

STN[®]

Derwent World Patents Index[®]
Searching Polymer Manual Codes and abstracts

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STN STN is available through FIZ Karlsruhe, Germany
and Chemical Abstracts Service, U.S.A.

Agenda

- Derwent World Patents Index[®] (DWPISM) enhanced titles and abstracts
 - Content and purpose of the Title, Basic Abstract, Technology Focus, and Extension Abstract
- Searching DWPI titles and abstracts
 - Using appropriate STN fields, proximity, etc.
- DWPI Manual Codes (/MC)
 - How they are indexed and searched

DWPI enhanced patent title (TI)

- Not the title on the patent
- In English
- Rewritten to cover:
 - Scope = what the invention is
 - Use = what the invention is used for
 - Novelty = what is new about the invention

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Example Title: WO2009138342

Original title: Basic stabilisation systems for emulsion polymerised rubbers

Becomes:

DWPI title: Elastomer composition, e.g. for forming strips, profiles, conveyor belts or tires, comprises emulsion crude rubber, synthetic latex or natural rubber latex, styrenated diphenyl amine, and thiomethyl hydroxyl containing compound

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The Basic Abstract (AB)

- English language summary of the invention
- Detailed yet concise, avoiding patent jargon
- Benefits:
 - Consistent style and single language helps make word searches more effective
 - Rapidly understand the key points of an invention

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The Basic abstract (AB) (cont.)

- Comprises up to 7 separate sections (fields)
 - Novelty
 - Detailed Description
 - Use
 - Advantage
 - Activity
 - Mechanism of Action
 - Description of Drawing(s)

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Novelty (NOV)

- Forms the first part of Basic Abstract (AB)
- Describes the inventive features that characterise the invention
- In essence it is the main patent claim with the legal jargon removed
- Searchable and displayable separately (NOV)
- Search this field to find patents where the search terms are the main theme of the claimed invention
 - E.g. => [S AIDS VACCINE/NOV](#)

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Example Novelty: WO2009138342

NOVELTY - An elastomer composition comprises emulsion crude rubber, synthetic latex or natural rubber latex subject to oxidative, thermal, dynamic and/or light-induced degradation; styrenated diphenyl amine; and thiomethyl hydroxyl containing compound.

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Detailed Description (DETD)

- Optional second part of the Basic Abstract (AB)
 - Additional details from the broadest independent claim of the invention
 - Chemical formulae and definitions
 - Any additional independent claims
- Search this field in conjunction with novelty to focus a search on the *independent claims*
 - E.g. => [S AIDS VACCINE/NOV,DETD](#)

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Example DETD: WO2009138342

DETAILED DESCRIPTION - An elastomer composition comprises emulsion crude rubber, synthetic latex or natural rubber latex subject to oxidative, thermal, dynamic and/or light-induced degradation; styrenated diphenyl amine of formula (II); and thiomethyl hydroxyl containing compound of formula (I).

R1=8-12C alkyl;

R2=H, 1-12C alkyl, cyclohexyl, 1-methyl cyclohexyl, benzyl, alpha -methylbenzyl, alpha , alpha -dimethylbenzyl or-CH2-S-R1; R3=1-12C alkyl, benzyl, alpha -methylbenzyl, alpha , alpha -dimethylbenzyl or-CH2-S-R1;and

R4=H or Me.

INDEPENDENT CLAIMS are included for: (1) stabilizing an emulsion crude rubber, synthetic latex or natural rubber latex subject to oxidative, thermal, dynamic and/or light-induced degradation, in which method at least styrenated diphenyl amine, and thiomethyl hydroxyl containing compound is mixed with or applied to material; and

(2) use of a mixture of styrenated diphenyl amine, and thiomethyl hydroxyl containing compound for stabilizing an emulsion crude rubber, synthetic latex or natural rubber latex subject to oxidative, thermal, dynamic and/or light-induced degradation.

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Use (USE) and Advantage (ADV)

- Part of the Basic Abstract (AB)
- Information from all parts of the basic patent
- All stated applications (uses) are included
- All stated advantages are included
- Sometimes provided as a combined paragraph Use/Advantage and search field (/UADV)
- Useful to cut down large answer sets to ones where a particular application or type of improvement is of interest
 - E.g. => [S REFRIGERATOR AND ENERGY EFFICIENCY/ADV](#)

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Example USE and ADV: WO2009138342

USE - Elastomer composition for forming strips, molding materials, profiles, conveyor belts or tires. Can also be used for paper industry particularly paper coatings, adhesive industry particularly dispersion adhesives, dyestuffs industry for disperse dyes, and textile industry.

ADVANTAGE - The composition eliminates the drawback for halogen containing coagulation system and provides stability against the action of heat and oxygen by using antioxidants.

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Mechanism-of-action (ACTN) and Activity (ACTV)

- Part of the Basic Abstract (AB)
- Pharmaceutical/agrochemical inventions **only**
- Activity field is a form of keyword indexing, standardized terminology is used
 - E.g. => [S ANTI-INFLAMMATORY/ACTV](#)
- Standard terms for abstractors to look up – ensures consistency of application
- Mechanism of Action, e.g. agonist, inhibitor
- Data in support of these may also be included

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Example ACTV and ACTN: WO2002072110

ACTIVITY - Cytostatic.

