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**Datasheet for the decision
of 25 February 2013**

Case Number: T 2619/11 - 3.4.02

Application Number: 02712622.6

Publication Number: 1402762

IPC: G01N21/71, G01N21/73, H05H1/42,
H01J49/04, H01J49/10, H05H1/30

Language of the proceedings: EN

Title of invention:
PLASMA TORCH

Applicant:
Agilent Technologies Australia (M) Pty Ltd

Headword:

Relevant legal provisions:
EPC Art. 123(2)

Keyword:
Claims combination extends beyond the disclosure of the
application as filed (no)

Decisions cited:
T0296/96, T0147/99, T1150/00, T0172/02

Catchword:

Focus of the decision disproportionately directed to the structure of the claims as filed to the detriment of what is really disclosed to the skilled person by the documents as filed as directed to a technical audience rather than a philologist or logician, for which audience an attempt to derive information from the structure of dependent claims leads to artificial result



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Chambres de recours**

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Case Number: T 2619/11 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 25 February 2013

Appellant: Agilent Technologies Australia (M) Pty Ltd
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 11 August 2011
refusing European patent application No.
02712622.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman: A. Klein
Members: M. Rayner
B. Müller

Summary of Facts and Submissions

- I. The patent applicant has appealed against the decision of the examining division refusing European Patent Application number 02712622.6 (WO-A-03/005780), concerning a plasma torch.

Examination Procedure

- II. In a telephone consultation dated 16 May 2011 during the examination proceedings, the applicant was informed that the case was essentially suitable for issue of an intention to grant subject to deletion of claims 2 to 4.

Requests

- III. The appellant requested that the decision under appeal be set aside and a patent granted on the basis of the set of claims of the application refused in the decision of the examining division.

Claims

- IV. Independent claim 1 is worded as follows.

"1. A plasma torch (40) for introducing a sample into a plasma (17) produced in the torch for spectrochemical analysis of the sample, wherein the plasma torch is for aerosol samples having relatively high salt concentrations, the plasma torch including a tube (25) for conveying a flow of a gas carrying the aerosol sample to a plasma (17) produced in the torch by an electromagnetic field, the tube (25) having an inlet (31) and an outlet (39) of smaller size than the

inlet, and being shaped to deliver a substantially laminar flow of the aerosol-laden gas at the outlet for penetrating the plasma, wherein the tube (25) is tapered (27) along substantially its whole length such that its cross-sectional area gradually and smoothly reduces towards its outlet along said substantially whole length, the arrangement being such that the tube (25) is resistant to obstruction by salts deposited by the aerosol sample containing relatively high salt concentrations."

Dependent claims 2 to 4 are worded as follows.

"2. A torch (40) as claimed in claim 1 wherein the tube (25) is tapered (27) along its length for a distance that is at least five times the internal diameter of the inlet of the tube.

3. A torch (40) as claimed in claim 2 wherein the tube (25) is tapered (27) along its length for a distance that is from five to ten times the internal diameter of the inlet tube.

4. A torch (40) as claimed in any one of claims 1 to 3 wherein the tube (25) includes a parallel walled portion (29) extending to the outlet (39), wherein the tapered portion (27) of the tube smoothly blends into the parallel walled portion."

Decision under Appeal

- V. Pertinent contents of the decision under appeal are as summarised in section VI to XIII below.
- VI. Amendments of independent claim 1 include introduction of a feature pertaining to tapering of the tube along

substantially its whole length as was originally disclosed in dependent claim 6, depending from claim 1, into originally filed independent claim 1.

- VII. The subject matter of present claims 2 to 4 which depend from independent claim 1 thus now comprises this feature in combination with the following features:
Claim 2 - the tube is tapered for a distance that is at least five times the internal diameter of the inlet of the tube,
Claim 3 - the tube is tapered for a distance that is from five to ten times the internal diameter of the inlet tube,
Claim 4 - the tube includes a parallel walled portion extending to the outlet wherein the tapered portion of the tube smoothly blends into the parallel walled portion.
- VIII. The original application comprised the following disclosure pertaining to the tapering of the tube, three separate alternatives:
(i) the tube is tapered along at least a substantial portion (originally filed independent claim 1).
(ii) the tube is tapered along substantially its whole length (originally filed dependent claim 6).
(iii) the tube is tapered over its entire length (page 6, lines 2-6).
- IX. The description and drawings as originally filed provide no basis for feature (ii), in particular the wording on page 6, lines 2-6 relating to feature (iii) concerns the "entire length" rather than "substantially its whole length" as in feature (ii) and, in addition, is presented merely as a hypothetical possibility rather than a particular embodiment.

- X. The feature of present claim 4 concerning the parallel wall portion blending smoothly with the tapered portion is based on claim 4 as originally filed which was dependent on claims 1-3 as originally filed. The feature of the parallel wall portion blending smoothly with the tapered portion was therefore not disclosed in combination with originally filed claim 6 (feature (ii)), since claim 6 was, in the original disclosure, solely dependent directly from claim 1. The originally filed claim structure therefore provides no basis for the combination of feature (ii) with the feature of smoothly blending into a parallel walled portion. Further, since the description and drawings disclose only features (i) and (iii) but not feature (ii), they also fail to provide a basis for the combination with dependent claim 4. Present dependent claim 4 therefore does not meet the requirement of Article 123(2).
- XI. Similarly, for present claims 2-3 the disclosure of the features of the length of the taper being five or five to ten times the inlet internal diameter was disclosed in originally filed claim 2 or 3 as dependent on claim 1 or 2, respectively, whereby as indicated claim 1 comprised feature (i) but not feature (ii). In addition, the passage of the description on page 2, lines 20-25 concerning these features was made in the context of the preceding passage under summary of the invention (commencing on page 1, line 27) which concerned the general embodiment (feature (i)) which is entirely consistent with the claim structure of dependent claims 2-3 as originally filed.
- XII. The test with respect to Article 123(2) EPC is whether the skilled person would derive the claimed subject matter directly and unambiguously, using common general knowledge, from the originally filed application as a

whole (see T1150/00). The combination of the features of dependent claims 2-4 with feature (ii) taken from originally filed dependent claim 6 (dependent directly from originally filed independent claim 1) results in the skilled person being presented with information which is not directly and unambiguously derivable from that previously presented by the application, even when account is taken of matter which is implicit to a person skilled in the art. In addition, according to e.g. T 296/96, on the issue of Article 123(2) EPC, the content of an application is not to be viewed as a reservoir from which features pertaining to separate embodiments can be combined in order to artificially create a particular embodiment (see also T0147/99, T0172/02).

- XIII. Present dependent claims 2-3 therefore also do not meet the requirement of Article 123(2). The division also made additional comments stated not to form part of the decision concerning a corresponding objection to claims 5 and 6.

Case of the Appellant

- XIV. In support of its appeal, the appellant advanced arguments as summarised in section XV to XIX below.
- XV. Decision T1150/00 is concerned with the allowability of a claim that comprises features from two distinct embodiments. The claimed teaching could not take place in one embodiment without further circuitry being provided (see paragraph 3.3). T 296/96 is concerned with the application of a very general statement about the number of carbon atoms that could be used for a claim directed to a very specific compound. Neither of

these precedents concerns amendments similar to the present application.

- XVI. The application as originally filed disclosed the tapered portion may be at least five times the internal diameter of the inlet of the tube, the length of the tapered portion is advantageously from five to ten times the internal diameter of the inlet of the tube and the taper may blend smoothly into any parallel portions.
- XVII. A person skilled in the art would not regard claim 6 as originally filed as a stand-alone embodiment, but rather as disclosing a preferred length of the tapered portion of the tube, that is consistent with the detailed embodiment described.
- XVIII. The assertion that the tube tapered along substantially its whole length is a "separate alternative" in the decision under appeal is thus wrong. There is no choice to the skilled person between the tube being tapered along at least a substantial portion of its length and one tapered along substantially its whole length. The tube is always tapered along at least a substantial portion of its length. What is disclosed is that one configuration of a tube tapered along at least a substantial portion of its length is a tube that is tapered along substantially its whole length.

The decision is therefore incorrect and should be reversed.

Reasons for the Decision

1. The appeal is admissible.
2. Amendments
 - 2.1 In the view of the board, in the present case the focus of the decision is disproportionally directed to the structure of the claims as filed to the detriment of what is really disclosed to the skilled person by the documents as filed. This led to the examining division identifying three separate alternatives pertaining to the tapering of the tube disclosed in the present application, which led to assumptions upon which the subsequent reasoning is based and which the board does not consider to stand up to close scrutiny.
 - 2.2 Firstly, as submitted by the appellant, a tube tapered along at least a substantial portion (designated (i) by the division) includes a tube tapered along substantially its whole length (designated (ii) by the division). Therefore no alternative is involved. Similarly, a tube tapered along at least a substantial portion (designated (i) by the division) includes a tube tapered over its entire length (designated (iii) by the division).
 - 2.3 Secondly, the stance of the division with respect to the tube being tapered over its entire length (designated (iii)) is somewhat contradictory because after stating it was an alternative, the division went on to consider a reference to entire length as not to be a particular embodiment, but to be a possibility. The consequence of this shift in position is to cast doubt on the division's own argument about subject matter extending beyond the application as filed in a

combination of pending claim 1 with claim 2, 3 or 4 because all the features concerned the described embodiment variation.

2.4 In considering the reference in the passage on page 6 of the specification concerning the "entire length" feature to offer no basis for the "substantially the whole length" feature, the division can, nevertheless, be considered to reaffirm its view that "substantially its whole length" and "entire length" are alternatives.

2.5 In the present context, "entire" and "whole" have virtually the same meaning, in fact the first definition given in the online "Oxford English Dictionary" ("OED") of "entire" is "whole; with no parts excepted". It therefore seems the division would have had the same "no basis" difficulty with "substantially its entire", i.e. any difference seen by the division would rest on the originally disclosed word "substantially", to which the online OED gives one meaning as "in all essential characters or features; in essentials, to all intents and purposes, in the main". It is quite common practice in patent claim drafting to use the word "substantially" in the sense of the OED definition in order to soften strict mathematical boundaries.

2.6 Turning to the disclosure in detail, the board is mindful that the application is directed to a technical audience rather than to a philologist or logician, for which audience an attempt to derive information from the structure of dependent claims leads to an artificial result. A reading of the passage concerned in lines 2 to 6 on page 6 reveals that it follows a passage about a design according to Figure 3, worded as follows:

"This led to the design of a tube 25 as shown in Figure 3, which has a tapered portion 27 of greatly increased length compared to section 23 of tube 10 of Fig. 2. The tube 25 is substantially constantly tapered along at least a substantial portion of its length such that its cross-sectional area gradually and smoothly reduces between its inlet 37 and its outlet 39 along said at least a substantial portion of its length. Tube 25 includes a narrow parallel sided portion 29 similar to portion 22 of tube 10 of Fig. 2."

the page 6 passage itself amounting to one sentence, which is worded as follows:

"It is probable, but not yet experimentally verified, that the tapered portion 27 could extend over the entire length of tube 25, the taper at the outlet end 39 approximating the narrow parallel-sided portion 29, such that the flow of sample aerosol laden gas within tube 25 at outlet 39 is substantially laminar."

- 2.7 What is striking about this sentence is that it uses the definite article in referring to "the tube 25" and "the tapered portion 27" and uses the verb form "could extend". This tells the skilled person directly and unambiguously that starting from the length shown for the tube 27 in Figure 3, the tapered portion could extend over the entire length of the tube, i.e. fully consistent with "at least a substantial portion". This can be contrasted with the embodiment of Figure 3 as opposed to that of prior art Figure 2, where different reference numerals are used for corresponding parts (25 instead of 10, 27 instead of 23 and 29 instead of 22), and where, moreover, the indefinite article is first used with items 25, 27 and 29. A variation of and not

an alternative to the items of embodiment described in relation to Figure 3 is therefore directly and unambiguously described in relation to "entire length". Moreover, the sentence also makes clear that the parallel sided portion is approximated at the outlet end for laminar flow, in other words in view of the approximately parallel sides, the "taper" tends away from being a taper at the end.

2.8 What is directly and unambiguously disclosed to the skilled person is thus that the tapered portion of the tube with the features of Figure 3 could extend over the entire length of the tube, there being an approximated parallel wall portion thereof at the outlet end. In the view of the board, this tallies with the feature of originally filed claim 6 pertaining to tapering of the tube along substantially its whole length, just as the skilled person would understand it and in accordance with the OED definition mentioned in point 2.5 above.

2.9 Similarly in relation to claims 2 and 3, since "substantially the whole length" is included in "at least a substantial portion" and not an alternative thereto, and because "over its entire length" is a variation of a described embodiment, the subject matter of these claims shows no inconsistency in relation either to the original claims or the statement of invention, nor did the examining division object against the description of Figure 3 as such in this context.

2.10 In view of the foregoing, the board does not consider the assumptions made by the examining division correct and therefore concluded that present claims 2, 3 and 4 do not include subject matter extending beyond the

disclosure of the application documents as filed. So far as the additional comments of the examining division in relation to claims 5 and 6 are concerned, a corresponding argument applies.

- 2.11 Since there is a disclosure of "tapered over its entire length" directly and unambiguously referring to a variation of but not alternative to the embodiment of Figure 3 as set out in section 2.7 above, contrary to the view of the examining division, the board has not identified any reason in the content of decision T1150/00 which could affect its view. A similar situation exists in relation to decisions T0296/96, T0147/99 and T0172/02.

3. Further Procedure

- 3.1 The position of the examining division was that the case was essentially suitable for issue of an intention to grant subject to deletion of claims 2 to 4. The board has, however, reached the conclusion that it is not necessary to delete claims 2 to 4, thus removing the sole objection of the examining division. As editorial improvements to the description are not sufficient reason to depart from the position of the examining division and the board sees no other reason thus to do, other than its disapproval of the necessity of the deletion, the appeal succeeds. Consequently, the oral proceedings requested on an auxiliary basis are not necessary.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent in the following version:

Description:

Pages 3 to 9 as published;
Pages 1 and 2 as received by telefax on 24
February 2010;

Claims:

Nos. 1 to 6 as submitted with the letter
dated 07 September 2010.

Drawings:

Sheets 1/4 to 4/4 as published

The Registrar:

The Chairman:



M. Kiehl

A. Klein

Decision electronically authenticated