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**Datasheet for the decision
of 18 February 2010**

Case Number: T 0305/08 - 3.2.06

Application Number: 99966424.6

Publication Number: 1140689

IPC: B66B 7/08

Language of the proceedings: EN

Title of invention:

Wedge clamp type termination for elevator tension member

Patentee:

Otis Elevator Company

Opponents:

INVENTIO AG
SCHINDLER S.A.
Schindler Aufzüge und Fahrtreppen GmbH

Headword:

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Relevant legal provisions:

EPC Art. 123(2), 105
EPC R. 77, 89
RPBA Art. 13(1)

Relevant legal provisions (EPC 1973):

EPC Art. 100(b), 84

Keyword:

"Interventions admissible; first cases under Article 105;
third party"

"Special reason not to remit case to first instance despite
presence of a new ground"

"Main request - not allowable Article 100(b) EPC 1973"

"First and second auxiliary requests not admitted
(Article 13(1) RPBA)"

"Request for adjournment rejected"

Decisions cited:

G 0001/94, G 0003/97, T 0296/93

Catchword:

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Case Number: T 0305/08 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 18 February 2010

Appellant:
(Opponent OI)

INVENTIO AG
Seestrasse 55
CH-6052 Hergiswil (CH)

Representative:

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(Opponent OII)

SCHINDLER S.A.
San Joaquin, 15
ES-50080 Saragoza (ES)

Representative:

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

(Opponent OIII)

Schindler Aufzüge and Fahrtreppen GmbH
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)

Respondent:
(Patent Proprietor)

Otis Elevator Company
10 Farm Springs
Farmington, CT 06032-2568 (US)

Representative:

Klunker . Schmitt-Nilson . Hirsch
Patentanwälte
Destouchesstrasse 68
D-80796 München (DE)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 4 December 2007 rejecting the opposition filed against European patent No. 1140689 pursuant to Article 102(2) EPC 1973.**

Composition of the Board:

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

Summary of Facts and Submissions

- I. The appellant (opponent OI) filed an appeal against the opposition division's decision of 4 December 2007 rejecting the opposition against European patent number 1 140 689, and requested revocation of the patent.

The only grounds of opposition raised during opposition proceedings by opponent OI and considered by the opposition division were those under Article 100(a) and (b) EPC 1973.

- II. An intervention under Article 105 EPC was filed by Schindler S.A. (hereafter opponent OII) on 22 February 2008, and the opposition fee was paid on the same day. The grounds for opposition included objections under Article 100(a) and (c) EPC 1973.

The intervention was based on an infringement suit lodged by the patent proprietor against opponent OII in the Zaragoza Mercantile Court bearing a date of 23 November 2007. In support of its arguments, opponent OII filed an unsigned copy of said infringement suit, together with a translation thereof into English.

- III. In its letter dated 14 March 2008, received at the EPO on 15 March 2008 together with payment of the opposition fee, a further intervention under Article 105 EPC was filed by Schindler Aufzüge und Fahrtreppen GmbH (hereafter opponent OIII), including objections under Article 100(a), (b) and (c) EPC 1973.

The intervention was filed with respect to a request for an interlocutory injunction in respect of

infringement lodged at the Landgericht Düsseldorf, against opponent OIII, bearing a date of 10 January 2008. A copy of the request for an interlocutory injunction was filed.

IV. With its letter of 18 April 2008, opponent OII also filed:

E1: "Diligencia de presentacion" (A notice of lawsuit) at 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.

E3: Pages 63 to 65 and signed cover page receipt of 4 December 2007, of the served summons relating to the lawsuit of 29 November 2007, in Spanish.

V. In its reply of 20 October 2008, the respondent (proprietor) requested dismissal of the appeal and that the interventions also be dismissed as being inadmissible.

In support of its arguments, the respondent filed *inter alia*:

OT1: Nullity lawsuit filed in Milan on 30 November 2006 by *inter alia* Schindler S.A. against Otis Elevator Company (respondent);

OT1a: translation of OT1;

OT2: Order from Zaragoza Commercial Court dated 21 September 2007 in respect of "Preliminary Findings 584/2006 Section E" regarding a complaint filed by Otis Elevator Company against Schindler S.A.;

OT2a: Translation of OT2;

OT3: Nullity lawsuit dated 13 November 2007 filed by Schindler S.A. against Otis Elevator Company;

OT3a: Translation of OT3;

OT4: "Financial Statements and Corporate Governance 2007", Section 8, Schindler Holdings Ltd.;

OT5: Letter dated 4 August 2008 to Landgericht Düsseldorf in case 4a O 462/05 regarding a request for costs;

Additionally, claims of a first and second auxiliary request were filed.

VI. In a letter dated 15 September 2009, the Landgericht Düsseldorf requested the Board to accelerate proceedings in light of an ongoing patent infringement lawsuit concerning the German part of European patent number 1 140 689.

VII. In a communication dated 29 September 2009, the Board informed the parties, with reference to the Notice of the Vice-President of Directorate General 3 of the European Patent Office of 17 March 2008, that it would accede to the request of the Landgericht.

VIII. In its letter dated 28 September 2009, opponent OIII filed further submissions, as did opponent OII and opponent OI in their letters dated 8 October 2009 and 9 October 2009 respectively. Additionally opponent OII filed *inter alia*

A1: Opinion from Grau & Angulo, Abogados, dated 28 August 2008 addressed to opponent OI.

IX. In a further submission of 13 October 2009, the respondent requested the Board to delay substantive work on the case until its own response to the further submissions of opponents OI, OII and OIII had been filed.

X. The Board's issued a summons dated 2 December 2009, inviting the parties to attend oral proceedings.

XI. With the respondent's submission of 10 December 2009, further arguments were supplied together with claims of auxiliary requests A, B, C and D which replaced the previous auxiliary requests.

Additionally, *inter alia* the following documents were filed:

OT7: Minutes dated 27 February 2008 of the hearing at the German Patent and Trademark Office in case DE-U-299 24 761;

OT8: Minutes dated 4 December 2007, concerning the oral proceedings in relation to the present patent held before the opposition division;

OT9: Minutes dated 10 March 2009 of the hearing at the German Patent and Trademark Office in case DE-U-299 24 745;

OT10: Cost order ("Kostenfestsetzungsbeschluss") of the Landgericht Düsseldorf of 10 March 2009, in case 4a O 462/05.

XII. In its communication of 17 December 2009, the Board indicated that the intended (at the time of drafting the communication) reply by the respondent was not a justification for delaying proceedings. The Board also gave its provisional opinion, stating *inter alia* that the interventions appeared admissible, and that the parties were invited to comment on the matter of whether the case should be remitted back to the department of first instance for consideration of the objections under the new ground of opposition. The Board noted however that it might decide to examine at least the objections under Article 100(b) and (a) EPC 1973 as a decision had already been taken in relation to these grounds. In regard to Article 100(b) EPC 1973, the Board opined that the invention defined in at least claim 1 of the main request was not disclosed sufficiently clearly and completely for it to be carried out by a skilled person. Comments were also made in regard to Article 123(2) EPC concerning the first and second auxiliary requests filed with the grounds of appeal. The Board further noted that since E1 to E3 had only been filed in Spanish, that translations should be filed if these documents were to be taken into account.

XIII. In a further letter dated 28 January 2010, the respondent filed further arguments together with a replacement set of twenty auxiliary requests. Additionally, the respondent requested remittal of the case to the department of first instance for consideration of any of the objections by the interveners under Article 100(a), (b) or (c) EPC 1973, or for the case that any of the auxiliary requests were to be considered. In addition, the following documents were filed:

OT14: DIN 50 106

OT15: DIN 53 444

OT16: "GeN2 ANSI/CSA CSB / Coated Steel Belts, Visual Inspection Limited Duties" pages 1 to 6, 1 June 2003.

OT17: Schindler 3300 and Schindler 5300 "Eigentümerdokumentation", Index and pages 4-10 to 4-13.

