

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference ./.	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/BR01/00038	International filing date (day/month/year) 04/04/2001	Priority date (day/month/year) 05/04/2000
International Patent Classification (IPC) or national classification and IPC B60C11/02		
Applicant DREBOR INDUST. DE ARTEFATOS DE BORRACHA LTD. et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 31/10/2001	Date of completion of this report 16.04.2002
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Peschel, W Telephone No. +49 89 2399 2702 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/BR01/00038

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-8 as originally filed

Claims, No.:

1-2 as originally filed

Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing: --

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:

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the drawings, sheets:

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-2
	No: Claims
Inventive step (IS)	Yes: Claims 1-2
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-2
	No: Claims

2. Citations and explanations
see separate sheet

V. Reasoned statement according to Article 35(2)

2. Citations and explanations

Reference is made to the following documents:

D1: US-A-3 496 981 (BARASSI CARLO ET AL) 24 February 1970

D2: US-A-2 609 026 (LUCHSINGER-CABALLERO R) 2 September 1952

2.1 Document D1 is regarded as being the closest prior art to the subject-matter of **independent claim 1**, and shows (see figure; claims):

- " a tread **1** (*suitable*) for retreading tires (*see the Guidelines III-4.8*), having an external face provided with the usual grooves and an internal face to be seated and adhered

(the feature "usually by vulcanization" does not limit the scope of the claim but merely expresses an optional adhering method; see also the Guidelines III-4.6)

to the convex external face of a tire carcass, from which the compound of the original tread has been totally abraded,

whereby (*see figure 1*)

the tread **1** presents a thickness varying throughout the width thereof, and having its internal face defined in a (*plurality of*) concave arc(s), with the radi(*i*) of curvature corresponding to that of the external face of the tire carcass and with its external face being convex",

from which the **subject-matter of independent claim 1** differs in that

- the radius of curvature of the external face of the tread being substantially larger than that of its internal face.

The subject-matter of **claim 1** is therefore novel (Article 33(2) PCT).

The **problem to be solved** by the present invention may be regarded as to mitigate center wear of the tread and thus improving the life cycle of the tread.

The **solution to this problem** proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

Document D1 is completely silent concerning the thickness distribution of the tread over the tread width and does not even mention the problem of center wear. Document D2 discloses (see figure 24) a tread suitable for retreading tires, whereby over about two thirds of the tread width, the radius of curvature of the external face of the tread being larger than the radius of curvature of the internal face, thus providing a coupling profile of trapezoidal shape. However, due to this trapezoidal shape, the tread of D2 is not suitable to be used for retreading of tires where the compound of the original tread has been completely abraded.

2.2 **Claim 2** is dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

3. **Miscellaneous**

3.1 Although independent claim 1 is drafted in the two-part form the features already known from document D1 (see chapter 2.1 above) are incorrectly placed in the characterising portion, as they are known in combination with the features placed in the preamble (Rule 6.3(b) PCT).

3.2 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.