



Use of Patent Information (Prior Art) for Technology Management

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Outlines

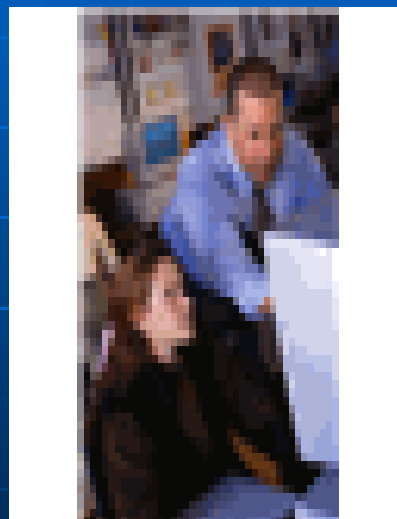
- **What is Prior Art?**
- **Characteristics of Prior Art information**
- **Purposes and Significance of Prior Art Searches**
- **Searches and Analysis**
- **Source of Prior Art information**
- **PCT Pamphlet**
- **Patent Classification**
- **Search Methods**

What is prior art?

- Prior art refers to scientific and technical information that exists prior to the effective date of a patent application
 - The effective date varies from country to country and from first-to-file and first-to-invent systems
 - The effective date is typically the filing date
- includes any public documents, such as:
 - Patents, technical publications, conference papers, marketing brochures, products, devices, equipment, processes and materials

What is prior art?

- A prior art search refers to an organized review of prior art materials available from public sources
- Used to assess patentability of invention
- Searches may also be a part of due diligence for an acquisition or investment



Characteristics of Prior Art Information

- Information include all published scientific and technical information
- Rich in information of cutting-edge technologies
- Concrete description and specific technological information
- Presentation and data elements based on WIPO standards (uniformed structure)
- Can be freely used to support research
- Problem solving approach

Characteristics of Prior Art Information

- Potential economic value
- Renders exclusive rights
- Industry oriented information
- Identifies competition in early stage
- Information on legal status of patent applications
- Essential tool for successful IP protection, licensing and commercialization
- Over 60 million documents made available on Internet

Main Purposes of Prior Art Search

- To generate ideas for R&D
- To avoid duplicate of research
- To reduce significantly R&D investment
- To develop new technical solutions to problems
- To evaluate specific technology
- To plan new products
- To identify state-of-art of technology
- To find legal status of patent applications
- To assess novelty and patentability
- To market for commercialization
- To update new technological trends
- To monitor competitor's research activities
- To prevent infringement actions (validity, ownership etc.)

Different Purposes of Prior Art Search

- **Technological**
 - Focus of Research area to avoid redundant research
 - Novelty
 - State-of-the-art searches
 - Decision of Patent Application (patentability searches)
 - Patent examination searches
- **Legal**
 - validity searches
 - Legal status of patent application
 - e.g., Detection of possible infringement,
- **Economic**
 - R&D investment strategy (e.g., Preventing overlap of investment)
 - IP as economic asset
 - Marketing
 - Commercialization
 - Competitors activities

Users of Prior Art

- IPOs
- Scientific researchers
- University/ R&D Institution managers
- Potential inventors and applicants
- TMO
- Companies
- IP practitioners (IP lawyers, patent agents)

Significance of Prior Art searches in the Process of Patent Prosecution

- **May speed patent prosecution by allowing claims to be tailored to avoid the prior art before the examiner's own search**
 - Know early on without investing much time, effort and money if an application is patentable
 - May sometimes assist in determining how to allocate R&D funds if want to investigate a relatively unexplored area
- **May help avoid being patent infringer**
 - But a different kind of analysis is required

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(54) Publication Language:
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Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Details on Code and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD AND A DEVICE FOR HEDGING COMPENSATION IN INTENSITY-BASED FIBRE-OPTICAL MEASURING SYSTEMS

(57) Abstract: The invention relates to a method for hedging compensation in intensity-based optical measuring systems, comprising a sensor element (10) connected to a measuring and control unit (11) via an optical connection (12), and being adapted for providing a signal corresponding to a measurement of a physical parameter in connection with the sensor element (10), said method comprising the generation of a measuring signal (15) that is brought to cause in the sensor element (10), the generation of a reference signal (16) that is transmitted through the optical connection (12) without being influenced by the sensor element (10), said measuring signal and said reference signal having different wavelengths, the detection of said measuring signal (15) and the detection of said reference signal (16). The invention is characterized by comprising hedging compensation through correction data based upon previous data concerning the relationship between the measured reference signal (16) and the measured measuring signal (15) as a function of the hedging influence in said optical connection (12). The invention also relates to a device for carrying out said method. Through the invention, measurements with an optical pressure measuring system are allowed, which exhibit effective compensation for any hedging of the optical connection.

Patent Information: PCT Publication

- International Publication date
- International Patent Classification
- International Application Number
- International Filing Date
- Filing Language
- Publication Language
- Priority Data
- Applicant
- Inventor
- Title of the Invention
- Drawing representing the invention

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges Eigentum
Internationales Büro

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(81) Bestimmungsstaaten (zweigt nicht anders angegeben, für jede verfügbare regionale Schutzrechtsart): AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, FR, GB, GE, GR, GT, HK, HU, IL, IN, IS, IT, JP, KR, KP, KZ, LC, LK, LR, LS, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PA, PE, PG, PH, PK, PL, PT, RU, SA, SE, SG, SI, SK, SL, SM, SV, TH, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Bestimmungsstaaten (zweigt nicht anders angegeben, für jede verfügbare regionale Schutzrechtsart): AR, AT, AU, BE, BR, CA, CH, CN, CO, DE, DK, EC, EE, EG, ES, FI, FR, GB, GR, HU, IL, IN, IS, IT, JP, KR, KP, KZ, LC, LK, LR, LS, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PA, PE, PG, PH, PK, PL, PT, RU, SA, SE, SG, SI, SK, SL, SM, SV, TH, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Details on Code and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MULTI-PART OIL SCRAPER RING FOR PISTONS OF INTERNAL COMBUSTION ENGINES

(54) Bezeichnung: MEHRTEILIGER ÖLSCHÄUFRING FÜR KOLBEN VON VERBRENNUNGSMOTOREN

(57) Abstract: The invention relates to a multi-part oil scraper ring for pistons of internal combustion engines. Said ring comprises two lamellae consisting of a steel strip and having parallel flanks and an expanding spring that is located between the lamellae, the interspaced spring elements of said spring pressing both axially against respective flanks of an annular groove in the piston and radially against the cylinder wall. The aim of the invention is to effectively prevent the displacement of the ring elements in relation to one another without adversely affecting the flexibility of the ring. To achieve this, at least one of the lamellae (1, 2) has at least one axially protruding deformation (13) on the flank (14) that faces the expanding spring, said deformation engaging in the space (A) between the spring elements (1, 2).

(57) Zusammenfassung: Die Erfindung betrifft einen mehrteiligen Ölschäuferring für Kolben von Verbrennungsmotoren, mit zwei aus Stahlband bestehenden Lamellen mit parallelen Substratflächen und Federsegmenten, die Lamellen sowohl axial gegen jeweils eine der Flanken einer Ringnut im Kolben als auch radial gegen die Zylinderwand drücken. Erfindungsgemäß soll eine Relativbewegung der Ringsegmente gegeneinander ohne Beeinträchtigung der Ringflexibilität wirksam abgedeckt werden, indem mindestens eine der Lamellen (1, 2) auf seiner zur Federsegmenten gegenüberliegenden Seite (14) mindestens eine axial vorstehende Verformung (13) aufweist, die in den zwischen den Federsegmenten (1, 2) bestehenden Abstand (A) eingreift.

- International Publication Number
- Agent
- Designated States
- Abstract

Bibliographic Data

- Application Number
- Application date
- Publication Number
- Publication date
- Patent Classification
- Priority Number
- Priority date
- Priority Country
- Applicant, Inventor
- Designated States
- Title of Invention
- Abstract
- Drawings

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Description of the invention

Background of the invention

Background art

NO 887923

FC/SE/88/126

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TITLE:

A METHOD AND A DEVICE FOR SENDING COMPENSATION IN INTENSITY-BASED FIBRE-OPTICAL MEASURING SYSTEMS

Title of the invention

5 TECHNICAL FIELD

The present invention relates to a method for measuring systems according to the preamble of the appended claim 1. The invention is especially intended for use with intensity-based fibre-optical measuring systems for pressure measurements. The invention also relates to a device for carrying out such a method, according to the preamble of the appended claim 5.

10 BACKGROUND ART

In connection with measuring physical parameters such as pressure and temperature, it is previously known to utilize various sensor systems by which the optical intensity of a ray of light, conveyed through an optical fibre and coming in towards a sensor element, is influenced due to changes in the respective physical parameter. Such a system may for example be used when measuring the blood pressure in the veins of the human body. Said system is based upon a transformation from pressure to a mechanical movement, which in turn is transformed into an optical intensity, conveyed by an optical fibre, which is in turn transformed into an electrical signal that is related to the measured pressure.

25 According to known art, such a fibre-optical measurement system may comprise a pressure sensor, an optical fibre connected to said pressure sensor, and at least one light source and at least one light detector located at the opposite end of the fibre, in order to provide the pressure sensor with light, and to detect the information-carrying light signal returning from the pressure sensor, respectively.

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One problem occurring with previously known systems of the above kind relates to the fact that interference may occur in the signal transmission path,

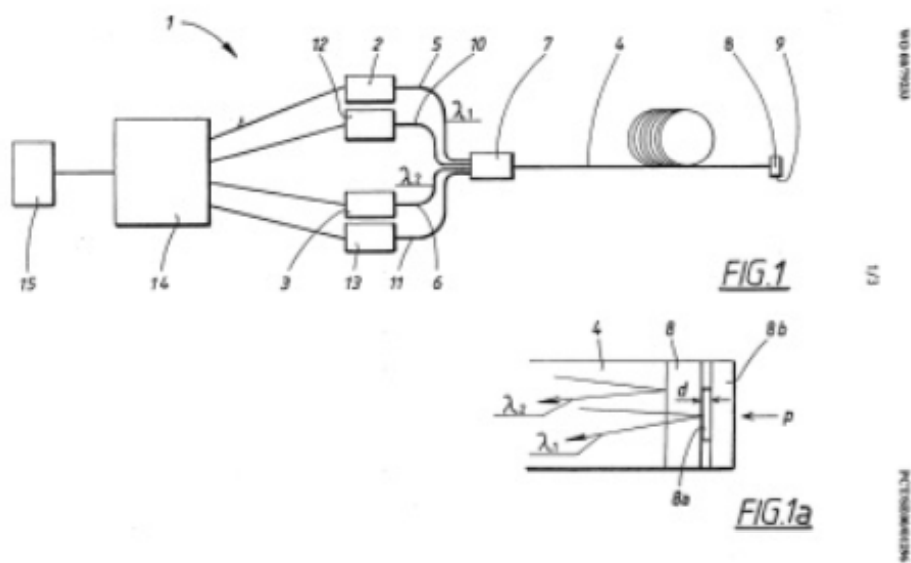
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Claims

Start with the independent claims

1. A method for bending compensation in intensity-based optical measuring systems, comprising a sensor element (8) connected to a measuring and control unit (16) via an optical connection (4) and being adapted for providing a signal corresponding to a measurement of a physical parameter in connection with the sensor element (8), said method comprising
- 5 generation of a measuring signal (λ_1) that is brought to come in towards the sensor element (8),
- 10 generation of a reference signal (λ_2) that is transmitted through the optical connection (4) without being influenced in the sensor element (8), said measuring signal and said reference signal having different wavelengths,
- 15 detection of said measuring signal (λ_1) and detection of said reference signal (λ_2),
- 20 characterised by comprising bending compensation through correction data based upon pre-stored data concerning the relationship between the measured reference signal (λ_2) and the measured measuring signal (λ_1) as a function of the bending influence upon said optical connection (4).

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Information Included in the Patent Documents

- **Bibliographic data**
General information of patent application
- **Search report**
Prior art document citations
- **Description of the invention**
Background and details of invention
- **Claims**
New technical solution
- **Abstract**
Summary of invention
- **Drawings**
Image data of invention

Different Types of Search

- **Thematic search:**
Classification codes and keywords
- **Validity search:**
Legal status and deadlines
- **Patent family search :**
Patents based on the same priority application

Method of Search

- **Text Searching**
 - Databases of abstracts
 - Full-text databases
 - Other Patent Classifications
- **Classification based searching**
 - IPC

Fields of Search

	Search Fields
Number	Priority, Application, Publication, Patent grant Nos.
Date	Dates of Priority, Application, Publication, Grant, etc.
Name	Applicant, Inventor, Agent, Examiner
Country	Priority Application country, Application Country, Designated States, etc.
Patent Classification	IPC, ECLA, FI, F-Term, UPC
Keywords	Title, Abstract, Claims, Description
Reference	Cited documents, Patent Family

Major Source of Prior Art Information

- EPO Publication
 - e.g., Esp@cenet (60 million documents from 60 countries)
- JPO Publication
 - e.g., JPO IPDL, F-Term
- USPTO Publication
 - e.g., USPTO IPDL, Cassis
- WIPO PCT Publication
 - e.g., PatentScope, IPC

Dissemination of Prior Art Information

- Industrial Property Offices
- IGOs and NGOs
- Patent Information Centres (over 300 in Europe)
- Commercial vendors

Medium:

- Paper
- Optical discs
- Online



Non-Patent Literature

- **Web of Science**

Research journal bibliographic and full-text data

- **Science Direct**

World's science, technology and medicine bibliographic and full-text data

- **PCT Non-patent literature**

Other Important Prior Art Databases

- **Free-of-Charge Patent Information**

- IPDL of IP Offices

- **Commercial Patent Information**

- Thomson-Derwent,
- IBM
- PatentCafe,
- MicroPatent,
- Questel-Orbit,
- Patlis,
- WIPS etc.
- Google IP

- **Scientific, Chemical**

- Chemical Abstract (journal and patent literature relevant to Chemistry – each chemical compound and chemical structure searchable)
- STN International

Patent Classification

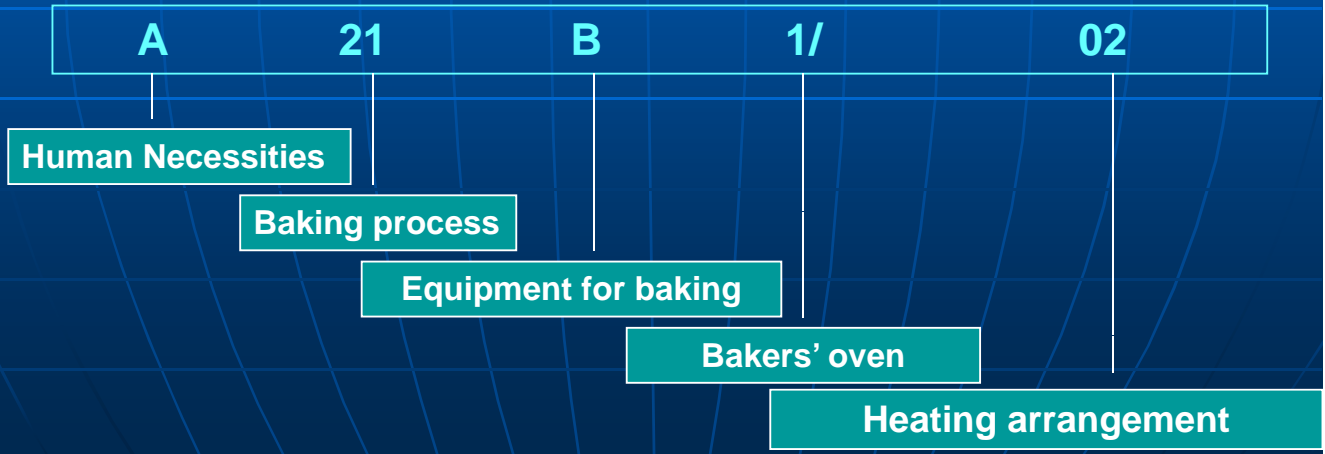
- IPC - **70,000 groups**
- ECLA Code (EPO Classification) – **130,000 groups**
- FI / F-Term Code (JPO Classification) - **190,000 groups**
- UPC Code (US Patent Classification) – **150,000 groups**
- UK Patent Classification – **40,000 groups**
- DECLA (German Classification – **100,000 groups**

IPC Technical Sections

Section	Contents
A	Human Necessities
B	Performing Operations; Transporting
C	Chemistry; Metallurgy
D	Textiles; Paper
E	Fixed Constructions
F	Mechanical Engineering; Lighting, Heating; Weapons; Blasting
G	Physics
H	Electricity

IPC Codes

Section (8)	Class (120)	Sub Class (623)	Main Group (6,923)	Sub Group (67,634)
A - H	2 digits	1 Alphabet Capital	1-3 digits	More than 2 digits



Other IP Information Search

- Trademark
- Design

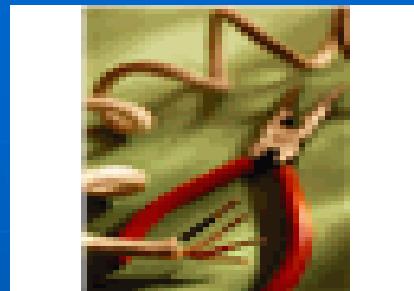
Useful links

<http://www.wipo.int/patentscope/en/>

<http://ep.espacenet.com/>

<http://www.piug.org/vendors.php>

<http://www.wipo.int/classifications/ipc>



Thank you
for your attention