XIV. In its submission of 5 February 2010, opponent OIII requested that the auxiliary requests be rejected due to their late-filing and that the case not be remitted back to the opposition division, as did opponent OII in its letter of 9 February 2010. Additionally, opponent OII filed translations of E1 to E3 in English with its letter of 15 January 2010.

XV. In its submission of 9 February 2010, opponent OI filed arguments as to why remittal appeared unsuitable.

XVI. During the oral proceedings held before the Board on 18 February 2009, the appellant confirmed its request to set aside the decision under appeal and to revoke the patent, as did both interveners. The appellant and the interveners also requested that the respondent's auxiliary requests should not be admitted into the proceedings.

The respondent confirmed its main request as being dismissal of the appeal. In the alternative it was requested that the proceedings be adjourned to have the opportunity to file a request that would overcome the objections discussed during the oral proceedings, or that the patent be maintained in an amended form on the basis of auxiliary request AAAA* filed with the submission of 28 January 2010, or on the basis of auxiliary request E filed during the oral proceedings on 18 February 2010.

XVII. Claim 1 of the main request (patent as granted) reads as follows:

"Elevator system (12) including a car (14), a counterweight (16), a tension member (22) having an elastomere coating for moving the car and counterweight, and a termination device (30) for attaching an end of the tension member (22), characterized in that, the tension member (22) is a suspension rope (22) for suspending and moving the car (14) and counterweight (16), the termination device (30) includes a socket (34) having at least one jaw surface (62, 64); and a wedge (32) having a centerline (83) and at least one clamping surface (33, 35), positioned at a predetermined angle (Φ) from the centerline (83), the wedge (32) disposed

within the socket (34) with the at least one clamping surface (33, 35) juxtaposed to the jaw surface (62, 64), wherein the tension member is disposed between the clamping surface (33, 35) and the jaw surface (62, 64), the termination device being such that for a given length (L) and width (W) of the clamping surface and the tension member, respectively, the predetermined angle (Φ) is such that in use a tensile force on the tension member provides a normal force (F_n) against the tension member (22) which produces a stress less than the maximum compressive stress capability (σ_c) of the elastomere coating."

XVIII. Claim 1 of auxiliary request AAAA* (hereafter "first auxiliary request") reads as follows:

"Elevator system (12) including a car (14), a counterweight (16), a tension member (22) for moving the car and counterweight, and a termination device (30) for attaching an end of the tension member (22), the tension member (22) being a suspension rope (22) for suspending and moving the car (14) and counterweight (16), the termination device (39) including a socket (34) having at least one jaw surface (62, 64); and a wedge (32) having a centerline (83) and at least one clamping surface (33, 35), positioned at a predetermined angle (Φ) from the centerline (83), the wedge (32) being disposed within the socket (34) with the at least one clamping surface (33, 35) juxtaposed to the jaw surface (62, 64), the tension member being disposed between the clamping surface (33, 35) and the jaw surface (62, 64) the tension member (22) being wrapped around the wedge (32) and inserted with the socket (34) and clamped therein by forces generated by

the tension in the tension member (22) and the cooperation of the clamping and jaw surfaces (33, 35), characterized in that the tension member (22) is a flat tension member having a substantially rectangular cross section and comprises an elastomer coating, the termination device being such that for a given length (L) and width (W) of the clamping surface and the tension member, respectively, the predetermined angle (Φ) is such that in use a tensile force on the tension member provides a normal force (F_n) against the tension member (22) which produces a stress less than the maximum compressive stress capability (σ_c) of the elastomer coating, the maximum compressive stress capability (σ_c) being between about 2.5 MPa and about 5 MPa."

XIX. Claim 1 of auxiliary request E (hereafter "second auxiliary request") reads as follows:

"Elevator system (12) including a car (14), a counterweight (16), a tension member (22) for moving the car and counterweight, and a termination device (30) for attaching an end of the tension member (22), the tension member (22) being a suspension rope (22) for suspending and moving the car (14) and counterweight (16), the termination device (39) including a socket (34) having at least one jaw surface (62, 64); and a wedge (32) having a centerline (83) and at least one clamping surface (33, 35), positioned at a predetermined angle (Φ) from the centerline (83), the wedge (32) being disposed within the socket (34) with the at least one clamping surface (33, 35) juxtaposed to the jaw surface (62, 64), the tension member being disposed between the clamping surface (33, 35) and the

jaw surface (62, 64) the tension member (22) being wrapped around the wedge (32) and inserted with the socket (34) and clamped therein by forces generated by the tension in the tension member (22) and the cooperation of the clamping and jaw surfaces (33, 35), characterized in that the tension member (22) is a flat tension member having a substantially rectangular cross section and comprises a plurality of individual load carrying cords encased within a common layer of elastomer coating, the coating layer surrounding and/or separating the individual load carrying cords and defining an engagement surface for engaging a traction sheave (24), the termination device being such that for a given length (L) and width (W) of the clamping surface and the tension member, respectively, the predetermined angle (Φ) is such that in use a tensile force on the tension member provides a normal force (F_n) against the tension member (22) which produces a stress less than the maximum compressive stress capability (σ_c) of the elastomer coating, before non-recoverable deformation or creep, occurs, the maximum compressive stress capability (σ_c) being between about 2.5 MPa and about 5 MPa, wherein at least one of the clamping surface (33, 35) and the jaw surface (62, 64) includes locking features to mechanically lock the tension member (22) therein by cold flow of the elastomeric coating."

XX. The arguments of the appellant (opponent OI) may be summarised as follows:

Admissibility of the interventions

The appellant and the interveners were separate legal entities and thus third parties in the sense of

Article 105(1) EPC. Merely because the opponents were part of a group of companies did not remove their separate legal status.

Main request

The case should not be remitted to the opposition division for examination of the main request, at least not for consideration of Article 100(b) EPC 1973.

The invention defined by the subject matter of claim 1 was open to objection under Article 100(b) EPC 1973, because the parameter "maximum compressive stress capability" was not a recognised parameter for an elastomeric coating; it was not defined in the patent, nor was any method for its determination known generally. Its value was dependent on many factors, such as time, temperature, load carrying cord type, how the existence of cold flow was to be determined etc., all of which were unknown. The explanation in paragraph [0021] of the patent stated that the maximum level was before non-recoverable deformation or creep occurred, but since all elastomers were subject to creep even at small loads, the explanation was technically meaningless. OT15 concerned creep of plastics due to tensile stresses and was thus irrelevant. The maximum compressive stress capability did not correspond to a certain level of permanent deformation or creep nor was any such disclosure in the patent, nor were any tests disclosed as to how such a maximum level could be determined for the coating, it being noted that the maximum stress would anyway be dependent on the underlying load carrying structure which could be of any shape.

The respondent's argument that the design of the clamp in claim 1 was simply to be chosen such that the tension member was not destroyed in use bore no relation to what was stated in the patent.

As to whether iterative tests could instead be performed to determine when the correct design of angle, width of tension member and length of clamp surface had been arrived at, this approach was incorrect because the conditions under which such tests might be carried out were not known, let alone how any observed results from such tests might be evaluated. OT16 was irrelevant; it was published too late and it did not concern a tension member in a clamp. None of the further prior art cited by the respondent was relevant.

First auxiliary request

The first auxiliary request was late-filed and should not be admitted. It failed to overcome the objection under Article 100(b) EPC 1973 against the main request. Moreover, several further problems under Article 123(2) EPC and Article 84 EPC 1973 arose due to the amendments, such as the maximum compressive stress capability being defined for a wedge/tension member combination having "at least one clamping surface" whilst at least two clamping surfaces acted on the tension member after it was wrapped around the wedge.

Second auxiliary request

The second auxiliary request was late-filed. It did not overcome the objections under Article 123(2) EPC of the first auxiliary request and resulted in further lack of clarity. The request should thus not be admitted.

Respondent's request for adjournment

The request for adjournment should be rejected. The objections had not changed since the receipt of the Board's communication and ample opportunity had been available already for filing auxiliary requests. The respondent had also not indicated in concrete terms how any new request might overcome the deficiencies of the previous requests.

XXI. The arguments of opponent OII may be summarised as follows:

Admissibility of the intervention

The action dated 23 November 2007 in Zaragoza was the first proceedings against opponent OII in accordance with Article 105(1) EPC. OT1, OT2 and OT3 related to actions which were either not infringement proceedings in accordance with Article 105(1)(a) EPC or which were proceedings which were not made in response to a request of the proprietor to cease alleged infringement as required by Article 105(1)(b) EPC.

Opponent OII was a separate legal entity to 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.

The relationship of opponents OII and OIII with OI did not mean that the interventions were an abuse of procedure. No limitation was made in the EPC against interveners being part of the same group of companies.

Main request

Further to the arguments of opponent OI under Article 100(b) EPC 1973, it was additionally not possible to test experimentally whether the maximum compressible stress capability had been met, since it could not be ascertained what factors had to be evaluated to establish this maximum level. Whilst the respondent had argued that the maximum compressive stress capability could be derived for any tension member merely by considering the maintenance of belt integrity over its lifetime, not only was the intended lifetime of a belt indefinite but no limits were stated as to when damage or cold flow might be regarded as unacceptable for belt integrity.

In regard to tests which might be used to establish the maximum compressive stress capability of the elastomeric coating, none were known. There was also no indication in the patent or anywhere else supporting the respondent's contention as to how a skilled person would take known tests for other purposes and adapt them, in some unknown way, to arrive at a test which allowed an elastomeric coating of a tension member to be tested to arrive at the parameter defined in claim 1.

First auxiliary request

The first request was late-filed and should not be admitted, since it merely gave rise to new objections. Article 123(2) EPC was contravened because the numerical values of stress capability introduced into the claim had only been defined in originally filed claim 8, which was itself however dependent on not one of, but all of, claims 1 to 7, whereas only some of the features in claims 1 to 7 as filed were included in

present claim 1. The Article 100(b) EPC 1973 objection against the main request was not overcome and a further objection resulted since the material of the coating was not defined and it was thus unclear which materials might have 2.5 MPa and which might have 5 MPa maximum compressive stress capability.

Second auxiliary request

The deficiencies in the first auxiliary request had not been overcome by this request. Part of the added wording came from a portion of the description which was concerned with the disclosure of the prior art, not the invention. An internal contradiction, contrary to Article 84 EPC 1973, also existed in the claim by way of the introduced terminology concerning avoiding non-recoverable deformation on the one hand and the use of locking features which caused cold flow on the other, whereby the claim did not delimit areas where non-recoverable deformation could occur.

Respondent's request for adjournment

The arguments of opponent OI were agreed.

XXII. The arguments of opponent OIII may be summarised as follows:

Admissibility of the intervention

The intervention had been filed within the time limit applicable to interventions under Article 105(1) EPC. Any business and financial interest between opponents OI and OIII was irrelevant; the fact that licences were issued by opponent OI to the other opponents merely reinforced the fact that they were independent parties. The lawsuit of the respondent against opponent OIII

itself was the cause of the intervention by opponent OIII and this was a matter entirely within the control of the respondent.

Main request

The requirements of Article 100(b) EPC 1973 were not met because the material, the maximum stress capability and the angle of the clamp were all interrelated yet the material was not defined, the maximum compressive stress capability was not given as a value - also not in any way which allowed it to be derived by a skilled person even if a cover material were known, and the angle was a variable dependent on both of these.

First auxiliary request

The request was late-filed and should not be admitted. The arguments of opponents OI and OII were agreed. Since new objections had resulted due to the amendments, the Board should exercise its discretion under Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA) not to admit the request.

Second auxiliary request

This request was also late-filed and introduced still further objections not least due to lack of clarity. Since the request was not immediately allowable it should be rejected with respect to Article 13(1) RPBA.

Respondent's request for adjournment

The arguments of opponent OI were agreed. Since extra preparation time would be involved the next day and since no concrete request had been put forward, costs were requested for the case that the Board decided to

adjourn the proceedings and give extra time to the respondent to draft a further request.

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

Admissibility of the interventions

The intervention of opponent OII was not filed within three months of institution of the first court action. OT1, OT2 and OT3 were earlier court actions in Milan, Zaragoza and Barcelona respectively, between the proprietor and opponent OII, all concerning the present European patent. All of these would be an earlier action than the action in Zaragoza of 23 November 2007 from which the intervention was filed. An intervention could only admissibly be filed from the first action, as established in e.g. T 296/93, item 2.5.

Additionally, no evidence was supplied by opponent OII within three months according to Rule 89(1) EPC proving that proceedings in accordance with Article 105(1) EPC had been instituted. Only an unsigned copy of a writ dated 23 November 2007 was filed in time, from which it was impossible to calculate the three-month time limit. E1 filed on 18 April 2008 after expiry of the three-month time limit was the only evidence proving that the writ dated 23 November 2007 was received by the court on 28 November 2007.

Both interventions were not admissibly filed for the further reason that neither of opponents OII and OIII was a "third party" under Article 105(1) EPC. Opponents OII and OIII were tightly associated with opponent OI in a legal relationship. Opponent OI was the patent department for activities of opponents OII and OIII,

which patent department unlike the interveners was itself however not actively visible on the market and thus could not be sued for infringement. Opponents OII and OIII were even obliged by contract to transfer their own responsibility to act in patent matters to opponent OI. The status regarding patent matters was the issue to be considered under the EPC. Further, employees of opponent OI acted in official proceedings in patent matters for opponent OIII, as could be seen from the representatives of the parties listed in OT7, OT8 and OT9 and all opponents belonged to and were controlled by one holding company, as could be seen from OT4. Opponent OI was thus effectively late-filing further oppositions and evidence via opponents OII and OIII. Opponent OI also indemnified opponents OII and OIII in the event of patent disputes as could be seen from OT5, and was even entitled to reimbursement of costs as shown by OT10.

The intention of Article 105 EPC was to allow parties who had not had a chance to file an opposition, to do so when court proceedings relating to infringement were started. Even if opponents OI, OII and OIII might be regarded by the Board as independent in a strict and limited judicial sense, this was contrary to the intention of the Article, in particular as due to its legal structure in respect of patent activities, when opponent OI filed an opposition it was filed in the name of all other business departments for which it was handling business matters.

It would be an abuse of procedure if opponents OII and OIII were allowed to admissibly intervene.

The oppositions by opponent OII and OIII further had the character of straw man oppositions. In the present case, acting as a straw man was a circumvention of the law by abuse of due process, as confirmed by the EPO Enlarged Board of Appeal, since it allowed opponents OII and OIII to introduce new facts and evidence.

Remittal to the opposition division

If the Board concluded that the interventions were admissible, the case should be remitted back to the opposition division not only for consideration of the new ground of opposition, but also the new evidence raised in respect of the grounds under Article 100(a) and (b) EPC 1973. Remittal back to the department of first instance for consideration of new documents filed and admitted into appeal proceedings was established case law.

In G 1/94, item 13 stated that the case should be remitted back to the opposition division when a new ground of opposition was raised by an intervener "...unless special reasons present themselves for doing otherwise, for example when the patentee himself does not wish the case to be remitted." No special reason was apparent in the present case. Article 100(c) EPC 1973 had to be examined in order to establish which was the disclosed invention against which an Article 100(b) or (a) 1973 objection was being made. The request of the Landgericht Düsseldorf was not a special reason speaking against remittal either, because the Landgericht could always stay its proceedings. Opponent OIII would suffer no unreasonable disadvantage and a bond had been placed with the court in respect of the interlocutory injunction. The lack of a decision on all

matters by the opposition division would be a clear and unfair disadvantage to the respondent.

Main request

The requirements of Article 100(b) EPC 1973 were met. The opposition division had also decided that this was the case since the termination clamp design required by claim 1 could even be arrived at experimentally or on the basis of

F3: "VULKOLAN = Abriebfest", product description brochure, Angst und Pfister, 30.10.1975.

