refrained from making any arguments against the presence of an inventive step in claim 1 and none are immediately apparent to the Board. The Board thus concludes that, based on the cited prior art, the subject matter of claim 1 involves an inventive step. The requirement of Article 56 EPC 1973 is therefore fulfilled.

6. *Adaptation of the dependent claims and the description*

The numbering of the dependent claims was adapted to claim 1 of the sole request and the description was adapted for consistency with these claims. No objections were made by the parties to these amendments, nor were any apparent to the Board.

7. Since the requirements of the EPC are fulfilled by the sole request, the patent is in an amended form in which it can be maintained.

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 European patent with the following documents:

claims 1 - 4 and description pages 2 - 7, dated
15 December 2010; drawings Figures 1 to 9 as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau