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**Datasheet for the decision
of 13 December 2006**

Case Number: T 0630/04 - 3.3.03

Application Number: 97115830.8

Publication Number: 0832920

IPC: C08K 5/5398

Language of the proceedings: EN

Title of invention:

A pneumatic tyre

Patentee:

Bridgestone Corporation

Opponent:

Rhein Chemie Rheinau GmbH

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"

"Inventive step (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0630/04 - 3.3.03

D E C I S I O N
of the Technical Board of Appeal 3.3.03
of 13 December 2006

Appellant:
(Opponent)

Rhein Chemie Rheinau GmbH
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Representative:

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Respondent:
(Patent Proprietor)

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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office dated 26 February 2004
and posted 18 March 2004 rejecting the
opposition filed against European patent
No. 0832920 pursuant to Article 102(2) EPC.

Composition of the Board:

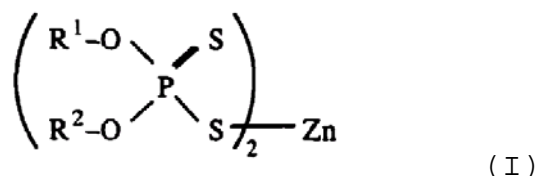
Chairman: R. Young
Members: W. Sieber
E. Dufrasne

Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 832 920, in respect of European patent application no. 97 115 830.8, in the name of Bridgestone Corporation, filed on 11 September 1997 and claiming JP priorities of 25 September 1996 and 18 July 1997 (JP 25320396 and JP 19379197), was published on 2 January 2002 (Bulletin 2002/01). The granted patent contained 13 claims, whereby Claim 1 read as follows:

"A pneumatic tire comprising a tread,

wherein the rubber composition of the tread layer comprises 50 parts by weight or more of SBR in 100 parts by weight of the rubber component and, in an amount of 0.2 to 5.0 parts by weight per 100 parts by weight of the rubber component, a vulcanization accelerator represented by the following general formula (I):



wherein R¹ and R² each independently represents an alkyl group having 1 to 10 carbon atoms which may be linear, branched, or cyclic or an aryl group having 6 to 10 carbon atoms."

Dependent Claims 2-13 were directed to preferred embodiments of the pneumatic tire of Claim 1.

II. A notice of opposition was filed by Rhein Chemie Rheingau GmbH on 2 October 2002 requesting revocation of the patent in its entirety on the grounds of Article 100 (a) EPC (lack of novelty and lack of inventive step).

The opposition was supported by the following documents:

D1: *H. Ehrend*, "Über die Wirkung von Thiophosphaten in Vernetzungssystemen für Dienkautschuke", *Gummi, Asbest, Kunststoffe*, 1977, 30, 68-71;

D2: "Buna® EM, Styrol-Butadien-Kautschuk (Emulsions-SBR)", *Produktinformationsbroschüre Bunawerke Hüls GmbH*, February 1985, 5th edn.; and

D3: "Rhenocure® TP/S", *Produktinformationsbroschüre, Rhein Chemie Rheingau GmbH*, Oktober 1998.

III. By a decision which was announced on 26 February 2004 and issued in writing on 18 March 2004, the opposition division rejected the opposition.

(a) According to the opposition division, the subject-matter of granted Claims 1-13 was novel over D1. D1 only disclosed styrene butadiene rubber (SBR) compositions and their vulcanization behaviour but was silent on tires in general and on pneumatic tires in particular. In carrying out the teaching of D1 a skilled person could, therefore, not inevitably and unambiguously arrive at a pneumatic tire.

(b) Although the rubber composition referred to in granted Claim 1 was known from D1, there was no suggestion in D1 to produce pneumatic tires comprising such rubber compositions. Furthermore, the opposition division pointed out that D1 referred to a disadvantage of the SBR compositions, namely that the SBR compositions had reduced tear resistance. Therefore, a person skilled in the art trying to produce further rubber articles would not consider the SBR compositions as suitable for the production of tires. Hence, an inventive step over D1 had to be acknowledged.

IV. On 11 May 2004, the appellant (opponent) filed a notice of appeal against the above decision with simultaneous payment of the prescribed fee. The statement of grounds of appeal was filed on 28 July 2004 together with the following documents:

D4: Römpps Chemie-Lexikon, 8th edn., 1987, Franckh'sche Verlagshandlung, W. Keller & Co., Stuttgart, 3541-3542;

D5: *Peter Sponagel*, "Tires" in Ullmann's Encyclopedia of Industrial Chemistry, vol. A 27, 5th edn., 1996, Wiley-VCH, 83-94;

D6: Ullmanns Encyclopädie der Technischen Chemie; 4th edn., vol. 13, Verlag Chemie, 693-700;

D7: *Jochen Schnetger*, Lexikon der Kautschuk-Technik, 1981, Dr. Alfred Hüthig Verlag GmbH, 220-225;

- D8: Encyclopedia of Polymer Science and Engineering, vol. 16, John Wiley & Sons, 834-861;
- D9: Kautschuk-Lexikon, 1966, A.W. Gentner Verlag, Stuttgart, 384-387;
- D10: wdk-Konjunkturbericht, Nr. 88, 13 November 2003, 16-18;
- D11: Pressemitteilung Continental, "High Performance Kart-Reifen", June 2004;
- D12: *H. Roebuck und K.M. Davies*, "Effiziente Vulkanisationssysteme zur Sicherung der Alterungs- und Reversionsbeständigkeit", German translation of CAUCHO, vol. 111, 1978, 52-58; and
- D13: V.I. Ovcharov et al., "Use of zinc isobutylisooctyldithiophosphate in tread rubber compositions", English translation of *Khimicheskaiia tekhnologiia*, 1990, 5, 18-22.

V. The appellant's arguments filed with the statement of grounds of appeal and a letter dated 15 August 2006 may be summarized as follows:

- (a) Table 9 of D1 disclosed a rubber composition S which had all the parameters required in granted Claim 1. Furthermore, the passage at the bottom of page 71 referred to Tables 9 and 10 and stated that the thiophosphate-containing vulcanizates had besides an excellent heat resistance also the disadvantage of a reduced tear propagation resistance, which might, for example, lead to the

chunking of a tire tread profile. It was apparent from this passage that D1 was concerned with the use of composition S as a tire tread and that D1 investigated the suitability of that composition for the stated use. Since, furthermore, the disclosure of a tire tread automatically and inevitably disclosed a tire, D1 directly and unambiguously taught a person skilled in the art to use composition S for the production of a tire. In this context, it was pointed out that a person skilled in the art would consider the term "tire" as an equivalent for "pneumatic tire" as could be seen from D4-D9.

- (b) D1 was considered to represent the closest prior art since it disclosed a rubber composition having all the parameters required in granted Claim 1 and its use in a tire tread. Furthermore, D1 disclosed good reversion stability and very good heat aging properties of SBR compositions containing carbon black as filler. Although the patent in suit outwardly focussed on high speed controllability of a tire, high speed controllability actually correlated with the properties reported in D1. In view of the beneficial high temperature characteristics reported in D1, a person skilled in the art would have selected rubber composition S in the manufacture of a tire tread. This argument equally applied to the tread of a pneumatic tire because a person skilled in the art reading D1 would associate the term "tire" automatically with a "pneumatic tire" (D4-D9). Apart from that, it was known from D2 that SBR

based rubber compositions were used for the manufacture of pneumatic tire treads.

Also the disadvantage mentioned on page 71 with respect to composition S would not prevent a person skilled in the art to use that composition, especially in view of the other beneficial characteristics mentioned in D1.

Furthermore, the inventive step objection was, to some extent, based on D1 in combination with prior art references D12 and D13.

- (c) In order to support its interpretation of the disclosure of D1, the appellant filed with the letter dated 15 August 2006 an expert opinion of Prof Dr R.H. Schuster dated 14 August 2006.

VI. The written submissions (letters dated 21 February 2005, 13 November 2006 and 21 November 2006) of the respondent (proprietor) can be summarized as follows:

- (a) D1 focussed on specific rubber compositions and individual components thereof and disclosed some properties of the cured rubber compositions but not uses thereof. The rubber compositions investigated in D1 were also by no means specific for use in tire treads because such rubber compositions could, for instance, be used also in conveyor belts, hoses and related products. The reference to the chunking of the tire tread at the bottom of the left-hand column of page 71 was clearly a hypothetical speculation. Furthermore, the term "tire" did by no means automatically

refer to "pneumatic tires" as could be seen from the following documents:

D14: Random House Unabridged Dictionary,
2nd edition, page 1987; and

D15: Standards Manual 2000, published by the
European Tyre and Rim Technical Organisation.

In the latter context, further documents were filed to demonstrate that the particularly fine carbon black used in composition S of D1 was not necessarily indicative for a use of that composition for manufacturing pneumatic tires.

D16: JP 3646956 B2;

D16a: English translation of D16;

D17: Entry "Carbon Black" of Wikipedia;

D18: Printouts of appellant's internet homepage;

D19: DE-A-2 222 781;

D20: US-A-5 610 217; and

D21: US-A-5 916 934.

- (b) The appellant's argumentation with respect to inventive step suffered, according to the respondent, from the fundamental deficiency that it was based on the hindsight knowledge of the invention. In particular, a person skilled in the

art would have had no reason to consider D1 as a suitable and realistic starting point. Moreover, there would have been no reason for the skilled person to select rubber composition S from D1 among the various rubber compositions disclosed therein, when trying to solve the problem underlying the invention, namely high speed controllability. The appellant's assertion that "high temperature resistance" as discussed in D1 would be indicative of high speed controllability was based on an oversimplification of the properties concerned and, therefore, contested. Specifically, the properties investigated in D1 were concerned with slow processes and were associated with destructive events whereas high speed controllability related to non-destructive properties occurring at a very short timescale. Furthermore, the disadvantage mentioned in D1 would have prevented the skilled person from selecting especially rubber composition S.

- VII. In the course of the appeal proceedings, the respondent filed 16 auxiliary requests. However, these auxiliary claim sets are not of importance for this decision and consequently will not be discussed in further detail.
- VIII. On 13 December 2006, oral proceedings were held before the board where both parties basically relied upon their written submissions.

In addition, the issue of the closest prior art was discussed. The appellant considered D1 as the closest prior art but referred also to other documents as possible starting points for the assessment of

inventive step, namely D2, D5, D8, D12 and D13. The respondent maintained its position that D1 was not a suitable starting point and considered a conventional tire with an SBR containing tread such as disclosed in D8 as the closest prior art.

IX. The appellant requested that the decision under appeal be set aside and the patent be revoked in its entirety.

X. The respondent requested:

- that the appeal be dismissed (main request), or, in the alternative,
- that the decision under appeal be set aside and that the patent be maintained on the basis of the first auxiliary request, filed with letter dated 11 December 2006 or one of the second to sixteenth auxiliary requests, filed with letter dated 21 February 2005, in that order.

Reasons for the Decision

1. The appeal complies with Articles 106 and 108 EPC and Rule 64 EPC and is therefore admissible.

2. *Novelty (main request)*

The only relevant document with respect to novelty is D1. No other document has been invoked in this connection in the opposition and the appeal proceedings.

2.1 D1 is an article reporting on the effects of thiophosphates as accelerators in crosslinking systems for diene rubbers. It focuses on rubber compositions containing the thiophosphates and investigates some properties of the resulting vulcanizates. These vulcanizates have good reversion stability and very good heat aging properties (page 71, right-hand column).

Table 9 discloses a composition S comprising - *inter alia* - 50 parts Buna[®] 1500, 50 parts Buna[®] 1778, and 2.5 parts Rhenocure[®] TP/S. Both Buna[®] types are styrene butadiene rubbers (SBR) as is apparent from D2, and Rhenocure[®] TP/S is Zn-di(n-butyl)dithiophosphate (D1: page 68, centre column and page 71, centre column). Table 10 discloses properties of the vulcanized composition S. Furthermore, there is a reference to Tables 9 and 10 at the bottom of the left-hand column on page 71 which is followed by a statement that the thiophosphate-containing vulcanizates have besides an excellent heat resistance also the disadvantage of a reduced tear propagation resistance, which might, for example, lead to the chunking of a tire tread profile [*"Neben dem ausgezeichneten Hitzeverhalten der Thiophosphat-haltigen Vulkanisate soll hier aber auch ein Nachteil genannt werden. Es ist dies ein verminderter Weiterreißwiderstand, der beispielsweise zum Ausbrechen der Stollen bei einem Reifenprofil führen könnte."*]

2.2 According to the appellant, this statement on page 71 teaches the use of composition S in a tire tread. However, the board cannot accept the appellant's position for the following reasons:

2.2.1 The reference to the chunking of the tire tread at the bottom of the left-hand column of page 71 is clearly a **hypothetical speculation** of what might happen if one would possibly use the respective rubber composition for the manufacture of a tire tread. This is clear in view of the use of the subjunctive form in this sentence: "... *der beispielsweise zum Ausbrechen der Stollen bei einem Reifenprofil führen **könnte** (emphasis added)*". This hypothetical speculation is introduced using the term "*beispielsweise*", which indicates once again that the use in a tire tread is by no means the only possible use of said rubber composition. The author evidently had in mind that other problems may arise when using said rubber composition in other practical applications. Otherwise, the term "*beispielsweise*" would not make sense in this context.

In the board's view, this hypothetical speculation cannot be equated with a clear indication that compound S had been used, let alone with a clear instruction to use it for a particular application, ie in a tire tread.

2.2.2 Moreover, this hypothetical speculation conveys in the present case a clear warning that problems are likely to be encountered when using the respective rubber composition for the manufacture of tire treads as apparent from the immediately following sentence on page 71, central column, requiring further developments by the chemistry and the technology [*"Hier **muß** (emphasis added) also noch weitere Entwicklungsarbeit von Seiten der Chemie und der Technik geleistet werden"*]. This statement, which does not use the subjunctive form, makes it clear that the author of D1

did not consider this potential problem to be acceptable. If anything, then the passage on page 71 of D1 teaches not to use such rubber compositions for the manufacture of tire treads.

- 2.3 In summary, no part of D1 contains any direct and unambiguous directions to use the investigated rubber compositions, and in particular composition S, for any specific practical use. A person skilled in the art would not have understood the discussion of the disadvantage on page 71 of D1 as a direct and unambiguous teaching to disregard this disadvantage and to use the composition for exactly one of those applications where the problem may arise, namely the use in a tire tread.

Hence, the subject-matter of Claim 1 as granted and, by the same token, the subject-matter of Claims 2-13 as granted is novel over the disclosure of D1.

- 2.4 In view of the board's finding that D1 does not disclose the use of composition S in a tire tread, any discussion as to whether or not the term "tire tread" in the relevant passage on page 71 of D1 automatically refers to the tread of a **pneumatic** tire is superfluous. Consequently, there is no need to discuss the documents cited in this context, basically D4-D11.

3. *Problem and solution (main request)*

- 3.1 Claim 1 as granted is directed to a pneumatic tire, and more particularly, to a pneumatic tire showing excellent controllability at high speed, hereinafter

referred to as high speed controllability (paragraph [0001] of the patent in suit).

- 3.2 It is stated in paragraph [0003] of the patent in suit that one method of improving high speed controllability is to use a low profile radial tire. Since, however, the size of a low profile radial tire differs from the size of a conventional tire, it has been desired to increase high speed controllability with tires of the same size. In order to solve this problem, attempts have been made to modify the rubber composition of the tire tread (paragraph [0004]).

Generally, the item of prior art in the technical field concerned, disclosing technical effects, purpose or intended use most similar to the claimed subject-matter represents the starting point for the assessment of inventive step, ie the closest prior art. In the present case, the patent in suit does not identify any particular item of prior art with respect to the cited attempts of improving high speed controllability. Nor does any document cited in the opposition or the opposition appeal proceedings deal with high speed controllability of tires. Thus, in principle, any conventional tire could be considered as the closest prior art. Nevertheless, the board notes that the control tires used in Comparative Examples 1-4 comprise SBR which means that the patent proprietor itself considered a tire with an SBR containing tread as the appropriate comparison with the claimed subject-matter. Since such a tire is indeed known from, for example D8 (Tables 7 or 8), such a tire is considered to represent the closest prior art.

3.3 The opposition division and the appellant considered D1 as representing the closest prior art. In the board's view, D1 does not qualify as the closest prior art because D1 is not concerned with tires. As explained in point 2.1, above, D1 is an article reporting on the effects of thiophosphates as accelerators in crosslinking systems for diene rubbers in rather general aspects. It is concerned with rubber compositions but not their application. Also the hypothetical speculation at the bottom of the left-hand column on page 71 as to what might happen if one would possibly use the respective rubber composition for the manufacture of a tire tread, cannot be considered as a teaching in the field of tires. If any conclusion could be drawn from that passage it would be that the authors of D1 considered rubber composition S to be not suitable for the manufacture of tire treads.

Also the appellant's argument that the properties investigated in D1 were indicative of high speed controllability cannot throw doubt on the conclusion that D1 does not qualify as the closest prior art. Basically, the appellant argued that high "temperature resistance" as reported in D1 would be indicative of high speed controllability and that the contested patent itself (paragraphs [0027] and [0028]) would support this view. However, as pointed out by the respondent, the properties described in Table 10 of D1 in connection with heat aging, such as compression set, loss in tensile strength and elongation at break, relate to long term aging characteristics, ie changes observed after one to 14 days of continuing terminal stress, whereas high speed controllability is a property determined by the immediate response of the

tire to external influences, such as changes in the road surface or steering actions by the driver. Hence, D1 investigates long term changes under static conditions which may be possibly indicative of the aging and/or long-term durability properties of a product. These properties are not, in the board's view, related to high speed controllability of a tire which determines a tire's instantaneous response in a dynamic stress field. This is confirmed by paragraph [0026] of the patent in suit where it is stated that the contribution of the tread rubber to the controllability of a tire is not fully understood and widely varies depending on viscoelasticity, modulus, and hardness of the rubber and the temperature dependency of these properties. In other words, this statement suggests a rather complex balance of the parameters not mentioned in D1 which may influence high speed controllability. Although the patent in suit stresses the importance of these parameters at high temperature, the appellant's argument that the measurement of the temperature dependency of the properties in D1 has the same information content as the temperature dependency of the parameters relevant to high speed controllability appears to be based on an oversimplification concerning the properties that are of interest.

In view of the above, D1 cannot be accepted as the starting point for the assessment of inventive step.

- 3.4 According to paragraph [0004] of the patent in suit, satisfactory improvement in high speed controllability of tires has not been achieved. Consequently, the technical problem to be solved was said to be the

provision of a pneumatic tire having excellent high speed controllability (paragraph [0007]).

The patent in suit suggests, as a solution to this problem, a pneumatic tire wherein the rubber composition of the tread layer has the features as defined in Claim 1 as granted, in particular the use of a specific thiophosphate accelerator in the SBR containing tire tread.

As can be seen from Table 1 of the patent in suit, an SBR composition comprising as an accelerator zinc diisopropyldithiophosphate leads to a tire with better high speed controllability (Examples 1- 4) than a tire where the SBR composition is cured in the presence of another accelerator, namely bis(benzothiazolyl-2)disulfide (Comparative Examples 1-4). According to paragraph [0032], a test driver could detect the difference in high speed controllability between the tires according to Claim 1 and the control tires. In the absence of any submission to the contrary, the board has no reason to doubt these results and is, therefore, satisfied that the technical problem is adequately solved by a tire as defined in granted Claim 1.

- 3.5 As the proper prior art was used in the patent in suit for defining the technical problem and as there is nothing available to the board which could call in question the success of the suggested solution, there is no need to deviate from the technical problem set out in paragraph [0004] of the patent in suit (in this context see Case Law of the Boards of Appeal of the European Patent Office, 4th edition 2001, I.D.4.3).

Therefore, it has to be accepted for the purpose of evaluating inventive step.

4. *Inventive step (main request)*

4.1 It remains to be decided whether the proposed solution, namely the use of the specified vulcanization accelerator in combination with an SBR composition, is obvious from the prior art.

4.2 It is conspicuous to the board that none of the documents cited in the proceedings deals with high speed controllability. Consequently, none of these documents can in principle provide an incentive to modify the tire of the closest prior art by using thiophosphates as accelerators in order to improve high speed controllability.

4.3 Nevertheless, the appellant was of the opinion that the teaching of D1 would provide a hint to the claimed solution. According to the appellant, the heat aging properties and the reversion stability referred to in D1 were intimately related to high speed controllability and would, therefore, provide a hint to the solution of the posed problem. However, there is no evidence on file which would link the heat aging properties and the reversion stability mentioned in D1 with high speed controllability. Furthermore, as set out in point 3.3, above, high speed controllability is a property determined by the immediate response of the tyre to external influences whereas the heat aging properties investigated in D1 relate to long term aging characteristics, so that any equation of these two types of properties is, in the board's view, based on

an oversimplification of the properties that are of interest. Such an oversimplification appears also the reason for an equation of high speed controllability with reversion stability which is the stability of a vulcanizate to devulcanization under heat. To reduce the temperature dependency of the properties relevant to high speed controllability (*inter alia* viscoelasticity, modulus and hardness) simply to a question of devulcanization ignores the rather complex nature of high speed controllability and, in the end, would make the measurements of all the different parameters superfluous. However, in view of the different situations arising during the various measurements, in particular dynamic versus static stress field, it is not convincing that the only relevant question with respect to high speed controllability should be as to whether or not the tire starts to devulcanize at high speed. Therefore, the board cannot concur with the appellant's argument that D1 provides a hint to the solution of the posed technical problem.

4.4 No other conclusion with respect to inventive step of the subject-matter of granted Claim 1 can be reached when D1 is chosen as the closest prior art as proposed by the appellant in its main approach to attack inventive step of the subject-matter of granted Claim 1.

4.4.1 When starting from D1 as the closest prior art, a document which is not related to tires, the objective technical problem can only be seen in the provision of further applications of the rubber compositions disclosed in D1. A person skilled in the art trying to solve this problem would have specifically to select

rubber composition S in order to arrive at something falling within the scope of granted Claim 1. However, such a selection appears to involve the hindsight knowledge of the patent in suit. Specifically, D1 discloses various other rubber compositions not falling within the scope of granted Claim 1 and, in most cases, there is at least one alternative rubber composition exhibiting at least one property that is superior to the respective property of rubber composition S. Thus, for instance, rubber compositions X, Y and Z (containing a Bi, Cu or Fe dithiophosphate instead of a Zn dithiophosphate) exhibit superior compression set properties (Table 11) and rubber composition Ab (containing Butyl 268 instead of SBR) exhibits a loss in tensile strength and a loss in elongation at break following thermal stress (Table 13) that are superior to the corresponding values reported for rubber composition S. This means that other compositions disclosed in D1 appear to be much more suitable for the manufacture of tires than composition S. Finally, it is pointed out that D1 mentions on page 71 a potential disadvantage of composition S, namely a reduced tear propagation resistance [*"verminderter Weiterreißwiderstand"*] which might, for example, lead to the chunking of a tire tread profile (see also point 2.1, above). As already pointed out in the decision under appeal and in point 2.2.1, above, it is very unlikely that the skilled reader of D1 would have selected especially a rubber composition for the manufacture of a tire tread for which there is a clear warning that there may be problems if it is used in a tire tread.

Finally, it appears that the ingredients and the properties of the rubber compositions disclosed in D1

are not necessarily indicative for a use of these rubber compositions for a "pneumatic" tire. As plausibly argued by the respondent, the ingredients and properties disclosed in D1 are also used in and relevant to conveyor belts, hoses and related products. Therefore, it is not possible to conclude on the basis of the ingredients and properties that the disclosure of rubber composition S in D1 (or any other composition) was made exclusively with a view to its specific use in pneumatic tires. This view is confirmed by the last paragraph of D1 which refers to the manufacture of rubber articles having thick walls [*"dickwandigen Gummiartikeln"*]. If the author of D1 meant to write an article to discuss only starting materials for the manufacture of tires, why should he then refer to "rubber articles having thick walls" instead of "tires"?

- 4.4.2 Furthermore, the appellant referred to a combination of D1 and D2 and, to some extent, to a combination of D1 with D12 or D13.

D2 is a product information on Buna[®] EM, ie styrene butadiene rubbers which discloses that these types of rubbers can be used in pneumatic tire treads. It was cited in connection with D1 to demonstrate that Buna[®] EM, ie styrene butadiene rubbers, can be used in a tire treads. In the end, a combination of D1 and D2 does not bring a person skilled in the art closer to the claimed subject-matter than D1 alone.

D12 relates to the use of Zn-dithiophosphate in natural rubber. Some of the natural rubber compositions are used for tire treads. However, in view of the above mentioned warning expressed in D1, there was no clear

incentive for a person skilled in the art to combine D1 with D12 when trying to solve the posed problem.

D13 relates to the use of Zn-dithiophosphate in tread rubber compositions which do not contain SBR. If anything, D13 shows that the authors of this document took the warning of D1 into consideration and tried other rubber compositions for the use in tire treads. A combination of D1 and D13 appears to be based on hindsight.

- 4.5 In summary, the subject-matter of Claim 1 as granted, and, by the same token, the subject-matter of Claims 2 to 13 as granted involves an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

R. Young