It was a misunderstanding of the claim to interpret the feature "maximum compressive stress capability" as a parameter which had to be determined, because claim 1 did not rely on attributing any specific value to this. Instead, claim 1 defined a termination device in which the length of the clamping surface (L) and the width (W) together with a certain angle was such that the maximum compressive stress capability was not exceeded. Thus, the claimed invention was clearly directed to a clamp which ensured that the coating of the tension member did not lose its integrity during its working life. When integrity of the coating was destroyed, the maximum compressive stress capability had been exceeded. An approximate value which should not be exceeded was a stress of 5 MPa as stated in the patent; this was applicable to most elastomeric coatings usable in this technical area.

It was also evident that the clamp could be built to meet the claimed requirements and thus the invention could be carried out.

For any given tension member, the skilled person could arrive at the required structure with merely a few simple tests. If for example the coating integrity was not maintained, the length or the angle of the clamp merely had to be adjusted and tested again until coating integrity was achieved. Such iterative methods were well known and not an undue burden for a skilled person.

Even though several norms existed in the area of stress or strength determination for various materials, a skilled person would recognise that the conditions of testing such as time and temperature etc., should be chosen to meet the requirements to which the tension member would be put in practice. This was always the case when working with a new concept, but did not mean that the invention could not be carried out or that an item could not be tested.

The damage to a tension member coating due to creep or other damage effects as defined in paragraph [0021] of the patent was also well known in the art. OT15, a document involving the tensile testing for creep, gave a clear method how creep should be measured. Page 3, right column, in the section "Note", contained clear statements about how test pieces should be evaluated for different sorts of damage that would preclude their use. Although these were tension tests, it was still evident what had to be investigated in a creep test. Compression tests were known e.g. from OT14 and the skilled person thus knew how to implement these.

Although it was alleged by the opponents that creep always occurred when compressing elastomers, this would not stop a skilled person carrying out the invention since all that was involved was choosing a clamp design such that the coating retained its integrity under loading in use. As with tension tests on elastomers where creep might occur, the skilled person merely had to choose a level of stress produced by the clamp which produced creep at such a level that was a normal margin from the point at which damage would occur during the lifetime of the member. This was routine work for a lift engineer. OT16 and OT17 showed that the signs of damage which were relevant to belt integrity were known.

A skilled person would also recognise immediately that damage which might occur locally on a macroscopic scale due to cold flow as a result of structures deliberately introduced to provide increased friction or mechanical locking at limited areas (see paragraph [0030] of the patent) was not damage which would destroy the tension member integrity and was thus not something excluded by claim 1, not least since the presence of such structures reduced the stress on other areas.

Paragraph [0014] of the patent referred to the compressive stress capability of the tension member as being the invention. This was referring to the fact that the elastomeric coating had to remain intact for the tension member compressive stress capability not to be exceeded. Paragraph [0014] should also be read in the correct context. Paragraph [0007] explained that crush or creep were deleterious effects which occurred in steel ropes, and it was evident that this was a reference to the rope being damaged by such effects.

Paragraphs [0008 and 0009] related to improvements using coated tension members, and when paragraphs [0014] and [0021] were read in this context, it was evident that "non-recoverable deformation, or creep" or "compressive stress capability" were referring to damage effects which mirrored those occurring in prior art steel ropes.

Remittal of the case to the opposition division for consideration of any auxiliary requests

Since no auxiliary requests had been considered due to the rejection of the opposition, the case should be remitted to the opposition division to give a complete opportunity to discuss and/or overcome any objections arising, since the case was now completely different.

First auxiliary request

This request was made in the written proceedings in response to the Board's communication and it overcame any perceived problem under Article 100(b) EPC 1973, because concrete numerical values were now stated. Concerning Article 123(2) EPC, these compressive stress values were disclosed in claim 8 as filed. It was evident that these values were to be understood in the same way as the value of "about 5 MPa" quoted for elastomers on page 8. The value could obviously be smaller than 5 MPa, and whilst theoretically any elastomer might be used, such a consideration would be disregarded by a skilled person because only certain types of elastomer would be generally suitable for lift rope applications. Although claim 8 as filed was dependent only on claim 7, which was itself dependent on claim 6 etc., this was merely a U.S. drafting style used to avoid excess claim fees. A skilled person

understood however that the dependency of claim 8 on the entire trail of previous claims was not limiting for the disclosure of the features in claim 8, since it was evident that the clearly very general formula for the clamping surface wedge angle in claim 5 would not be understood as limiting for the invention, since it was known that more precise formulae existed, such as in

F4: Drahtseile, Bemessung, Betrieb, Sicherheit, K. Feyrer, Springer-Verlag, 1994 pages IV-IX, 1-57 and 327-346.

Any lack of clarity in the expression "at least one clamping surface" in respect of the fact that the claim defined "the tension member being wrapped around the wedge", thus having clamping surfaces on both sides of the wedge, could be overcome by minor amendment. It was also evident that the maximum compressive stress was to be measured at the location on the clamp where that occurred. The expression "forces generated by the tension in the tension member" related to the "in use" situation of claim 1, whereby steady state forces with a fully loaded lift and not dynamic forces were to be considered when arriving at the relevant tension for the claim. There was also no need to define a specific elastomeric material, since the values were applicable to elastomeric materials for use in lifts in general.

Second auxiliary request

The amendments introduced by way of the second auxiliary request were based in part on page 2, lines 16 to 28. This related to the relevant features of the prior art and it was clear to a reader that

these features were included in the invention under consideration and could thus be included in the claims. Although claim 6 as filed related to similar subject matter, this was more limiting and did not detract from the disclosure of the other information in the description.

The further amendments clarified the definition of "maximum compressible stress capability" in functional terms on the one hand, the terminology having been taken directly from the description, and on the other hand included the extra limitation of the locking features and the cold flow occurring, which removed any lack of clarity in respect of the exclusion of this in light of what was stated in the description.

Request for adjournment

The respondent's contact in the USA who could approve further amendments for this matter could not be reached until later in the day. The Board's and opponents' objections during the oral proceedings had been understood and would be taken into account in a new request, but drafting a claim to reflect these would take some time. Two days had been reserved for the oral proceedings, it was already late and so no party was disadvantaged by waiting until the next day. The request for adjournment was thus appropriate and reasonable, especially since the Board had decided not to remit the case thus depriving the respondent of the possibility of having further requests considered by the first instance.

Reasons for the Decision

1. *Admissibility of the interventions*

1.1 The intervention by opponent OII was filed on 22 February 2008. This had annexed thereto an unsigned copy of the infringement suit dated 23 November 2007 together with an English translation thereof.

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 dated 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 Although an unsigned copy and translation alone provided insufficient evidence for proving the date of institution of proceedings, or indeed whether proceedings were instituted at all, opponent OII later filed evidence to that effect on 18 April 2008, in the form of E1. The respondent did not contest that the lawsuit had indeed been filed as later proven by E1, nor that this lawsuit was indeed the lawsuit dated 23 November 2007.

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) 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 was in Spanish and was not filed with a translation into one of the official languages of the EPO, it is to be noted that the Board first invited the opponent to remedy the deficiency of filing E1 in Spanish only, when issuing its communication subsequent to the summons to oral proceedings. The translation of E1 was also filed in due time (i.e. at least 20 days prior to the oral proceedings as specified in the communication), by way of the letter of 15 January 2010.

1.3 The infringement action in Zaragoza dated 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 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 OT1, OT2 and OT3 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 OT1 was a lawsuit brought by opponent OII against the respondent, requesting *inter alia* nullification of the European patent number 1 140 689 (see item 4 on page 4 of OT1a) and a declaration that the products of opponent OII (see item 5 on page 9 of OT1a) 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 On page 2 of OT1a under the heading "The competition", it is stated that the respondent "began a campaign of systematic aggression towards" opponent OII, and that "The feeling of the plaintiff (*opponent OII*) is that Otis (*the respondent*) wishes to intimidate the Schindler Group companies, so as to discourage it from continuing in the production, sale and installation of systems ...". On page 3, it is stated that "It is likely...that (*the respondent*) will undertake further

judicial measures". Further a "saisie-contrefaçon" of 11 September 2006 is also mentioned "on the basis of the assumption that such elevators systems would constitute infringement of... EP 1140689 B1...". Additionally, 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 show 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 "saisie-contrefaçon" (seizure procedure) in Zaragoza/Spain had been instituted earlier, it is stated in A1 (see item 2a) that this procedure does not constitute infringement proceedings. In order to find the correct definition of infringement proceedings in the sense of Article 105 EPC reliance has to be placed on the specific national law. The respondent provided no evidence which could lead to a contrary interpretation under Spanish national law than that given in A1.

1.3.6 OT2 is an order regarding the findings of a seizure procedure according to a Court resolution of 29 December 2006 (see third item in OT2a) providing conclusions as to the patent of the present appeal (see item 8 on page 5 of OT2a) stating that "we cannot

determine if there exists hints of a potential violation as the information is not sufficient...". In accordance with Article 130 of the Spanish Patents Act (see OT2a, e.g. page 2, item "Second"), it is evident that the procedure does not simply continue as though an infringement action has been brought, but that a new procedure must commence. In as far as concerns Article 130 of the Spanish Patents Act (see OT2a, page 2, under the heading "Second") a judge must indeed order the opening of a separate file in cases where "the Judge considers that it is not presumable that the devices inspected serve to execute the violation of the patent." The case relating to OT2 is therefore also not proceedings which correspond to Article 105(1)(a) or (b) EPC.

The respondent has provided no evidence to counter the submission supported by A1 in this regard.

- 1.3.7 OT3 (see OT3a, page 1) is an ordinary action for a declaration of nullity brought by opponent OII against the respondent. Reference is made on page 2, item "Two", to an alleged opinion of the respondent that certain lifts infringe its patents. OT3 however gives no indication that the respondent had started an infringement proceedings against opponent OII according to Article 105(1)(a) EPC, nor that proceedings had been opened for a ruling that opponent OII was not infringing the patent or even that the nullity suit 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 to the contrary.

1.3.8 Consequently, the first action from which an intervention could have been filed was the action in Zaragoza dated 23 November 2007 in which proceedings were instituted on 29 November 2007, and the intervention was validly filed within the three-month time limit from that date.

1.4 The proceedings instituted by the respondent against opponent OIII in the Landgericht Düsseldorf on 10 January 2008 were the first proceedings instituted between the respondent and opponent OIII under Article 105(1) EPC. The respondent has not disputed the evidence put forward by opponent OIII in this regard, nor has evidence concerning an earlier instituted proceedings against opponent OIII been supplied. Thus the Board finds that the intervention was validly filed within the applicable three-month time limit under Rule 89 EPC.

1.5 The respondent however argued that both opponents OII and OIII were not a "third party" in accordance with Article 105(1) EPC. The Board however finds otherwise.

1.5.1 OT4 and OT5 were supplied as evidence that opponents OII and OIII belonged to the same group of companies as the appellant and that therefore these allegedly supported the respondent's contention that neither of these parties could be seen as independent, nor a "third party" in Article 105(1) EPC.

1.5.2 OT4 indeed appears to show that opponents OII and OIII are within the same group of companies as the appellant, 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 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 as will be explained below.

1.5.3 According to the respondent, OT5, which is a request for costs drafted on behalf of the appellant in a national proceedings, allegedly demonstrates that the appellant acts as the patent department of opponent OIII which itself has no patent department, and that opponent OIII is a licensee to the appellant which further indemnifies opponent OIII in respect of actions against it by third parties holding intellectual property rights. Its representative indeed also claimed costs for representing opponent OIII. However, the Board finds that this does not alter the fact that the appellant and opponent OIII are separate legal entities. Indeed it is quite common that an employee of one company may be named as a legal representative of another company in the company statutes.

1.5.4 OT7 to OT10 do not provide any evidence which would alter the conclusion that the appellant and opponents OII and OIII are separate legal entities. These documents merely show that a particular employee of the appellant may represent not only the appellant but also opponent OIII, and can receive costs for this representation. The allegation that the appellant has no presence on the market by which it can be held

liable for infringement does not alter this conclusion either.

1.5.5 The respondent's allegation that allowing the interventions would be the same as allowing the appellant effectively to late-file oppositions via opponents OII and OIII under its control, and thus introduce new evidence, is not found convincing. The Board finds no reason which should prevent opponents OII and OIII filing new evidence when filing their interventions (see G 1/94, item 13, where the Enlarged Board stated that if an intervener were prevented "from making use of all available means of attacking the patent, which he is accused of infringing, including the raising of new grounds for opposition under Article 100 EPC not relied upon by the proper opponent, (*this*) would run contrary to this purpose of intervention"), since they are a "third party" under Article 105(1) EPC.

1.5.6 Whilst the respondent argued that the intention of Article 105 EPC was to allow parties who had not had a chance to file an opposition, to do so when court proceedings relating to infringement were started, the respondent provided no evidence of this alleged intention underlying Article 105 EPC. The wording of Article 105 EPC itself is quite clear in allowing "any third party" to file an intervention, and is not restricted to any third party who had not had a chance to file an opposition, it being noted that all third parties always have the possibility to file an opposition within the nine month time limit for filing an opposition. Likewise, there is no evidence supporting the respondent's allegation that it would be

contrary to the intention of Article 105 EPC to allow a party to arrange its company structure so that, in particular, the patent department being one company could file oppositions on behalf of the other companies. Further, there is also no evidence that the opposition filed by opponent OI was filed on behalf of the other companies; it was filed solely in its own name. Whether OI chooses to indemnify the other opponents for possible consequences of this is entirely outside the scope of Article 105 EPC.

1.5.7 The allegation that allowing the opponents OII and OIII to intervene would be abusing the opposition procedure is not agreed. The fact that opponents OII and OIII are allowed to intervene lies entirely within the sphere of responsibility of the respondent, by its choice to institute proceedings against the opponents.

1.5.8 The argument of the respondent that the interventions had the character of straw man oppositions in accordance with G 3/97 since they were a circumvention of the law by abuse of due process cannot be followed. In G 3/97, see item 4, an abuse of due process is assigned to the cases where the proprietor is represented by a straw man in order to file an opposition or where an unauthorised representative acts in the role of a professional representative before the EPO. Moreover, in as far as a straw man might be filing an opposition on behalf of a third party this was found anyway to be acceptable (see e.g. G 3/97 item 3.3). In the present case, neither of these circumstances arises and there is no evidence showing a parallel circumstance to the use of a straw man to circumvent the law, since due process is indeed being adhered to

by opponents OII and OIII filing interventions, as this was only possible by the actions of the respondent against them. Without such action by the respondent, the interveners would not have been able to file their oppositions at all. Merely because the appellant was not a party which the respondent was able to sue for infringement cannot alter this conclusion.

2. *Remittal to the opposition division*

2.1 The respondent requested that, if the Board concluded that the interventions were admissible, the case should be remitted back to the opposition division not only for consideration of the new ground of opposition as should normally be the case in accordance with G 1/94 item 13, but also the new evidence raised in respect of the grounds under Article 100(a) and (b) EPC 1973.

2.2 In regard to a new ground of opposition under Article 100(c) EPC 1973, it is noted that the Enlarged Board of Appeal stated in G 1/94 (see item 13) that if a fresh ground for opposition is raised by the intervener the case "should be remitted to the first instance for further prosecution unless special reasons present themselves for doing otherwise, for example when the patentee himself does not wish the case to be remitted." It is clear from this statement, that the Enlarged Board foresaw further situations where remittal to the first instance might not be suitable. The Board finds that in the present case a special reason for doing otherwise exists.

2.3 The objections raised by the appellant under Article 100(b) EPC 1973 already gave rise to serious

doubt as to the allowability of the claims. Indeed the Board stated this in its communication prior to oral proceedings. Since Article 100(b) EPC 1973 was a matter which had already been decided by the opposition division, the Board found it suitable not to remit the case only because further opponents had now provided new lines of argumentation within this ground of opposition. Thus the Board found that examination of all the objections under Article 100(b) EPC 1973 was appropriate.

2.3.1 Although the respondent argued that the subject matter of claim 1 could only be considered under Article 100(b) EPC 1973 once a form of claim had been arrived at which fulfilled the requirements of Article 100(c) EPC 1973, the Board finds that Article 100(c) 1973 requirements do not outweigh the requirements under Article 100(b) EPC 1973, nor that there should be a presumption that the claims would necessarily be found unallowable under Article 100(c) EPC 1973 and thereby result in amendments which would also obviate any problems under Article 100(b) EPC 1973.

2.3.2 It also should not be overlooked that in the infringement proceedings in Germany an interlocutory injunction had already been enforced, and that the Düsseldorf Landgericht had requested the EPO to accelerate proceedings. Although it is correct that the Landgericht Düsseldorf could have stayed its proceedings until an outcome had been reached after remittal of the case to the EPO first instance and possibly also after a further appeal, this is generally undesirable in the interests of legal certainty and in the existence of a *prima facie* problem with

Article 100(b) EPC which objection had already been examined by the opposition division, unjustified. It is thus of no consequence that opponent OIII would allegedly suffer no disadvantage due to a bond having been placed by the respondent with the Court. Likewise, the respondent was not unfairly disadvantaged by the lack of a remittal, since the appellant had already objected under Article 100(b) EPC and the reasons of the opposition division were already given in the decision under appeal. It should also be noted that absent any intervention, that ground would anyway have been considered by the Board.

- 2.4 That being the case however, the Board instructed the parties at oral proceedings that it would, as a first step, not take into account any fresh evidence introduced by the interveners in relation to Article 100(b) EPC 1973 with their interventions or subsequent submissions, and would reconsider the matter of remittal only if use of any such fresh evidence were required.

3. *Main request*

- 3.1 The invention defined in claim 1 is found not to be disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC 1973).

- 3.2 Claim 1 defines that at least one clamping surface is positioned at a predetermined angle, and that "the predetermined angle (Φ) is such that in use a tensile force ... produces a stress less than the maximum compressive stress capability (σ_c) of the elastomer(e)

coating." The predetermined angle defined in the claim is thus directly related to the maximum compressive stress capability of the elastomer coating.

3.2.1 As the Board indicated in item 5.2 of its communication in preparation for oral proceedings, "the terminology "maximum compressive stress capability" is not, as such, a parameter which is known in the art of elastomeric coatings; at least no evidence has seemingly been filed to this effect." The Board further stated in item 5.3 that "it is seemingly the "elastomer(e) coating" of which the parameter of maximum compressive stress capability is defined, and thus which must be ascertainable, rather than the maximum compressive stress capability of the tension member itself (see paragraph [0014]). It would appear to the Board that for such a determination a test would be required for measuring the maximum stress capability of the coating when in position on the underlying wire, since it is not the maximum compressive stress capability of the material *per se* which is claimed. No details of how such a test would be performed are found in the patent. Even a test regarding the material itself has not been described."

3.2.2 The respondent did not file any evidence which showed that the parameter was one known in the art, nor were any test results or indeed any test details for measuring such a parameter filed.

3.2.3 Instead, the respondent argued that it was a misunderstanding of the claim to interpret the feature "maximum compressive stress capability" as a parameter, because the invention was directed to a clamp which

ensured that the coating of the tension member did not lose its integrity during its working life. However, the Board is not convinced by these arguments because, as explained above, the predetermined angle is directly related to the maximum compressive stress capability, so that unless the maximum compressive stress capability is known, it is impossible for a skilled person to establish what the predetermined angle of the claim must be. Even if a test had been described (which is not the case) in the patent for determining when the coating integrity should be considered as being destroyed or losing its integrity in some way, or even otherwise rendered insufficient for its purpose, it is to be noted that the patent however states nothing about "coating integrity" at all, let alone it being a measure or determining factor for arriving at the value of maximum compressive stress capability. The respondent's argument in this respect is thus unsupported by the disclosure in the patent. Additionally it may be noted that even the concept of a loss of integrity of the coating is described in several different ways by the respondent in its written submissions, as listed for example by the appellant in its letter of 9 February 2010 under item 5.

- 3.2.4 Instead, the only relevant indications that can be found in the patent regarding the specific effects occurring when maximum compressive stress capability is reached are those contained in paragraphs [0021] and [0027], which state that if the angle is too small the "tension member will experience compressive creep", and "...urethane outer coating, or where the coating is another flexible elastomer, as they have a maximum compressive stress capability of about 5 MPa before

non-recoverable deformation, or creep, occurs", and "the compressive stress limit of the material is not exceeded and therefore no creep will occur."

None of these explanations however is a disclosure which would allow a skilled person to identify when the maximum compressive stress capability has been reached in any particular elastomer, let alone when any particular elastomer is applied as a coating of a tension member and subjected to forces "in use".

- 3.2.5 The terms "non-recoverable deformation" or "creep" relate to all elastomers subjected to stress, even in small amounts. This is well known to a skilled person. Thus, the patent only defines effects which always occur when stressing elastomers. The degree to which these effects might present themselves is entirely undefined in the patent. Although it can be appreciated that a manufacturer may decide to impose limits on how large a load may be in order that a tension member in a specific application may be considered fit for service, or that differing factors may be used for determining when the integrity of a tension member can be considered insufficient for the elevator application required, no such information is given in the patent.

Reference was made to F3 by the opposition division in its decision in item 2.3, and the respondent also referred to this as being a recognisable limit for a skilled person, since this disclosed a value of $\sigma_{0,1}$ as being a value for compression which was similar to the values experienced in tensile tests and which was a value which could thus be used in practice.

However, the patent itself makes no reference to F3, nor to any value of $\sigma_{0,1}$. Nor has it been shown that a skilled person would necessarily understand that a value of $\sigma_{0,1}$ should be used when determining the maximum compressive stress capability. Notably, even page 7, left column second paragraph of F3 states that in the static case, there is no limit for compressive loading, and anyway that this is more a matter of permanent deformation which itself is dependent on the shape factor. Thus, the value $\sigma_{0,1}$ is not a value which is implied by the patent as being necessarily the same things as, or a measure of, the maximum compressive stress capability, let alone in the particular case where it is used as the coating elastomer of a tension member in an elevator system.

- 3.2.6 In as far as the value of 5 MPa is referred to, the respondent argued that this was a suitable value from which to start when considering elastomers, and that choosing this value meant that a clamp could be arrived at which was safe for wedge clamp construction. The respondent also argued that it had not been demonstrated by the opponents that if a value exceeding 5 MPa was avoided in the clamp, any tension member with an elastomeric coating would have been stressed beyond its maximum compressive capability. However the Board notes not only that the value of 5 MPa is not a limiting feature of claim 1, but it is also clearly not a maximum value that would apply to all elastomer tension member coatings, since e.g. claim 4 as granted discloses that lower values may be also applicable to some, albeit unspecified, elastomers. Further, the concept of a tension member being "safe" in any particular clamp termination depends on the specific

conditions to which the clamp in question is to be subjected, which again are not disclosed.

3.2.7 It was further argued by the respondent that, as in the decision under appeal in item 2.2, experiments could be conducted to determine appropriate values of length and angle for any given tension member in any given clamp. However, the Board finds that this argument is unconvincing since the nature of such experiments are entirely undefined in the patent; a skilled person has no guidance whatsoever as to the conditions under which the test should be conducted (e.g. time, temperature, dynamic or static loadings etc.) nor which aspects of the tension member need to be analysed in determining whether the maximum compressive stress capability has been reached. Since creep is time-dependent and a tension member will be subject to more creep as time progresses, the extent to which creep is allowed to progress before it is considered to have passed the maximum compressive stress limit would need to be stated, but this is left as an unknown. Similarly, although the respondent argued that the test should be carried out to simulate the lifetime of the tension member, this requires information as to what the lifetime should be, which again is not stated. As argued by the opponents, the lifetime of a tension member in an elevator application is a matter decided by the manufacturer. Further, even if a specific set of conditions were imagined for a particular application, it remains unstated in the patent or elsewhere what analysis should be conducted to ascertain whether the tension member has surpassed its maximum compressive stress capability limit or not.

- 3.2.8 Thus, in the absence of any test known in the art or stated in the patent, let alone any test conditions or analysis method for such, the skilled person can never know when a value of maximum compressive stress capability has been reached.
- 3.2.9 Although the respondent argued that the coating integrity could be examined after making initial tests and adjustments then made in an iterative manner to arrive at the required clamp design, as explained *supra* the coating integrity is not equated in the patent with being a limit of compressive stress capability and any criteria for objective testing remain unknown. Thus, it is not a question of whether the skilled person is given an undue burden in carrying out a number of tests, but that it is entirely unknown whether any test might be regarded as successful or not.
- 3.2.10 The respondent further argued that a skilled person would recognise that when a new concept was developed, the product could still be tested e.g. using traditional methods, to see whether it would meet the requirements to which it was put, and thus that there was no requirement to prescribe a test. However, in the present case, not only is it undisclosed which traditional or untraditional tests might be used, but also which criteria are then applied in the analysis. The fact that several norms exist for testing elastomeric products does not imply that a skilled person knows which norm should be selected; moreover in the present case the respondent has not presented any norm at all for measuring the maximum compressive stress capability of an elastomeric coating in a

- tension member, but only other norms related to different tests.
- 3.2.11 The respondent cited OT15 to support its argument that creep could indeed be measured and that the skilled person was thus aware of such tests and would apply them appropriately to the present context. However, not only is OT15 not cited in the patent as a relevant test, but it relates to tension testing of specimens. No evidence was supplied by the respondent which would support a conclusion that the tension tests of OT15 would be equally applicable for a compression test of tension members in the patent. Likewise even though damage effects are noted in OT15, page 3, right column, in the section "Note", which would then preclude the use of the test specimens for that reason alone, this is entirely unrelated to the patent, since as stated *supra* the existence of damage is not equated in the patent with maximum compressive stress capability.
- 3.2.12 Further, although compression tests as such are known from e.g. OT14, not only is OT14 not cited in the patent but it relates to compression tests on metallic materials and is thus unrelated to the tension member with an elastomeric coating as in the patent.
- 3.2.13 Each of OT16 and OT17 relates to damage of belts, determined by visual inspection. The concept of visual or other damage is however not equated with the terminology "maximum compressive stress capability", nor are OT16 or OT17 disclosed as a manner of determining such either in the patent or in OT16 or OT17 itself; OT16 is also post-published with respect to the filing date of the patent in suit.

3.2.14 The respondent's argument concerning the matter of how a skilled person would know what non-recoverable damage effects, such as cold flow around certain structures, could be ignored when considering damage to belt integrity as being the criteria for determining whether the maximum compressive stress capability had been reached, is not found convincing either. Not only is damage not a disclosed criteria for determining the stress capability limit in the patent, but it is also unclear for a skilled person to what extent damage on a macroscopic scale due to cold flow would be understood as being acceptable or unacceptable damage which had or had not destroyed integrity of the tension member.

3.2.15 In regard to paragraph [0014] of the patent, the Board finds that this refers only to the compressive stress capability of the tension member and not of the elastomeric coating. Even if it were understood to mean the elastomeric coating on the tension member, it fails to solve the problem with the lack of disclosure of how a skilled person should arrive at the parameter of maximum compressive stress capability of the coating.

3.2.16 Whilst the respondent argued that paragraph [0014] should be read in the correct context in respect of paragraph [0007], it is to be noted that this merely explains that crush or creep are deleterious effects which occur in steel ropes, not that deleterious effects are a synonym for using "damage" as the criteria for judging whether the maximum compressive stress capability has been reached. Likewise, merely because the term "deleterious effects on the rope such as crush or creep" are used to describe effects

occurring in steel ropes, also when read in combination with paragraphs [0008] or [0009], this is no disclosure that "creep" referred to in terms of elastomer coated tension members in paragraph [0021] should be equated with "damage" as being the measure of maximum compressive stress capability.

- 3.3 The subject matter defining the invention in claim 1 of the main request is thus not allowable with respect to Article 100(b) EPC.

The main request is therefore not allowable.

4. *Request for remittal to the opposition division for consideration of the auxiliary requests*

- 4.1 Although it was argued by the respondent that it had not had an opportunity to have auxiliary requests considered by two instances, having been successful with its request to have the opposition rejected, the Board did not find this alone to be sufficient justification for remittal of the case to the first instance for further prosecution. Instead, the Board found that it could only consider remitting the case back to the opposition division as a reasonable measure, if it were provided with a request which was allowable having regard to any amendments made and which at least *prima facie* overcame the objection which had led to claim 1 of the main request being considered unallowable.

- 4.2 The respondent's request for remittal of the case to the opposition division for the consideration of its auxiliary requests was thus rejected. Although this

request was not maintained when the respondent confirmed its requests at the end of oral proceedings, it is relevant to the appellant's request for proceedings to be adjourned (see below).

5. *First and second auxiliary requests*

5.1 As with any late-filed request, when exercising its discretion to consider whether a request should be admitted into proceedings at all, the Board also has to consider the requirements of Article 13(1) RPBA. In terms at least of procedural economy, any new request should meet at least the requirements of Article 84 EPC 1973 and Article 123(2) EPC, in addition to overcoming the objection leading to rejection of a previous request.

As explained below, neither of the first and second auxiliary requests was found to meet both the requirements of Article 123(2) EPC and Article 84 EPC 1973. Whether the requests also met the requirements of Article 100(b) EPC can thus be left undecided.

5.2 In the first and second auxiliary requests, one amendment was that the terminology "the maximum compressive stress capability (σ_c) being between about 2.5 MPa and about 5 MPa" was introduced.

5.2.1 The respondent argued that the basis for the disclosure of this introduced subject matter was claim 8 as filed. However, claim 8 as filed was dependent only on claim 7, which in turn was dependent on claim 6, which itself was dependent on claim 5, etc. leading as a trail of dependency back to claim 1. Thus, the only unambiguous

disclosure of the numerical range of "between about 2.5 MPa and about 5 MPa" is in combination with further features, notably including the specific structure of the tension member defined in claim 6 as filed and the specific formula in which the maximum compressive stress capability was used with respect to other features of the clamp as defined in claim 5 as filed. These features were however lacking in claim 1 of the first and the second auxiliary requests, and even on the basis of this reason alone, the subject matter of the claims did not fulfil the requirement of Article 123(2) EPC.

5.2.2 Although the respondent argued that the claims had been drafted in a US format only so as to avoid excess claims fees, there is, first, no unambiguous disclosure from which the Board can draw the conclusion that this allegation would be correct in the present case (even if this were shown to be common drafting practice in some other cases). Moreover, the claim dependency structure (i.e. the trail of claim 8 dependent on claim 7, claim 7 dependent on claim 6 etc.) is also entirely logical with regard to the claimed subject matter, since e.g. the "maximum compressive stress capability" referred to in claim 8 finds its first antecedent basis in claim 5 and not for example in the more general claim 1. Thus, despite the allegation that some broader disclosure might have been intended than that which was filed, this is not borne out by the only unambiguous disclosure available.

