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Datasheet for the decision of 20 November 2024

Case Number: T 1676/22 - 3.2.02

Application Number: 18171021.1

Publication Number: 3388032

IPC: A61F2/24

Language of the proceedings: EN

Title of invention:
REDUCED GRANULATION AND INFLAMMATION STENT DESIGN

Patent Proprietor:
Boston Scientific Scimed, Inc.

Opponent:
BIOTRONIK AG

Headword:

Relevant legal provisions:
EPC Art. 56, 100(a)
RPBA 2020 Art. 13(1)

Keyword:
Inventive step - (no)
Amendment to appeal case - amendment overcomes issues raised (no) - admitted (no)
Prohibition of reformatio in peius

Decisions cited:
G 0009/92, G 0004/93

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1676/22 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 20 November 2024

Appellant: (Opponent)	BIOTRONIK AG Ackerstrasse 6 8180 Bülach (CH)
Representative:	Anetsberger, Georg Bardehle Pagenberg Partnerschaft mbB Patentanwälte, Rechtsanwälte Prinzregentenplatz 7 81675 München (DE)
Respondent: (Patent Proprietor)	Boston Scientific Scimed, Inc. One Scimed Place Maple Grove, MN 55311 (US)
Representative:	Vossius & Partner Patentanwälte Rechtsanwälte mbB Siebertstrasse 3 81675 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 29 April 2022 concerning the maintenance of European Patent No. 3388032 in amended form**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	D. Ceccarelli
	C. Schmidt

Summary of Facts and Submissions

I. The opponent appealed against the Opposition Division's decision that, account being taken of the amendments made by the patent proprietor during the opposition proceedings in accordance with auxiliary request 1 then on file, the patent and the invention to which it related met the requirements of the EPC.

II. Oral proceedings took place on 20 November 2024.

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

The respondent requested that the appeal be dismissed and that the patent be maintained on the basis of auxiliary request 1 as filed on 16 November 2021 (main request on appeal), auxiliary request 1a, filed on 24 January 2024, one of auxiliary requests 2 to 6, filed on 16 November 2021, or one of auxiliary requests 7 and 8, filed on 24 January 2024.

III. The following document is mentioned in this decision:

D1: US 2004/0243216 A1

IV. **Claim 1 of the main request** reads as follows:

"A stent with a variable radial force comprising:

a first serpentine band comprising struts interconnected by proximal turns and distal turns, a first strut angle, a first number of strut pairs, and a first wall thickness; and

a second serpentine band comprising struts interconnected by proximal turns and distal turns, a

second strut angle less than the first strut angle, a second number of strut pairs greater than the first number of strut pairs, and a second wall thickness greater than the first wall thickness;

the first serpentine band being two serpentine end bands, one of the two serpentine end bands forming one end of the stent and the other of the two serpentine end bands forming the other end of the stent, and

the second serpentine band being a plurality of serpentine center bands positioned between the two serpentine end bands,

wherein one of the two serpentine end bands is engaged to one of the plurality of serpentine center bands by a first plurality of longitudinal connectors; and the other serpentine end band is engaged to another of the plurality of serpentine center bands by a second plurality of longitudinal connectors."

Claim 1 of auxiliary request 1A differs from claim 1 of the main request in that the following wording is added at the end of the claim:

", wherein the first plurality of longitudinal connectors and the second plurality of longitudinal connectors are straight".

Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that after the expression "between the two serpentine end bands" the following deletion and addition is made as highlighted:

"~~wherein one of the two serpentine end bands is engaged to one of the plurality of serpentine center bands by a first plurality of longitudinal connectors; and the other serpentine end band is engaged to another of the plurality of serpentine center bands by a second~~

~~plurality of longitudinal connectors~~ wherein the stent has a center region with a first radial force and two end regions with a second radial force less than the first radial force".

Claim 1 of auxiliary request 3 differs from claim 1 of the main request in that the following wording is added at the end of the claim:

", and wherein the stent has a center region with a first radial force and two end regions with a second radial force less than the first radial force".

Claim 1 of auxiliary request 5 differs from claim 1 of the main request in that after the expression "variable radial force" the following wording is added:

", the stent being a vascular stent or stent for a coronary vessel, the stent".

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 5 in that the following wording is deleted at the end of the claim:

"~~wherein one of the two serpentine end bands is engaged to one of the plurality of serpentine center bands by a first plurality of longitudinal connectors; and the other serpentine end band is engaged to another of the plurality of serpentine center bands by a second plurality of longitudinal connectors~~".

Claim 1 of auxiliary request 6 differs from claim 1 of auxiliary request 4 in that the following wording is added at the end of the claim:

"wherein the stent has a center region with a first

radial force and two end regions with a second radial force less than the first radial force".

Claim 1 of auxiliary request 7 differs from claim 1 of auxiliary request 2 in that the following wording is added at the end of the claim:

", wherein the center region includes the plurality of serpentine center bands and each end region includes one of the serpentine end bands, wherein one of the two serpentine end bands is engaged to one of the plurality of serpentine center bands by a first plurality of longitudinal connectors; and the other serpentine end band is engaged to another of the plurality of serpentine center bands by a second plurality of longitudinal connectors, wherein the first plurality of longitudinal connectors and the second plurality of longitudinal connectors are straight".

Claim 1 of auxiliary request 8 differs from claim 1 of auxiliary request 7 in that the following wording is added at the end of the claim:

", and wherein pairs of serpentine center bands are engaged by a plurality of circumferential connectors".

V. The appellant's arguments, where relevant to this decision, can be summarised as follows.

Main request

The subject-matter of claim 1 of the main request lacked novelty over D1.

D1 disclosed a stent with a variable radial force comprising a first and a second serpentine band, each

comprising struts interconnected by proximal turns and distal turns, a strut angle, a number of strut pairs, and a wall thickness, as shown in Figure 11, also in view of paragraph [0041] in particular.

D1 disclosed a stent that had greater flexibility at both ends compared with its center portion, with a plurality of serpentine center bands forming the second serpentine band and two serpentine end bands forming the first serpentine band as claimed. This was described in paragraph [0078], first to third sentence. Paragraph [0078] further disclosed that the strut angle of the second serpentine band could be less than the strut angle of the first serpentine band and that the number of strut pairs of the second serpentine band could be greater than the number of strut pairs of the first serpentine band (last sentence). Finally, paragraph [0078] disclosed that the wall thickness of the second serpentine band could be greater than the wall thickness of the first serpentine band (seventh sentence). What was meant by thickness of the band in this sentence was the thickness of the struts as shown in Figures 5b and 5c and explained in paragraph [0057]. In the context of paragraph [0078] and in view of paragraph [0082], the expression "from the center portion of the stent to the proximal or distal ends" in the seventh and last sentences of paragraph [0078] implied a parameter change from the center portion to both ends.

D1 also disclosed longitudinal connectors as claimed. The term "longitudinal connector" was broad and the patent defined it as a connector which had ends that were circumferentially aligned (paragraph [0040]). Longitudinal connectors did not have to be straight, or long. According to paragraph [0071] of the patent, they

could be short. Figure 8 of D1 disclosed longitudinal connectors within the meaning of claim 1 of the main request. According to D1, such connectors could be present in the embodiment of Figure 11 (paragraph [0078]). Moreover, Figure 11 itself even disclosed straight longitudinal connectors.

If it was concluded that D1 did not disclose the combination of the wall thickness of the second serpentine band being greater than the wall thickness of the first serpentine band, the strut angle of the second serpentine band being less than the strut angle of the first serpentine band, the number of strut pairs of the second serpentine band being greater than the number of strut pairs of the first serpentine band and the longitudinal connectors as claimed, this distinguishing feature did not involve an inventive step over D1.

Paragraph [0078] of D1 taught each of these measures for obtaining a stent that had greater flexibility at both ends compared with its center portion, without a specific preference. Starting from D1, the person skilled in the art would have implemented these measures as an arbitrary choice from among a limited plurality of options for obtaining the desired flexibility of the stent.

Auxiliary requests 1A, 7 and 8

Auxiliary requests 1A, 7 and 8 had been filed late, after the reply to the statement of grounds of appeal, without justification. They could not be considered an appropriate reaction to the argument that the term "longitudinal connector" did not mean a connector extending in a straight line along the longitudinal

axis. This argument had already been provided with the statement of grounds of appeal. Moreover, the auxiliary requests were not *prima facie* relevant, since D1 disclosed straight connectors too (Figure 11) and the other additional features in claim 1 of auxiliary requests 7 and 8 were not intended to address the lack of inventive step. For these reasons, auxiliary requests 1A, 7 and 8 should not be admitted into the appeal proceedings.

Auxiliary requests 2, 4 and 6

Auxiliary requests 2, 4 and 6 were not admissible in view of the principle of prohibition of *reformatio in peius*. No longitudinal connectors were defined in claim 1 of these auxiliary requests. As a consequence, the scope of the claims extended beyond that of claim 1 of the main request, on the basis of which the patent had been maintained by the opposition division.

Auxiliary requests 3 and 5

The additional features of claim 1 of auxiliary requests 3 and 5 compared with claim 1 of the main request were known from D1. Hence these auxiliary requests were not allowable for lack of inventive step either. The radial forces as defined in claim 1 of auxiliary request 3 were inherently disclosed in paragraph [0078] of D1, according to which the ends of the stent disclosed in that paragraph were more flexible than its center portion. Moreover, D1 disclosed a stent suitable for vascular applications. Paragraph [0002] referred to "tortuous anatomy", whereas paragraphs [0094] to [0096] disclosed therapeutic agents delivered by the stent typically

delivered to a patient's blood vessel.

VI. The respondent's arguments, where relevant to this decision, can be summarised as follows.

Main request

The gist of D1 was to provide a stent with a less flexible proximal end, to allow for adequate pushability, and a more flexible distal end, to ensure adequate trackability. Moreover, a smooth transition of stiffness from the proximal end to the distal end of the system was desired (paragraph [0002]). Claims 1, 8, 17, 22 and 27 of D1 consistently defined stents with increased flexibility from the proximal to the distal end. Figure 11 of D1 disclosed a stent with such increased flexibility too. Only the first sentence in paragraph [0078] referred to a stent having greater flexibility at the proximal and distal ends when compared with a more rigid central portion. However, this was only to mirror the wording of claim 32. The seventh and last sentences of paragraph [0078] expressly and unambiguously disclosed parameter changes to obtain an increase in flexibility from the center portion to "the proximal or distal ends", but not to both ends. The meaning of the word "or" was clearly distinct from the meaning of the word "and". In view of this unambiguous disclosure, paragraph [0082] of D1 was meaningless.

Moreover, the seventh sentence of paragraph [0078] of D1 did not disclose a wall thickness, but merely mentioned a thickness. This was ambiguous, and could mean the thickness (diameter) of the stent as a whole. In this respect, Figures 5b to 5c and paragraph [0057] did not relate to the embodiment disclosed in

paragraph [0078].

For all these reasons, D1 did not disclose struts of a plurality of serpentine center bands, interconnected by proximal turns and distal turns, with a strut angle less than, a number of strut pairs greater than, and a wall thickness greater than, the respective ones of the struts of two serpentine end bands.

D1 did not disclose longitudinal connectors engaging serpentine end bands with serpentine center bands either. "Longitudinal" meant that the connectors had to extend along the longitudinal axis of the stent. This interpretation was backed by the description of the patent in suit and had even been shared by the appellant in submissions made during the first-instance proceedings. At no point did the patent in suit show or describe a "longitudinal connector" which did not extend longitudinally. Moreover, paragraph [0040] provided a direct link between the terms "longitudinal connector" and "extending longitudinally". The statement in that paragraph that a longitudinal connector had ends which were circumferentially aligned was not the definition of "longitudinal connector", but rather the result of the connector extending longitudinally, i.e. the result of being a longitudinal connector. Moreover, the figures of D7 could not be taken as a direct and unambiguous disclosure of longitudinal connectors, as the figures of patent documents were merely schematic illustrations, not suitable for deriving specific features.

In any case, paragraph [0078] of D1 disclosed a long list of possible features, but not the combination of only some of them. In fact, D1 did not disclose any embodiment with the combination of features as defined

in claim 1 of the main request.

D1 did not provide any pointer to the combination of features as defined in claim 1 of the main request, irrespective of whether they provided an additional technical effect over the disclosure of D1. The choice of the claimed combination from among the list of many possible optional features as disclosed in paragraph [0078] of D1 was not obvious. In any case, the claimed combination of features provided the technical effect of obtaining a stent with variable radial force, with a stiffer center portion and more flexible end portions. No matter which the correct interpretation of the expression "longitudinal connectors" was, D1 did not teach such connectors for achieving this technical effect due to the fact that the friction on the vessel wall was minimised. Moreover, configuring the connectors as longitudinal connectors also facilitated manufacturing and loading of the stent onto a delivery system.

Auxiliary requests 1A, 7 and 8

Auxiliary requests 1A, 7 and 8 had to be admitted as they were presented in response to new objections. Auxiliary request 1A, in particular, had been filed in response to the appellant's new interpretation of the term "longitudinal connector", which went against its own interpretation in the first-instance proceedings. Moreover, the amendment in claim 1 of these requests specifying that the longitudinal connectors were straight was straightforward and, *prima facie*, rendered the claimed subject-matter inventive. The additional features in claim 1 of auxiliary requests 7 and 8 addressed an objection of extension of subject-matter.

Auxiliary requests 2, 4 and 6

Auxiliary requests 2, 4 and 6 were admissible. They had already been filed in the first-instance proceedings. Moreover, features deleted in claim 1 compared with claim 1 of the main request had been replaced by other features. Hence the appellant's position had not been worsened by the amendments in these auxiliary requests.

Auxiliary requests 3 and 5

D1 did not mention the radial force provided by the stent regions. Flexibility was different from radial force. Moreover, D1 did not disclose a vascular stent. The reference to therapeutic agents to be delivered to a vascular vessel in D1 could mean that the stent was adapted for delivering these agents from the outside of the vessel. Hence the additional features of claim 1 of auxiliary requests 3 and 5 were not known from D1.

Reasons for the Decision

1. Subject-matter of the patent

The patent relates to a stent with a variable radial force.

Stents are medical devices intended to be inserted into body lumens, for example at the site of a stenosis or an aneurysm. They can be introduced into a body vessel through the skin and brought to the implantation site, where they are enlarged radially, to ensure that the body lumen remains open (patency).

A claimed stent includes two serpentine end bands and a

plurality of serpentine center bands positioned between the two serpentine end bands. A flat plan view of an exemplary stent pattern is depicted in Figure 1 of the patent, reproduced below.

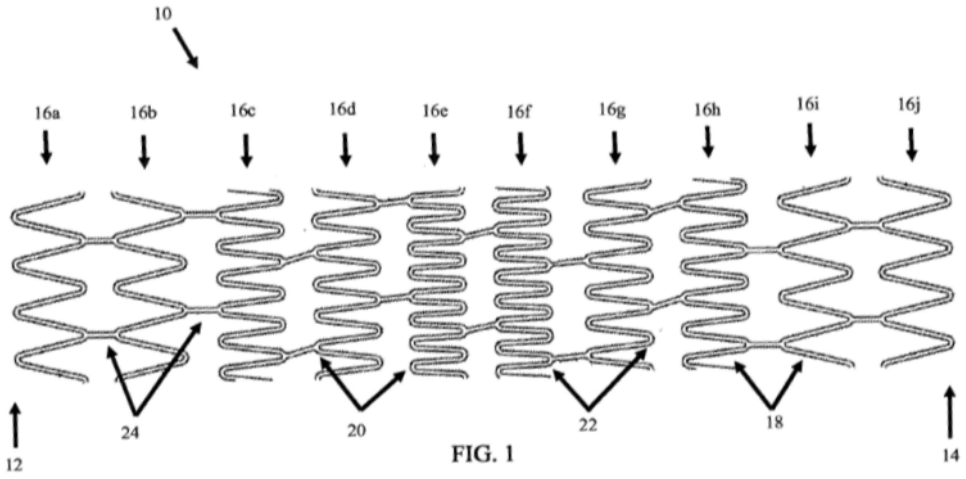

FIG. 1

The serpentine end bands (16a, 16b, 16i, 16j) comprise struts (18) interconnected by proximal turns and distal turns (20, 22), a first strut angle, a first number of strut pairs, and a first wall thickness.

The serpentine center bands (16c to 16h) comprise struts (18) interconnected by proximal turns and distal turns (20, 22), a second strut angle less than the first strut angle, a second number of strut pairs greater than the first number of strut pairs, and a second wall thickness greater than the first wall thickness.

Each of the two serpentine end bands is engaged to one of the plurality of serpentine center bands by a plurality of longitudinal connectors (24).

The claimed stent structure should result in a radial force, i.e. the force applied radially by the enlarged stent at the application site, of the center being

greater than the radial force of the ends of the stent. This should contribute to minimising or eliminating swelling and granulation of tissue when the stent is implanted in a body lumen (paragraph [0036] of the patent).

2. Main request

The appellant argued that the subject-matter of claim 1 was not novel, or at least not inventive, over D1.

2.1 The most relevant passage of D1 is paragraph [0078]. Figure 11, reproduced below, illustrates the disclosure of this paragraph.

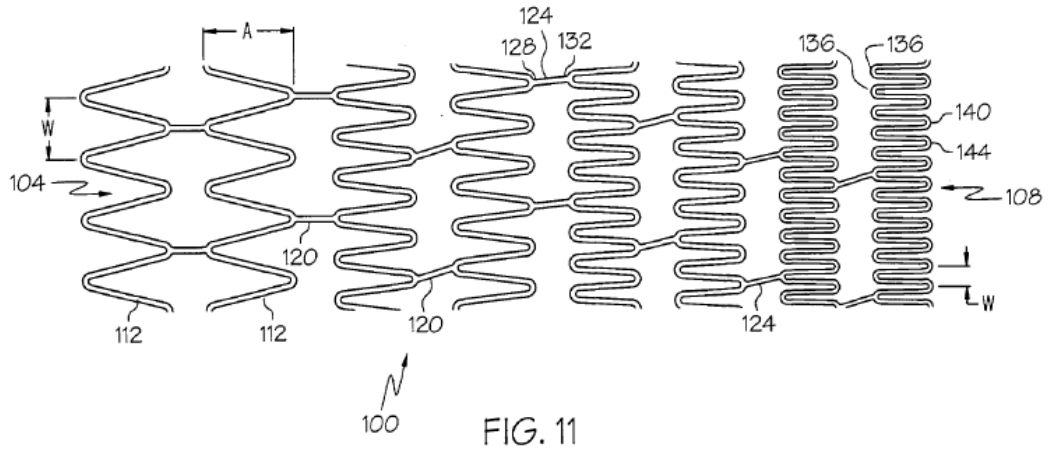

FIG. 11

D1 discloses a stent with a variable radial force (paragraph [0078], first sentence) comprising two serpentine end bands (as one of the end bands comprising the two bands with reference sign 112 on the left of Figure 11) with struts interconnected by proximal turns and distal turns, a first strut angle, a first number of strut pairs, and a first wall thickness; and a plurality of serpentine center bands (as the bands corresponding to 112 but without a reference sign on the right of Figure 11) with struts

interconnected by proximal turns and distal turns, a second strut angle, a second number of strut pairs, and a second wall thickness. The second strut angle could be less than the first strut angle and the second number of strut pairs could be greater than the first number of strut pairs (paragraph [0078], last sentence discloses circumferential bands which "increase in wavelength from the center portion of the stent to the proximal or distal ends"). Moreover, the second wall thickness could be greater than the first wall thickness (paragraph [0078], seventh sentence, discloses circumferential bands which "decrease in [...] thickness [...] from the center portion of the stent to the proximal or distal ends"). The serpentine end bands could be engaged to respective serpentine center bands by respective pluralities of longitudinal connectors (as connector columns 120 proximate to the serpentine end band in Figure 11, in view of paragraph [0078], sixth and ninth sentence).

2.2 The respondent argued that D1 did not disclose a plurality of serpentine center bands with a smaller strut angle, a greater number of strut pairs or a greater wall thickness than both serpentine end bands. D1 disclosed a stent with a less flexible proximal end and a more flexible distal end.

This argument is not convincing. While the Board agrees with the respondent that paragraph [0002] and various embodiments described in the first part of the detailed description of the invention in D1 relate to stents with a less flexible proximal end and a more flexible distal end, paragraph [0078] begins with a general statement explaining that "*the invention is also directed to a stent having greater flexibility at the proximal and distal ends when compared to a more rigid*

central portion". This is to allow "the stent to be maneuvered through a bodily vessel more easily". The beginning of paragraph [0078] unambiguously highlights a difference from the previous embodiments, which is confirmed in paragraph [0082], stating that "*specific embodiments of additional inventive stents having greater flexibility at the proximal and distal ends than at the central portion have not been depicted in the Figures*". As a consequence, further sentences in paragraph [0078], mentioning "either ends", "the proximal and/or distal ends" and "the proximal or distal ends" must be read in an inclusive sense, meaning that they can refer to both ends. This interpretation is not only possible from a purely linguistic point of view, but also the only correct one in the technical context of paragraph [0078] of D1.

2.3 The respondent argued that the seventh sentence of paragraph [0078] of D1 did not disclose a wall thickness, as it merely mentioned a thickness. This was ambiguous and could mean the thickness (diameter) of the stent as a whole.

However, D1 illustrates the meaning of a thickness of the serpentine circumferential bands, albeit in relation to an embodiment in which the thickness decreases from one end to the other end of the stent, in paragraph [0057] and Figures 5b and 5c. This thickness is clearly the wall thickness of the stent and not its diameter as a whole. Nowhere does D1 link the variation of such a diameter with a variation of flexibility.

It follows that the person skilled in the art, in view of the disclosure of paragraph [0057] and Figures 5b and 5c, would understand the term "thickness" in

paragraph [0078] as referring to the wall thickness of the serpentine circumferential bands of the stent.

2.4 The respondent also argued that D1 did not disclose longitudinal connectors engaging the serpentine end bands with respective serpentine center bands. The Opposition Division was convinced by this argument, stating that the only embodiment of D1 disclosing longitudinal connectors was the one according to Figure 2 and that paragraph [0078] only disclosed "an increase in angle to the more flexible end bands".

The Board sees it differently.

D1 discloses a number of embodiments with serpentine circumferential bands having varying flexibility along the length of the stent. Paragraph [0078] discloses a number of alternative or cumulative features ("alternatively or additionally") for achieving the variation in flexibility, amongst which connector struts which "increase in length and/or angle of inclination relative to the longitudinal axis of the stent" and which "include one or more connector strut peaks 156 and one or more connector strut troughs 160". Implementations of these features are shown in Figures 2 and 11, and in Figure 8, respectively.

It is also to be noted that, as the appellant argued, the patent does not assign any specific limitation to the expression "longitudinal connectors" except that the connectors must have "ends that are circumferentially aligned" (paragraph [0040]). Contrary to the respondent's assertion, there is no limitation or link regarding the longitudinal extension and the shape of such longitudinal connectors. Paragraph [0040] recites that "the connectors can be straight; have at

least one bend; extend longitudinally; and/or extend circumferentially". Paragraphs [0071] and [0072] relate to an example with longitudinal connectors which are "short and straight". This implies that longitudinal connectors within the meaning of the claim do not have to be either short (or long) or straight.

Although the Board agrees with the respondent that, in general, the figures of patent documents provide schematic illustrations, this does not mean that their disclosure is to be ignored. The person skilled in the art may not infer specific dimensions from Figures 2, 8 or 11 of D1, but still will recognise in a direct and unambiguous way, for example by comparison with other connectors represented as angled with respect to the longitudinal axis of the stent, that the connectors between the first and the third serpentine circumferential bands on the left in Figure 11, between the first and the second serpentine circumferential bands on the left in Figure 2 and in Figure 8, which implement the disclosure of paragraph [0078], are longitudinal connectors in accordance with claim 1 of the main request. What was stated by the appellant in the first-instance proceedings in this respect cannot change this factual assessment.

2.5 The Board agrees with the respondent that paragraph [0078] discloses a number of possibly alternative features for obtaining a stent having greater flexibility at the proximal and distal ends when compared with a more rigid central portion.

For this reason, it has to be concluded that D1 does not directly and unambiguously disclose the combination of the features of the wall thickness of the second serpentine band being greater than the wall thickness

of the first serpentine band, the strut angle of the second serpentine band being less than the strut angle of the first serpentine band, the number of strut pairs of the second serpentine band being greater than the number of strut pairs of the first serpentine band, and the longitudinal connectors as claimed.

2.6 However, as explained above, D1 discloses all these claimed features, individually, for obtaining a stent having greater flexibility at the proximal and distal ends when compared with a more rigid central portion. These and a few other features are disclosed "alternatively or additionally" (paragraph [0078]) for such a technical effect.

Paragraph [0078] states that "*the increased flexibility may be accomplished by any of the methods disclosed herein, combinations of any of the methods or in any other suitable way*". Paragraph [0082] states that "*it should be understood that any method or combination of methods described herein for causing a change in flexibility may be utilized*".

In view of the limited number of alternative or cumulative features disclosed in paragraph [0078] of D1, it has to be concluded that the provision of the combination of the claimed features (and possibly further ones disclosed in that paragraph) would have been a mere obvious design option for the person skilled in the art faced with the objective technical problem of obtaining a stent having greater flexibility at the proximal and distal ends when compared with a more rigid central portion. Whether the one or the other individual feature may have further advantages as argued by the respondent, no such advantages being disclosed in the patent, is of no relevance in reaching

this conclusion.

2.7 It follows that the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC). Hence the ground for opposition of lack of inventive step (Article 100(a) EPC) prejudices maintenance of the patent on the basis of the main request.

3. Auxiliary requests 1A, 7 and 8

Auxiliary requests 1A, 7 and 8 were filed by the respondent after the reply to the appellant's statement setting out the grounds of appeal. They constitute an amendment of the respondent's appeal case, the admission of which is at the discretion of the Board under Article 13(1) RPBA.

According to this article, one of the criteria the Board must use in exercising its discretion is whether the respondent has demonstrated that the amendment, *prima facie*, overcomes the issues raised by the appellant in the appeal proceedings. Moreover, there have to be reasons for submitting the amendment at this stage of the appeal proceedings.

The respondent provided no convincing arguments why auxiliary requests 1A, 7 and 8 were submitted only after the reply to the appellant's statement setting out the grounds of appeal. The appellant's arguments concerning the disclosure of "longitudinal connectors" in D1 were presented with that statement. The respondent's argument that the appellant changed its view, contested by the appellant, is not decisive, as any amendment addressing the appellant's allegedly new arguments could and should have been presented with the reply to the statement of grounds of appeal at the

latest.

Moreover, the respondent did not demonstrate that the amendment, *prima facie*, overcomes the objection of lack of inventive step of claim 1 of the main request raised by the appellant in the appeal proceedings. On a *prima facie* basis, Figures 2 and 11 of D1 show straight connectors according to claim 1 of auxiliary requests 1A, 7 and 8. As regards the additional features in claim 1 of auxiliary requests 7 and 8, the respondent did not submit that they were intended to address the objection of lack of inventive step.

For these reasons, auxiliary requests 1A, 7 and 8 are not admitted into the appeal proceedings, in accordance with Article 13(1) RPBA.

4. Auxiliary requests 2, 4 and 6

The appellant argued that auxiliary requests 2, 4 and 6 were not admissible in view of the principle of prohibition of *reformatio in peius*. In this respect, in decisions G 9/92 and G 4/93 (Order) the Enlarged Board of Appeal concluded that "*if the opponent is the sole appellant against an interlocutory decision maintaining a patent in amended form, the patent proprietor is primarily restricted during appeal proceedings to defending the patent in the form in which it was maintained by the Opposition Division in its interlocutory decision. Amendments proposed by the patent proprietor [...] may be rejected as inadmissible by the Board of Appeal if they are neither appropriate nor necessary*".

The Board shares the appellant's view that auxiliary requests 2, 4 and 6 are not admissible, as claim 1 of

these requests does not recite the longitudinal connectors. The deletion of this feature is neither appropriate nor necessary as it would extend the scope of protection of the auxiliary requests in this respect compared with the main request. This goes beyond defending the patent in the form in which it was maintained by the Opposition Division in its interlocutory decision. In this respect, it is irrelevant whether the auxiliary requests had been filed in the first-instance proceedings already.

For this reason, the patent cannot be maintained on the basis of any of auxiliary requests 2, 4 or 6.

5. Auxiliary requests 3 and 5

The additional features of claim 1 of auxiliary requests 3 and 5 are known from D1.

D1 discloses a stent with a center region with a first radial force and two end regions with a second radial force less than the first radial force within the meaning of the additional feature in claim 1 of auxiliary request 3. Although flexibility and radial force may not be the same concept, paragraph [0078], first sentence, inherently discloses the additional feature of claim 1 of auxiliary request 3. If different regions of the stent have different flexibilities, this means that these regions apply a different radial force within the body lumen where the stent is navigated or delivered.

D1 also discloses a vascular stent or stent for a coronary vessel in accordance with the additional feature in claim 1 of auxiliary request 5. This is inherently disclosed in paragraphs [0001] and [0002] of

D1, which disclose a stent to be delivered within a bodily lumen through tortuous anatomy, together with paragraphs [0094] to [0096], which disclose coatings for the stent with therapeutic agents to be delivered to the vascular system, such as "anti-thrombogenic agents", "anti-coagulants" and "vascular cell growth promoters". The person skilled in the art would not contemplate delivering the therapeutic agents to the vascular system by reaching it via a bodily lumen through tortuous anatomy other than a vascular vessel itself.
Consequently, the subject-matter of claim 1 of auxiliary requests 3 and 5 does not involve an inventive step (Article 56 EPC) over D1. Hence the ground for opposition of lack of inventive step (Article 100(a) EPC) prejudices maintenance of the patent on the basis of these requests.

6. It follows that none of the respondent's requests can form a basis for maintenance of the patent.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

A. Chavinier-Tomsic M. Alvazzi Delfrate

Decision electronically authenticated