MECHANISM OF ACTION - Cyclin-dependent kinase (CDK) inhibitor. Calporoside B (Ia) had IC50 value of 1.5 mM for the inhibition of CDK-4.

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Description of drawings (DRWD)

- Part of the Basic Abstract (AB)
- Describes the editorially selected drawing
- Used for drawings only, not chemical formulae
- Describes the labels in a DWPI drawing image
 - E.g. => [S MICROMETER/DRWD](#)

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Images (GI)

- When appropriate an image is provided in DWPI
- Chemical structures and/or technical drawings
- The abstractor selects the relevant image(s)
 - Chemical structures are typically described in DETD (slide 9) and drawings in DRWD (slide 15)
- Included in several display formats, e.g. [IFULLG](#)
- Available from 1988

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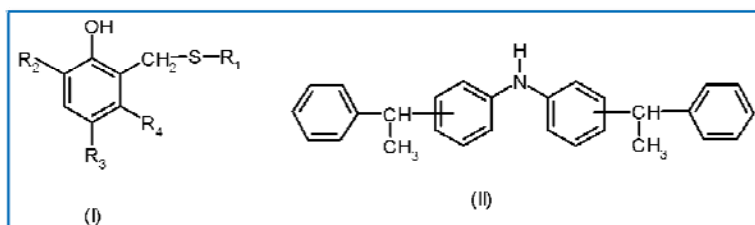
Example DETD: WO2009138342

DETAILED DESCRIPTION - An elastomer composition comprises emulsion crude rubber, synthetic latex or natural rubber latex subject to oxidative, thermal, dynamic and/or light-induced degradation; styrenated diphenyl amine of formula (II); and thiomethyl hydroxyl containing compound of formula (I).

R1=8-12C alkyl;

R2=H, 1-12C alkyl, cyclohexyl, 1-methyl cyclohexyl, benzyl, alpha -methylbenzyl, alpha , alpha -dimethylbenzyl or-CH2-S-R1; R3=1-12C alkyl, benzyl, alpha -methylbenzyl, alpha , alpha -dimethylbenzyl or-CH2-S-R1;and

R4=H or Me. . . .



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Example DRWD and GI: JP2011039017A

DESCRIPTION OF DRAWINGS - The drawing shows a front view of electrolytic polishing apparatus.

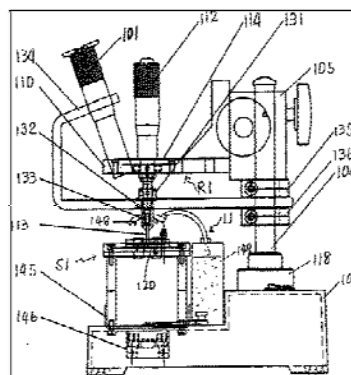
Electrode holding stand (110)

Micrometer head (112)

Observation mirror holding stand (134)

Adjustment unit (R1)

Voltage application unit (S1)



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Technology Focus (TECH)

- Optional separate field in addition to the Basic Abstract (AB)
 - Included in a default Basic Index (/BI) search
 - Included in the FULL (and MAX) display formats
- Describes details of the *preferred features* of the invention, from the patent's *dependent claims* and *embodiment*
- Features technology-specific headed sections
 - Using the (P) operator and section headings a focused technology search is possible
 - E.g. => S POLYMERS/TECH (P) STYRENE(W)BUTADIENE

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Technology Focus (TECH) headings

AGRICULTURE	COMPUTING AND CONTROL
IMAGING AND COMMUNICATION	METALLURGY
BIOLOGY	ELECTRICAL POWER AND ENERGY
INDUSTRIAL STANDARDS	ORGANIC CHEMISTRY
BIOTECHNOLOGY	ELECTRONICS
INORGANIC CHEMISTRY	PHARMACEUTICALS
CERAMICS AND GLASS	ENVIRONMENT
INSTRUMENTATION AND TESTING	POLYMERS
CHEMICAL ENGINEERING	FOOD
MECHANICAL ENGINEERING	TEXTILES AND PAPER

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Example TECH: WO2009138342

ORGANIC CHEMISTRY - Preferred Components: The composition comprises (pts. wt.) styrenated diphenyl amine (0.01-10), and thiomethyl hydroxyl containing compound (0.01-10). The emulsion crude rubber, synthetic latex or natural rubber latex is pale emulsion crude rubber, pale synthetic latex, or pale natural rubber latex; polydiene emulsion crude rubber, halogen-containing polydiene emulsion crude rubber, or styrene-butadiene copolymer emulsion crude rubber; emulsion crude rubber that has been coagulated with halogen containing system; emulsion styrene-butadiene rubber or nitrile butadiene rubber; or carboxylated styrene-butadiene, styrene-acrylic acid, vinyl acetate-acrylate, or carboxylated butadiene-acrylonitrile. The composition includes additional additives particularly pigments, dyes, fillers, flow auxiliaries, phenolic antioxidants, aminic antioxidants, organic phosphites or phosphonites, lactones, thiosynergistic compounds, dispersants, plasticizers, charge control agents, adhesion promoters, further antioxidants, and/or light stabilizers.

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The Extension Abstract (ABEX)

- Optional separate field in addition to the Basic Abstract (AB) for “chemical” (CPI) inventions
 - Included in a default Basic Index (/BI) search
 - Included in FULL/MAX display formats in WPIX **only**
- Comprises up to 5 headed sections:
 - Wider disclosure
 - Summarizes “inventions” not covered in the claims
 - Specific substances
 - Administration
 - Example
 - Definitions

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Example ABEX: WO2009138342

DEFINITIONS - Preferred Definitions: - R1=8 or 12C alkyl; - R2=Me; -R3=-CH2-S-R1;and - R4=H.

EXAMPLE - Additive system containing Irganox 1520 (RTM: 4,6-bis(octylthiomethyl)-o-cresol) and Wingstay 29 (RTM: styrenated diphenyl amine) was added into the latex in form of emulsion. A stabilizer containing natural butadiene rubber (1400 g) was slowly added while stirring to coagulation serum (2800 g). The serum containing demineralized water (2786 g) and calcium chloride (14 g). Coagulation temperature was 50 degrees C. The rubber crumbs received after coagulation were washed in demineralized neutral water at 65 degrees C. The wet crumbs were dewatered by passing the mixture through rubber covered roll mill and then dried overnight at 50 degrees C in vacuum oven. The wet rubber was compression molded to 10 mm sheets. The sheets were oven aged at 80 degrees C. The color was assessed once a week visually by using color scale of 0-10. The result showed that the composition provided color of after weeks aging at 80 degrees C of 5 at 0 days, and 6.5 after 6 days.

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Searching titles and abstracts

- Add plurals and DWPI abbreviations
 - => SET PLURALS ON
 - => SET ABBREVIATIONS ON
- Add English spelling variations
 - E.g. color/colour; diaper/nappy
 - => SET SPELLINGS ON
- Use left and right truncation
 - => S ?ANALY?
- Organize answer sets by relevance
 - => FOCUS L1

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STN search operators & truncation symbols

<u>Operator</u>	<u>Result</u>
OR	One OR the other
AND	Terms occur together
NOT	Terms do not occur together
(T)	<i>Term</i> (within the same term or word)
(W),(2W)	<i>With</i> (same order)
(A),(2A)	<i>Adjacent</i> (either order)
(S),(P),(L)	<i>Sentence, Paragraph, Link</i>
?	Right and/or left unlimited
#, #####	0-1, 0-4 right
!, !!!	1, 3 (exact) right/left/internal

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The screenshot shows a terminal window titled "STN Online and Results - [STN-K]". The interface includes a menu bar (File, Edit, Online, Query, Results, Preferences, Web, Window, Help) and a toolbar with various icons. The main display area shows the following text:

```

=> SET PLURALS ON
SET COMMAND COMPLETED

=> S ENERGY
    457923 ENERGY
    4658 ENERGIES
L1  459435 ENERGY
      (ENERGY OR ENERGIES)

=> SET ABBREV ON
SET COMMAND COMPLETED

=> S MANUFACTURE
    974618 MANUFACTURE
    8583 MANUFACTURES
    977898 MANUFACTURE
      (MANUFACTURE OR MANUFACTURES)
    271 MANUF
    6 MANUFS
    276 MANUF
      (MANUF OR MANUFS)
    278572 MFR
    462 MFRS
    278856 MFR
      (MFR OR MFRS)
L2  1071800 MANUFACTURE
      (MANUFACTURE OR MANUF OR MFR)

=>
  
```

A blue callout box with a white background and a blue border is positioned on the right side of the terminal window. It contains the text: "Abbreviations and plurals searching are customized to each STN file: DWPI terminology is used to search DWPI." Two red arrows point from the callout box to the search results: one points to the "(ENERGY OR ENERGIES)" line and the other points to the "(MANUFACTURE OR MANUF OR MFR)" line.

At the bottom of the terminal window, there is a status bar with the text "WPINDEX | INS | Hold Off | Print Off | Online" and a small box containing the number "26".

STN Online and Results - [STN-K]

```

=> SET SPELLINGS ON
SET COMMAND COMPLETED

=> S SULFUR?
      85087 SULFUR?
      109212 SULPHUR?
L1 179870 SULFUR?
      (SULFUR? OR SULPHUR?)

=> S ?ANESTHETIZ?
      1927 ?ANESTHETIZ?
      853 ?ANAESTHETIS?
      433 ?ANAESTHETIZ?
L2 171 ?ANESTHETIS?
      3333 ?ANESTHETIZ?
      (?ANESTHETIZ? OR ?ANAESTHETIS? OR ?ANAESTHETIZ? OR ?ANESTHETIS
      ?)

=> S AEROPLANE?
      7181 AEROPLANE?
      12966 AIRPLANE?
L3 17074 AEROPLANE?
      (AEROPLANE? OR AIRPLANE?)

=> S WINDSHIELD?
      9586 WINDSHIELD?
      19966 WINDSCREEN?
L4 24490 WINDSHIELD?
      (WINDSHIELD? OR WINDSCREEN?)

=> _
  
```

SET SPELLINGS automatically incorporates common English spelling variations from around the world into the search.

Transcript: WPINDEX INS Hold Off Print Off Online 27

STN Online and Results - [STN-K]

```

=> S ANALY?
L1 362688 ANALY?

=> S ?ANALY?
L2 364032 ?ANALY?

=> S L2 NOT L1
L3 1344 L2 NOT L1

=> D KWIC
L3 ANSWER 1 OF 1344 WPINDEX COPYRIG
TI Booting securing method for internet protocol TV terminal system, involves
performing cryptanalysis and integrity authentication, after loading
operating system, file system and application key respectively
NOV NOVELTY - The method involves performing a cryptanalysis and integrity
authentication of a boot loader and system keys. The cryptanalysis and
integrity authentication are performed, after loading an operating system
(OS), file system and an application key respectively. Decryption is. .
ADV. . . . The method efficiently loads the operating system (OS), file
system, and the application key during system booting and performs the
cryptanalysis and integrity authentication of each of the OS, the file
system, and the application, thus securing the stability of the.. . .

=> _
  
```

Left hand search term truncation.

KWIC is a useful low-cost display format for scanning DWPI search results.

Transcript: WPINDEX INS Hold Off Print Off Online 28

STN Online and Results - [STN-K]

(EMAIL OR EMAILS)
19205 ELECTRONIC MAIL
(ELECTRONIC MAIL OR EMAIL)
L1 6541 (MOBILE OR CELLULAR OR CELL)(W)(PHONE OR TELEPHONE) AND (E MAIL OR EMAIL OR ELECTRONIC MAIL)

=> FOCUS L1
PROCESSING COMPLETED FOR L1
L2 6541 FOCUS L1 1-

=> D BRIEF

L2 ANSWER 1 OF 6541 WPINDEX COPYRIGHT
AN 2002-515150 [55] WPINDEX
DNN N2002-408016 [55]
TI Electronic mail advertisement delivery system using internet, transmits advertisement data registered in database to mobile telephones as e-mail during transmission of e-mail between mobile telephones by e-mail server
DC T01
PA (MASU-I) MASUDA Y
AB JP_2002170043 A UPAB: 20050526
NOVELTY - The system delivers registered advertisement data in a database (111) to mobile telephones (12a,12b) as e-mail, when an e-mail server (11) transmits the e-mail received from the mobile telephone (12a) to another mobile telephone (12b).
USE - For delivery of advertisement as e-mail to mobile telephones through internet.
ADVANTAGE - The e-mail advertisement delivery system increases the number of users of internet, as the charge for internet usage is

Transcript: WPINDEX INS Hold On Print Off Online 29

Searching DWPI titles and abstracts (cont.)

- Use Basic Abstract (AB) headings (fields)
=> S TYRE /TI,NOV,USE
- Use Technology Focus (TECH) headings
=> S POLYMERS/TECH (P) BUTADIENE
- Include the Basic Index Extension (/BIEX)
=> SET SFIELDS BI BIEX

DWPI enhanced abstract precision searching options

<u>Field</u>	<u>Description</u>	<u>Availability</u>	
TI	Enhanced Title	1963-	} AB } BI
NOV	Novelty	1999-	
DETD	Detailed Description	1999-	
ACTN	Mechanism of Action	1999-	
ACTV	Activity	1999-	
ADV	Advantage	1984-	
UADV	Use/Advantage	1984-	
USE	Use	1984-	
DRWD	Drawing Description	1999-	
TECH	Technology Focus	1999-	
ABEX	Extension Abstract	1999-	

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Example: styrene-butadiene polymers and tyres

```

=> S TYRE/TI,NOV,USE,UADV,ADV
L1      102588 TYRE/TI,NOV,USE,UADV,ADV

=> S L1 AND POLYMERS/TECH (P) PREFERRED(W)(MATERIAL OR COMPONENT
OR COMPOSITION OR ?POLYMER?) (S) STYRENE(1A)BUTADIENE
L2      1026 L1 AND POLYMERS/TECH (P) PREFERRED(W)(MATERIAL OR COMPONENT
OR COMPOSITION OR ?POLYMER?) (S) STYRENE(1A)BUTADIENE

=> D HIT

L2      ANSWER 1 OF 1026 WPINDEX COPYRIGHT
TI      Composite reinforcement useful in semi-finished pneumatic tire, comprises reinforcement of thermoplastic polymer layer, second thermoplastic styrenic elastomer composition.
USE     USE - The composite reinforcement is useful in an article or a semi-finished rubber product such as pneumatic tire (all claimed).
ADV     ADVANTAGE - The composite reinforcement provides high resistance to corrosion, abrasion and external stresses such as oxidation and improved structural rigidity to the pneumatic tire.
TECH    INORGANIC CHEMISTRY - Preferred Components: The metallic fiber is made of carbon steel.
        POLYMERS - Preferred Components: The thermoplastic polymer is polyamide 6-6 or polyester. The poly(p-phenylene ether) is poly(2,6-dimethyl-1,4-phenylene-ether). The diene block includes isoprene or butadiene. The thermoplastic elastomer comprises a copolymer of styrene butadiene, styrene isoprene, styrene butadiene styrene and/or styrene isoprene styrene.

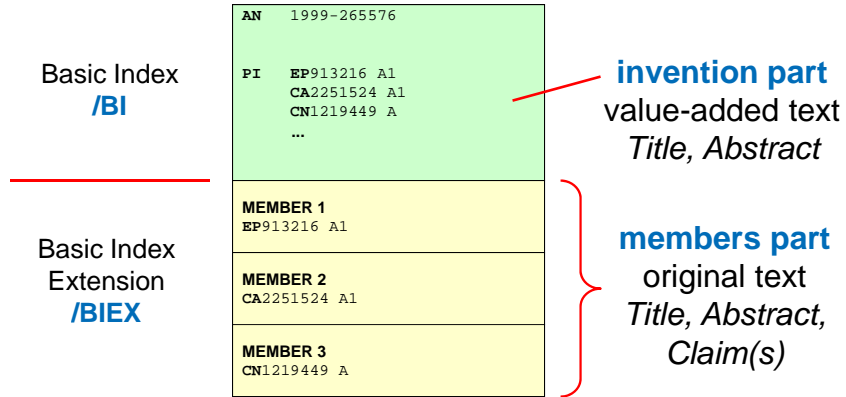
```

Reminder: all of these are set on:
=> SET SPELLINGS ON
=> SET PLURALS ON
=> SET ABBREVIATIONS ON

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The DWPI default Basic Index (/BI) is formed from value-added text fields



See also: The table of original publication data coverage at the Member Level: http://www.stn-international.com/stn_dwpi.html.

A DWPI search may be extended to include original text with /BIEX

- On STN it is possible to search DWPI value-added and original patent text separately or simultaneously
- Incorporating the Basic Index Extension (/BIEX) into your DWPI search may improve comprehensiveness

```

=> FILE WPINDEX
=> S OPTICAL FIBRE AND CABLE
L1 19683 S OPTICAL FIBRE AND CABLE
=> SET SFIELDS BI BIEX PERM
SET COMMAND COMPLETED
=> S OPTICAL FIBRE AND CABLE
L2 23267 OPTICAL FIBRE/BI,BIEX AND CABLE/BI,BIEX
=> S L2 NOT L1
L3 3584 L2 NOT L1
    
```

SET SFIELDS can be used to change the default search index.

Example: Basic Index Extension (BIE)

=> D TI TIEN ABEN

L3 ANSWER 1 OF 3584 WPIX COPYRIGHT 2011 THOMSON REUTERS on STN
 TI Self-aligning optical interconnect structure for optically aligning array of optical fibers with array of microlenses in computer, has guide features formed in surface of housing for receiving projecting end portions of optical fibers

Member(0001)

TIEN LENSED OPTICAL CONNECTOR WITH PASS

Using BI +BIE, the hit terms may occur in the value-added text (BI) or in the original text (BIE), or in both.

Member(0001)

ABEN US 20110026882 A1 UPAA 20110225
 A simply constructed and economical optical connector, wherein a fiber ribbon or waveguide ribbon cable incorporates a plurality of projecting fiber or waveguide ends adapted to engage into a guiding feature in a structure that incorporates an array of microlenses, upon said structure being aligned with and attached to a ferrule housing the ribbon cable. The guiding feature enables apertures in the ferrule within which the projecting fiber or waveguide ends are guides towards engagement with guiding feature in the microlens containing structure, to be formed or dimensioned with relaxed tolerances relative to the fiber or waveguide ends, thereby considerable reducing manufacturing costs for the ferrule.

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More on (S), (P) and (L) proximity

- When text searching in DWPI:

(S)-proximity = within the same paragraph

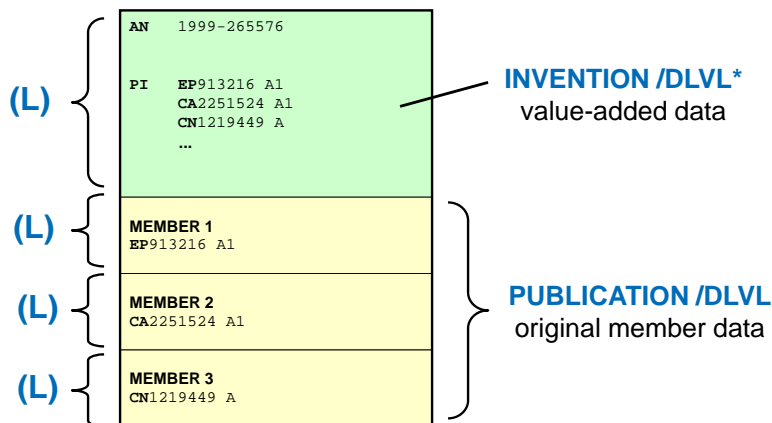
(P)-proximity = within the same field

(L)-proximity = within the same document

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(L)-proximity works at the document level



DLVL = Document Level. Options are INVENTION /DLVL or PUBLICATION /DLVL

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Popular DWPI display formats

D SCAN	Random title (free)
D TRIAL	Title (or Title Terms*) & codes (free)
D KWIC	Keywords In Context
D BRIEF	Title, assignee, abstract
D BIB	Title, assignee, patent family
D FULLG	BIB + Abstract(s), drawing image
D MEMBB	Applicant title, abstract and claim(s); agent, assignee and inventor details

Note: indented (full field description) versions of several formats are available, e.g. IBIB, IFULLG. See [HELP FORMAT](#) for further details.

(* The DWPI title is included free-of-charge in WPIDS/WPIX. Title Terms in WPINDEX.)

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Classification searching

- DWPI Classification (/DC)
- DWPI Manual Codes (/MC)
- International Patent Classification (/IPC)
- European Patent Classification (/EPC)
- USPTO National Classification (/NCL)
- Japanese Patent Office FI-Terms (/FCL)
- Japanese Patent Office F-Terms (/FTRM)

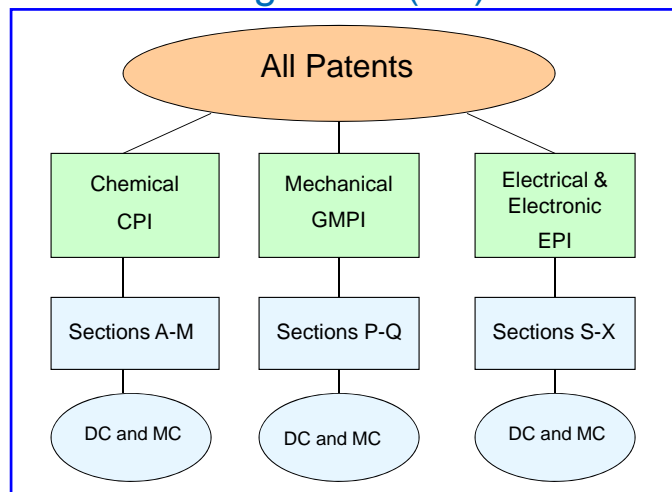
Example: Classification and Manual Codes

```

L9 ANSWER 1 OF 1 WPIX COPYRIGHT 2011 THOMSON REUTERS on STN
AN 2009-R36511 [200979] WPIX
TI Elastomer composition, e.g. for forming strips, profiles, conveyor
   belts or tires, comprises emulsion crude rubber, synthetic latex or
   natural rubber latex, styrenated diphenyl amine, and thiomethyl
   hydroxyl containing compound
DC A18; A81; A82; A87; A88; A95; F06; F09; G02; G03
IN KNOBLOCH G; ROTA-GRAZIOSI P; ROTA GRAZIOSI P
PA (BADI-C) BASF SE; (CIBA-C) CIBA HOLDING INC
CYC 124
PIA WO 2009138342 A1 20091119 (200979)* EP
   TW 2009051144 A 20091216 (201038) ZA
   KR 2011007248 A 20110121 (201112) KR
   EP 2285887 A1 20110223 (201115) EP
ADT WO 2009138342 A1 WO 2009-EP55460 20090506
   Application WO 2009-EP55460 20090506; TW 2009051144 A TW 2009-115802
   20090513; KR 2011007248 A KR 2010-727437 20090506; KR 2011007248 A
   PCT Nat. Entry KR 2010-727437 20101206; EP 2285887 A1 EP 2009-745675
   20090506; EP 2285887 A1 PCT Application WO 2009-EP55460 20090506
FDT KR 2011007248 A Based on WO 2009138342 A; EP 2285887 A1 Based on WO
   2009138342 A
PRAI EP 2008-156250 20080515
MC CPI: A07-A05; A08-A01; F03-F16; F03-F18; F05-A06B; G02-A05C;
   G03-B02D; G03-B02D1; G03-B02D2; G03-B02D3
FS CPI
    
```

DWPI Classification and Manual Codes are searchable and displayable in the DC and MC fields respectively.

DWPI Classes (DC), Manual Codes (MC), and File Segments (FS) flowchart



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DWPI Classification (DC)

- A broad classification system assigned by Thomson Reuters uniquely to DWPI
- 2 Level Hierarchy
- Top level split into 21 Sections (A-X)
- Searchable at two levels:
 - => S Q/DC (Section Level)
 - => S Q18/DC (Subsection Level)
- Expand /DC to see definition online
- DCs are searchable in DWPI back to 1970

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Chemical patents index (CPI) sections

- A Polymers & plastics
- B Pharmaceuticals
- C Agrochemicals
- D Food, detergents, water treatment, biotechnology
- E General chemicals
- F Textiles & paper
- G Printing, coating & photographic
- H Petroleum
- J Chemical Engineering
- K Nucleonics, explosives & protection
- L Refractories, glass, ceramics cement & electro(in)organics
- M Metallurgy

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Engineering sections

- Mechanical (GMPI)
 - P Miscellaneous
 - Q Mechanical engineering
- Electrical/electronic (EPI)
 - S Instrumentation; Measuring and testing
 - T Computing and Control
 - U Semiconductors and electronic circuitry
 - V Electronic components
 - W Communications
 - X Electric power engineering

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DWPI sections are divided into classes

- Each section is further divided into DWPI Classes (DC)
 - There are 32 Section A classes
 - e.g.
 - A25 - Polyurethanes and polyethers
 - A32 - Polymer fabrication
 - A41 - Monomers and condensants
 - A60 – Additives
 - A81 - Adhesives and binders
 - A82 - Coatings

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DWPI sections are the basis for DC and MC

- The section letter is the basis for the Derwent Class (DC) and Manual Code (MC) fields online
 - e.g. F09 Paper making (DC)
 - F05-A04 Paper making machines (MC)
 - X27 Domestic electric appliances (DC)
 - X27-D04 Vacuum Cleaners (MC)
- Use DC online for searching in conjunction with other search terms, and for statistical analysis
- Manual codes provide more precise subject searching

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DWPI Manual Codes (MC)

- An in-depth classification system assigned by Thomson Reuters uniquely to DWPI
- Covers basic patent publications in chemical/life science and engineering subject areas
- Chemical/life science codes (A-N) are only searchable in WPIDS/WPIX back to 1963
- Electrical/electronic codes (S-X) are searchable by all users of DWPI back to 1980
- More recently added Mechanical codes (Q), are searchable by all users of DWPI back to 2005

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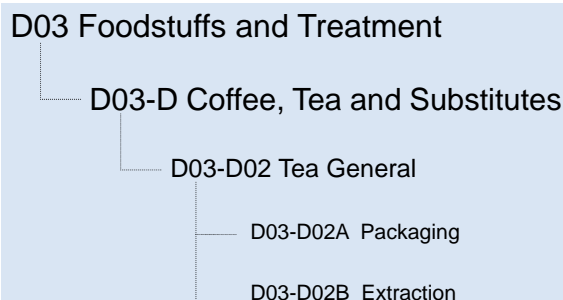
DWPI Manual Codes (MC) (cont.)

- Indexing system similar in concept to IPC
 - Both are hierarchical systems
 - Unlike IPC, Manual Codes cover the novelty of the invention, plus major applications
 - Unlike IPC, a DWPI record may be classified using Manual Codes from several sections
- Assigned based on information in the DWPI abstract
- More consistently indexed than IPC
- Produces unique relevant hits when compared to text-searching and IPCs
- Designed and updated in conjunction with patent searchers – Manual Codes are updated annually

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Manual Code hierarchy is “expressive”



- So, unlike IPC, it is OK to use truncation to include all subdivisions of a code
 - E.g. => [S D03-D02?/MC](#) searches for all references to tea, including packaging, extraction etc.

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The Manual Code Manual

- Divided into 2 parts
 - A complete list of the codes and their coverage given in code and CPI section order
 - A subject index of terms and concepts with their corresponding CPI manual codes
- For certain codes years or year ranges are indicated after the code description
 - identifies when a code was first introduced and if it has been discontinued
- The manual is revised annually each January

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Choosing Manual Codes from the Manual

- Consult the alphabetical index in Part II
- Verify the code definitions and hierarchy in Part I
- Verify the date that the code was introduced
 - it may be necessary to also use a broader code for earlier years
- Remember that there may be relevant codes from more than one CPI Section

Layout of the Manual Code Manual

A08-M07 Antiblocking agents, dusting agents, slip agents

i.e. materials applied to polymer surfaces to reduce their adhesiveness e.g. talc. Prior to 1970 see A08-M.

1970

Polymer Manual Codes (Section A)

- More detailed codes than the Derwent Class, allowing for more precise retrieval e.g.

A60 Polymer additives (Derwent Class)
 A08-A04 Heat stabilisers (Manual Code)
 A08-A06 Antioxidant (Manual Code)

- Applied since 1966 for polymer patents
- Search codes in /MC field

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Polymer Manual Codes (cont.)

- Alphanumeric in format and based on the CPI section letter A
 - e.g. A05-C01B1: phenoplast adhesives & binders
- Hierarchical in structure:

Section	A05	Condensation polymers
Group	A05-C	. Phenoplasts
Subgroup	A05-C01	.. General phenoplast
Division	A05-C01B	... Applications of phenoplasts
Subdivision	A05-C01B1 Adhesives and binders

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Polymer Manual code topics

- A01 Monomers, Condensants
- A02 Polymerisation Controllers
- A03 Natural Polymers
- A04 Addition Polymers
- A05 Condensation Polymers
- A06 Inorganic Polymers

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Polymer Manual code topics (cont.)

- A07 Polymer Blends, Aqueous Dispersions
- A08 Additives
- A09 Properties, Analysis, Testing, Control
- A10 Polymerisation, Polymer Modification
- A11 Processing Polymers
- A12 Polymer Applications

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Polymer Manual codes revision history

- Code commenced 1966
- Code enhancements:
 - DWPI update 197001
 - DWPI update 197701
 - DWPI update 198601
 - DWPI update 199401
 - DWPI update 200201
 - And then annually from 200501 onwards
- Code scope
 - All polymers and their related concepts

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Manual Code indexing rules

- One or more codes are applied to cover only the main inventive features and applications
 - Gives highly relevant hits when used in conjunction with words or other coding systems
- If 3 or more concepts from the same hierarchy apply, then only the generic code will be indexed
 - for complete retrieval of a specific concept, search for both the specific and generic code using 'OR'

Tip: These two rules apply equally to all CPI manual codes not just Section A (Polymers).

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Manual Code indexing rules – Section A

- If a novel polymer composition may be used in a wide range of applications, only the composition is indexed
- For a novel polymerisation catalyst, the corresponding polymerisation process is not indexed but the polymers produced are
- Properties of polymers are only indexed if they are of exceptional importance, e.g. high impact polymers, improved dyeability

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Manual Code indexing rules – Section A (cont.)

- If a particular process, additive or catalyst is disclosed for a specific polymer, then the feature and the polymer are indexed
 - e.g. heat stabiliser for PVC, A08-A04 and A04-E02 are indexed
- If a novel additive can be used for a range of alternative polymers then the additive only is indexed
 - e.g. an azo dye for cellulose acetate and polyamide and polyester, A08-E03A only

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Manual Code indexing rules – Section A (cont.)

- A chemically modified polymer is indexed only in A10-E
 - If the process of modification is described then the unmodified polymer will be additionally indexed

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Manual Code indexing rules – Section A (cont.)

- Prepolymers or intermediates for polymers are conventionally indexed as polymers
 - e.g. ethylene glycol terephthalate: A05-E04
 - e.g. polyurethane prepolymers: A05-G
- Section A01: Monomers, Condensants
 - Also searchable in General Chemistry (Section E)
 - Covers production and purification
 - For polymerisation of a monomer, search the polymer product and polymerisation process

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Polymer codes in other CPI Sections

- Section F - Textiles, Paper, Cellulose products
 - F01 Natural/synthetic threads/fibres
 - F02 Fabrics and their production
 - F03 Treatment of fabric products
 - F04 Textile applications
 - F05 Paper and wood

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Polymer codes in other CPI Sections

- Section G - Printing, Coating, Photographic etc.
 - G01 Non-fibrous inorganic pigments, Fillers
 - G02 Coatings, Paints, Inks, Natural Resins, Polishes
 - G03 Adhesives
 - G04 Miscellaneous compositions and applications
 - G05 Printing
 - G06 Photographic materials and processes

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Manual Code thesaurus

- E CODE/MC to see an alphanumeric listing of codes and the number of associated terms (AT)
 - E E3+ALL to see the hierarchy of associated terms includes NT, BT, UF terms, meaning, and introduction date
 - E E3+NT to see the narrower Terms
 - E E3+BT to see the broader Terms
- E CODE+ALL/MC to see immediately the full hierarchy of terms for this code
 - Remember that the thesaurus is available in [LWPI](#)

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Example: Manual Code thesaurus

```

=> E A04-G03+ALL/MC
E1 550208 BT2 A04/MC
      DEF ADDITION POLYMERS
E2 5637 BT1 A04-G/MC
      DEF POLYMERS FROM UNSUBSTITUTED (CYCLO)-ALIPHATIC
      MONOLEFINIC MONOMERS (OTHERS)
E3 677 --> A04-G03/MC
      DEF PROPYLENE HOMOPOLYMER*
      HNTE (1966-1967)
E4 1723 NT1 A04-G03A/MC
      DEF PROPYLENE HOMOPOLYMER PRODUCTION
      HNTE ( pre-1970)
E5 5498 NT1 A04-G03B/MC
      DEF PROPYLENE HOMOPOLYMER COMPOSITIONS
      HNTE ( pre-1970)
E6 3153 NT1 A04-G03C/MC
      DEF PROPYLENE HOMOPOLYMER FABRICATION
      HNTE ( pre-1970)
E7 1328 NT1 A04-G03D/MC
      DEF PROPYLENE HOMOPOLYMER TREATMENT
      HNTE ( pre-1970)
E8 15952 NT1 A04-G03E/MC
      DEF PROPYLENE HOMOPOLYMER USES
      HNTE ( pre-1970)
. . . . .
=> S A04-G03+NT/MC
A04-G03 PROPYLENE HOMOPOLYMER*
L1 36344 A04-G03+NT/MC (7 TERMS)
    
```

Broader Term (BT).

History Note (HNTE).

Narrower Term (NT).

Search with relationship codes.

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Resources

- DWPI on STN User Documentation
http://www.stn-international.com/stn_dwpi.html
 - DWPI on STN Reference Manual
 - DWPI on STN Workshop Manual
 - DWPI Classification (DC) guide
 - Summary table of member level data coverage
 - Global Patent Sources – DWPI coverage in detail
 - Chemistry, Engineering and Polymer User Guides
- DWPI on STN database summary sheet
<http://www.stn-international.com/wpindex.html>

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For more information ...

CAS
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Support and Training:
www.stn-international.de

STN STN is available through FIZ Karlsruhe, Germany
and Chemical Abstracts Service, USA.

Manual Codes: Hands-on Practice

1. Run a Basic Index search for acrylonitrile butadiene styrene (ABS) polymer, and review some answers using, e.g. Keyword in context (KWIC). Refine the search broadly to polymer technology using DWPI classification (/DC). What types of answers are removed from the original search? Search for ABS polymer using a suitable Manual Code (/MC). What types of additional answers are found or removed in comparison to the previous two searches?
2. Look-up and use only manual codes to search for metallocene catalysts used in polypropylene production. Compare the answers retrieved to a corresponding Basic Index text search. Why does the manual-code-only search retrieve a lot less answers? Repeat the search combining both text and manual codes to retrieve the most comprehensive answer set. Why does this combined approach retrieve more answers than a Basic Index search alone?
3. Run a basic index search for anti-static agent additives for polyamides. Use the ANALYZE command to identify relevant Manual Codes (MC), and verify their definitions and hierarchy using the STN manual code thesaurus. Repeat the search using the chosen codes on their own, and in combination with a Basic Index search. As in 1. and 2. (above), review unique results retrieved by broadening or narrowing the search using the codes. Are searches more relevant narrowing with the codes, and more comprehensive broadening with the codes? If so, why is that?