5.2.3 It was further argued that a skilled person would recognise immediately that the formula in claim 5 was only an approximate formula, since for example F4

gave a more precise definition of the calculation of forces in clamping elements, and that as such the formula was not something which needed to be included in the claim. However, this argument is unconvincing since the values of "between about 2.5 MPa and about 5 MPa" in claim 8 are values which are related to values of L and Φ which are indeed exactly those terms used in claims 7 and 5, irrespective of whether the values would be understood to be approximations or not.

- 5.2.4 The respondent also argued that the values of "between about 2.5 MPa and about 5 MPa" would be understood by a skilled person merely to be a replacement of the value "about 5 MPa" quoted in the description, and thus applicable to elastomers of the type which would be used for elevator ropes. However, the expression "between about 2.5 MPa and about 5 MPa" does not appear in the description at all, let alone in the isolated sense used in claim 1 of each auxiliary request. Thus it is unknown, apart from via the combination of features within the subject matter of claim 8 as a result of its dependency trail, whether the range of values between 2.5 MPa and 5 MPa is at all intended merely to be a replacement of that range. Even if it might have been the intention of the drafter of the application that such values were to be understood as an alternative possibility to the single value "about 5 MPa" used in the description, this is at least not unambiguous from the content of the application as filed and the isolated disclosure of the range introduced into claim 1 cannot therefore be understood as being part of the content of the application as filed.

5.3 Further, claim 1 of both requests also suffered from a lack of clarity, contrary to the requirements of Article 84 EPC 1973, due to the amendments introduced. In claim 1, the feature that the tension member is "wrapped around the wedge" is not only incompatible with (at least) the terminology "at least one jaw surface" and "at least one clamping surface" earlier in the claim, but doubt also arises in view of the opponents' objection as to the relationship of the way in which maximum compressive stress capability is to be understood in relation to the forces present at any particular part of the clamping arrangement in a wrapped around state and the particular location and manner in which stress must then be measured.

5.3.1 The respondent argued that any lack of clarity due to the terminology "at least one" was an unintentional and easily correctable error. Also it was argued that the stress in such a wrapped arrangement merely needed to be taken where it was at a maximum in the clamp and this location would be evident.

5.3.2 However, whilst the Board recognises that it might have been possible to amend the terminology "at least one" to define a jaw and clamp surface on both sides of the clamp, such amendments would seemingly give rise to further difficulties, in particular with respect to the location of the maximum stress not least in view of the later definitions in the claim of the given length and width of the clamping surface and the question as to which length was applicable in any particular circumstance.

5.3.3 Although further objections were made by the opponents under Article 123(2) EPC and Article 84 EPC 1973, it is not necessary to deal with these objections, since the foregoing conclusions already show that the claims are not allowable.

5.4 Concerning the second auxiliary request alone, this was filed during the oral proceedings after the Board had already raised doubts about the allowability of claim 1 of the first auxiliary request. Concerning claim 1, and in addition to the foregoing conclusions, further amendments were introduced which at least in part came from the description. For example, whereas the features of claim 18 as filed (claim 14 as granted) were introduced into claim 1, these were also qualified by a further feature coming from the description (see page 10, line 17 *et seq*), namely the feature "by cold flow of the elastomeric coating". In the description as filed on page 10, lines 17 to 19, it is disclosed that "a characteristic of the urethane coating is its tendency to exhibit cold flow..." and thus by not including urethane, the further question arises as to whether an unallowable intermediate generalisation has been made contrary to Article 123(2) EPC. Even if the features relating to cold flow had been removed, which was offered by the respondent, this would however not avoid the further difficulty that claim 1 would still contain the feature that the maximum compressive stress capability was defined as being "before non-recoverable deformation, or creep occurs", which is however precisely the result caused by the mechanical locking features, and the claim does not contain any feature by which the locking features would be understood to be an exception to that definition. Indeed, the use of such

locking features is even stated in the patent (paragraph [0030]) as being "an alternative embodiment", which the Board can only understand in the context of the previous disclosure of a calculation of compressive stress based on "smooth steel" surfaces of both the jaw and wedge (see paragraph [0026]), thereby adding further lack of clarity as regards the way in which a maximum compressive stress capability for a tension member in a clamp with locking features should then be arrived at, even if the theoretical approach in claim 5 as filed were to be applied.

5.5 Since claim 1 of the first and second auxiliary requests was considered not allowable in respect of Article 123(2) EPC and Article 84 EPC 1973, and since each request was late-filed (at least in the sense of Article 13(1) RPBA), the Board exercised its discretion not to admit the requests into proceedings since admittance of such requests would clearly not have been procedurally economical.

6. *Respondent's request to adjourn the proceedings to have the opportunity to file a request that overcomes the objections discussed during the oral proceedings*

6.1 In light of the Board's conclusion not to admit the first and second auxiliary requests into proceedings, the respondent then made the request to adjourn in order that it could file a further auxiliary request. Its reasoning for this was in part that it needed time to draft a new claim to take account of the objections made during oral proceedings and also that it would need to consult a contact in the USA who was unavailable at that time. Further, the respondent

supported its request on the basis that it was reasonable in the circumstances to give it time to draft such a new request since the Board had already rejected its earlier request to remit the case back to the first instance for consideration of any auxiliary requests.

- 6.2 The Board however rejected the respondent's request to re-open the debate on the following day (Art. 15(2) RPBA), primarily because the respondent was unable to state which amendments it envisaged in order to overcome the objections raised, apart from by a broad reference to amendments which would address all the matters discussed at oral proceedings. Further, the objections which had been made at oral proceedings were at least to a large part based on objections which had been made by the parties in writing and which the Board had already given comments upon in its communication prior to oral proceedings.

Further, the respondent had already filed a set of auxiliary requests during written proceedings as a result of the provisional opinion of the Board in its communication, it being noted that the objections under Article 100(b) EPC 1973 had already been commented upon. In light of the discussion of Article 100(b) EPC 1973 objections (already laid out in the communication), during the oral proceedings, a further auxiliary request (the second auxiliary request referred to above) was filed which itself failed to overcome many of the objections discussed already in relation at least to the first auxiliary request and indeed (as stated above) introduced additional difficulties. Thus, ample opportunity had been provided to the respondent to file

requests which met the objections arising already from the objections under Article 100(b) EPC 1973 which were present in the grounds of appeal and as were followed up in the Board's communication.

Thus the Board found that in the light of the state of proceedings and the lack of concrete suggestions as to which amendments were intended, the respondent's request for adjournment had to be rejected.

- 6.3 Although the respondent argued that two days had been set for oral proceedings so that no disadvantage existed for the other parties, this is irrelevant since the time reserved for an oral proceedings does not require that all this time be used; instead it depends on the state of the proceedings and the requests of the parties made and dealt with during proceedings.
- 6.4 The respondent's further argument that it needed to contact someone in USA who could give approval for certain amendments also does not alter the foregoing conclusion, since not only should the authorised representative already be prepared for such a scenario when arriving at oral proceedings, but most of the objections before it were not new (apart from those new objections that it had itself given rise to by way of the second auxiliary request filed during oral proceedings).
- 6.5 In respect of the respondent's additional argument that, since the case had not been remitted for discussion of auxiliary requests, it would be unfairly disadvantaged if it were not allowed a further opportunity to consider and file a further request during appeal, this

is found unconvincing because the reasons *supra* for not remitting the case for consideration of auxiliary requests were based largely on the fact that the objection to be overcome related to an objection (Article 100(b) EPC 1973) which had already been brought forward and decided upon by the opposition division and that remittal would only be suitable where amended claims met the further requirements of Article 123(2) EPC and Article 84 EPC 1973. Such an argument also does not alter the fact that no concrete indication was made as to the specific nature of any amendments.

- 6.6 Since the Board rejected the respondent's request for adjournment, the auxiliary request of opponent OIII concerning an apportionment of costs in its favour is moot.

7. Since the main request is unallowable, the first and second auxiliary requests were not admitted into proceedings, and no further request has been submitted containing a text of claims for consideration, the European patent has to be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The request for adjournment of the proceedings and the opportunity for filing a further request on 19 February 2010 is rejected.
3. The European patent is revoked.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau