AUPATFULL (Australia (AU) Patents Full-text)

Subject Coverage	All patent-relevant areas of science and technology, i.e., all classes of the International Patent Classification
File Type	Full-Text

Features

Thesauri	International Patent Classification (/IPC), Cooperative Patent Classification (/CPC), European Patent Classification (/EPC and ICO)		
Alerts (SDIs)	Weekly or monthly (weekly is the default)		
CAS Registry Numbers® Identifiers	☐	SLART	☑
Keep & Share	☑	Structures	☐
Register Links	☑		

Record Content

- Full-text of patent applications, patent specifications, and design patents published in Australia from 1900 onwards.
- Records are available about 3 days after publication date with the complete content.
- Records of the database contain bibliographic data including patent assignee, inventor, and legal representative information, patent, application and priority application data, IPC, CPC, and EPC classification codes, abstract, and full-text of description and claims.
- Independent claims and claim groups are searchable for all claims in English.
- Numeric values of 59 physical and chemical properties are searchable in about 20,000 variants of the base and additional units within all full text fields in English.
- Ultimate Owners are searchable in the field /UO and /UOS.
- Standardized and normalized patent assignee names are searched in /PAS and /PAN.
- Key terms, indexed and displayed in the field /KT, enhance retrieval of relevant results, and make the evaluation of results more efficient. They are useful to broaden search scope more precisely than Basic Index searches.
- The Locarno classification (/LCL) is available for design patents.
- Database records comprise all documents published for one application.
- Clipped images (mostly front-page images) are also included, when available.
- Some of the full text has been created by Optical Character Recognition (OCR) software. Therefore, characters may be misinterpreted, or portions of the text may be incomplete.

File Size

- More than 1.8 million family records with more than 2.5 million publications (07/2024)
- More than 765,000 front page images from 1913 to present (07/2024)

Coverage	1900 to present
Updates	Weekly
Language	English
Database Producer	LexisNexis Business Information Solutions B.V. Radarweg 29 1043 NX Amsterdam The Netherlands Copyright Holder

Sources	Patent applications and patent specifications published by the Australian Patent Office
User Aids	• Online Helps (HELP DIRECTORY lists all help messages available) • STNGUIDE
Clusters	• AEROTECH • ALLBIB • AUTHORS • CORPSOURCE • ENGINEERING • FULLTEXT • HPATENTS • NPS • PATENTS • PNTTEXT STN Database Cluster information

Search and Display Field Codes

If multiple search terms are linked with an AND operator, all terms are searched in the complete database record, i.e., in all publications referring to one application. For a search in a specific publication of the record, connect the search term and the patent kind code with the (L)-proximity operator, e.g.,
S BOREHOLE/ABEN,TIEN,CLMEN (L) AUA1/PK limits the search to Australian applications AUA1.

Fields that allow left truncation are indicated by an asterisk (*).

General Search Fields

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index* (contains single words from title (TIEN), abstract (ABEN), detailed description (DETDEN), claims (CLMEN), and main claims (MCLMEN), and key terms (KT) fields)	None or /BI	S TRANSISTOR AND ELECTRODE S ACOUSTIC SENSOR S ?TRANSFER?	TIEN, ABEN, DETDEN, CLMEN, MCLMEN, KT
Abstract*	/ABEN (or /AB)	S BOREHOLE/ABEN	ABEN
Accession Number	/AN	S 2010006109/AN	AN
Agent **(5)**	/AG	S PATENT ATTORNEY SERVICES/AG	AG
Agent, Total	/AG.T	S CHRYSILIOU IP, MELBOURNE/AG.T	AG
Agent Address	/AGA	S 26 ELLINGWORTH PARADE, BOX HILL/AGA	AG
Agent Country (WIPO code and text)	/AG.CNY	S AU/AG.CNY	AG, AG.CNY
Application Country (WIPO code and text)	/AC	S AU/AC	AI
Application Date **(1)**	/AD	S AD=JAN 2003	AI
Application Kind Code	/AK	S AUA1/AK	AI
Application Number **(2)**	/AP	S AU 2010-202547 /AP	AI
Application Number, Original	/APO	S AU0000188/APO	APO
Application Year **(1)**	/AY	S AY>=2000	AI
Claims*	/CLMEN (or /CLM)	S DERIVATION/CLMEN	CLMEN
Cooperative Patent Classification **(3)**	/CPC	S C12N0009/CPC	CPC
Cooperative Patent Classification, Action Date	/CPC.ACD	S 20121113/CPC.ACD	CPC.TAB
Cooperative Patent Classification, Keywords	/CPC.KW	S C12N0009/CPC(S)I/CPC.KW	CPC.TAB
Cooperative Patent Classification, Version	/CPC.VER	S 20130101/CPC.VER	CPC.TAB
Data Entry Date **(1)**	/DED	S 20110124/DED	DED
Data Update Date **(1)**	/DUPD	S 20110111/DUPD	DUPD
Detailed Description *	/DETDEN (or /DETD)	S ?DERIVATION/DETDEN	DETDEN
Document Type	/DT (or /TC)	S PATENT/DT	DT
Entry Date **(1)**	/ED	S ED=JULY 2011	ED
Entry Date of Fulltext **(1)**	/EDTX	S 20110705/EDTX	EDTX
EPC, Keyword Terms	/EPC.KW	S D12/EPC.KW	EPC
European Patent Classification **(3)**	/EPC (or /ECLA, /EPCLA)	S A01B0001-02B/EPC	EPC
Field Availability	/FA	S ABEN/FA	FA
ICO (in-computer-only) Classification **(3)**	/ICO	S T05B0213-05/ICO	ICO
ICO Keyword Terms	/ICO.KW	S A4/ICO.KW	ICO
IdT (Indeling der Techniek)	/IDT	S B21K0001-56/IDT	IDT
International Patent Classification (ICM, ICS, IPCI, IPCR) **(3)**	/IPC	S A01B001/IPC	ICM, ICS, IPCI, IPCR
International Patent Classification (ICM, ICS)	/IC	S A24B/IC	IC, ICM, ICS
Inventor	/IN (or /AU)	S MANDEL W MICKLEY/IN S MANDEL?/IN	IN
Inventor, Country (WIPO code and text)	/IN.CNY	S AU/IN.CNY	IN, IN.CNY
IPC, Action Date **(1)**	/IPC.ACD	S 20051008/IPC.ACD	IPC.TAB
IPC, Additional	/ICA	S B02C0004-08/ICA	ICA
IPC, Initial	/ICI	S G07B015-00/ICI	ICI
IPC, Initial	/IPCI	S B21B0001/IPCI	IPCI

General Search Fields (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
IPC, Keyword Terms	/IPC.KW	S INITIAL/IPC.KW	IPC.TAB
IPC, Main	/ICM	S A01N001/ICM	ICM
IPC, Reclassified	/IPCR	S B21B0001/IPCR	IPCR
IPC, Reform	/IPC.REF	S A01B0001-04/IPC.REF	IPC.TAB
IPC, Secondary	/ICS	S A01B0013-12/ICS	ICS
IPC, Version	/IPC.VER	S 7/IPC.VER	IPC.TAB
Key Terms *	/KT	S GLUCOCER?/KT	KT
Language (code and text)	/LA	S EN/LA	LA
Language, Filing (code and text)	/LAF	S ENGLISH/LAF	LAF
Locarno Classification	/LCL	S 99-00/LCL	LCL
Main Claim*	/MCLMEN (or /MCLM)	S ?FRACTURE?/MCLM	MCLMEN
Number of Claims **(1)**	/CLMN	S 5-7/CLMN	CLMN
Number of Paragraphs in DETD (Detailed Description) **(1)**	/DETN	S DETN<10	DETN
Patent Assignee **(5)**	/PA (or /CS)	S BASF AG/PA	PA
Patent Assignee, Country (WIPO code and text)	/PA.CNY	S AR/PA.CNY	PA.CNY
Patent Assignee, Total	/PA.T	S UNIVERSITY NEVADA/PA.T	PA.T
Patent Assignee Normalized **(5)**	/PAN	S BASF AG/PAN	PAN
Patent Assignee Standardized **(5)**	/PAS	S BASF AG/PAS	PAS
Patent Country	/PC	S AU/PC	PI
Patent Information Publication Type	/PIT	S AUA OPEN TO PUBLIC INSPECTION/PIT	PIT
Patent Kind Code	/PK	S AUA1/PK	PI
Patent Number **(2)**	/PN	S AU120007/PN	PI
Patent Number, Original	/PNO	S AU1000101/PNO	PNO
Patent Number/Kind Code	/PNK	S AU2009201460B2/PNK	PI
Physical Properties	/PHP	S VOLT/PHP (S) TOUCH SCREEN/BI	KWIC
Priority Country (WIPO code and text)	/PRC	S AU/PRC S AUSTRALIA/PRC	PRN
Priority Date **(1)**	/PRD	S PRD=APRIL 2 2003 S 20030402/PRD	PRN
Priority Date, First **(1)**	/PRDF	S 20000109/PRDF	PRN
Priority Number Kind Code	/PRK	S DEA/PRK	PRN
Priority Number **(2)**	/PRN	S DE2000-10001525/PRN	PRN
Priority Number, Original	/PRNO	S US03493352/PRNO	PRNO, PRAO
Priority Year **(1)**	/PRY	S 1993/PRY	PRN
Priority Year, First **(1)**	/PRYF	S 1993-1994/PRYF	PRN
Publication Date **(1)**	/PD	S PD=JAN-FEB 2003	PI
Publication Year **(1)**	/PY	S PY>2003 AND L1	PI
Related Application Country	/RLC	S WO/RLC	RLI
Related Application Number	/RLN	S WO1995-FR1391/RLN	RLI
Related Application Date **(1)**	/RLD	S 20000109/RLD	RLI
Related Application Type	/RLT	S PCT APPLICATION/RLT	RLI
Related Application Year **(1)**	/RLY	S 2005/RLY	RLI
Related Patent Country	/RLPC	S WO/RLPC	RLI
Related Patent Number	/RLPN	S WO2000000008/RLPN	RLI
Related Patent Date **(1)**	/RLPD	S 20000309/RLPD	RLI
Related Patent Year **(1)**	/RLPY	S 2005/RLPY	RLI
Title*	/TIEN (or /TI)	S FLUID###/TIEN	TIEN
Ultimate Owner **(5)**	/UO	S BASF/UO	UO
Ultimate Owner Standardized **(5)**	/UOS	S BASF/UOS	UOS
Update Date **(1)**	/UP	S UP=MAR 2023	UP
Update Date Text **(1)**	/UPTX	S 20240503/UPTX	UPTX

(1) Numeric search field that may be searched using numeric operators or ranges.
(2) By default, patent numbers, application and priority numbers are displayed in STN Format. To display them in Derwent format, enter SET PATENT DERWENT at an arrow prompt. To reset display to STN Format, enter SET PATENT STN.
(3) An online thesaurus is available in this field.
(4) Only valid for IPC version 1–7.
(5) Search with implied (S) proximity is available in this field.

Super Search Fields

Enter a super search code to execute a search in one or more fields that may contain the desired information. Super search fields facilitate crossfile and multifile searching. EXPAND may not be used with super search fields. Use EXPAND with the individual field codes instead.

Search Field Name	Search Code	Fields Searched	Search Examples	Display Codes
Application Number Group	/APPS	AP, APO, PRN, PRNO, RLN	S 2010AU-202547/APPS	AI, APO, PRAI, PRAO, APPS
Patent Assignee Group	/PASS	PA, PAN, PAS, PA.T, UO, UOS	S BIONTECH/PASS	PA, PAN, PAS, PA.T, UO, UOS
Patent Number Group	/PATS	PN, PNO, RLPN	S AU2009201460/PATS	PI, PNO, RLPI

Property Fields (1)

In AUPATFULL a numeric search for a specific set of physical properties (/PHP) is available within the full-text fields (TIEN, ABEN, DETDEN and CLMEN). The numeric values are not displayed as single fields but are instead highlighted within the hit displays.

Use EXPAND/PHP to search for all available physical properties. A search with the respective field codes will be carried out in all database fields with English text. The /PHP index contains a complete list of codes and related text for all physical properties available for numeric search.

Field Code	Property	Unit	Symbol	Search Examples
/AOS	Amount of substance	Mol	mol	S 10 /AOS
/BIR	Bit Rate	Bit/Second	bit/s	S 8000-10000/BIR
/BIT	Stored Information	Bit	Bit	S BIT > 3 MEGABIT
/CAP	Capacitance	Farad	F	S 1-10 MF/CAP
/CATA	Catalytic Activity	Katal	kat	S 1-10/CATA
/CDN	Current Density	Ampere/Square Meter	A/m^2	S CDN>10 A/M**2
/CMOL	Molarity, Molar Concentration	Mol/Liter	mol/L	S UREA/BI (S) 8/CMOL
/CON	Conductance	Siemens	S	S 1S-3/CON
/DB	Decibel	Decibel	dB	S DB>50
/DEG	Degree	Degree	°	S CYLINDER/BI (S) 45/DEG
/DEN (/C)	Density (Mass Concentration	Kilogram/Cubic Meter	kg/m^3	S 5E-3-10E-3/DEN
/DEQ	Dose Equivalent	Sievert	Sv	S 100/DEQ
/DOA	Dosage	Milligram/Kilogram/Day	mg/kg/day	S 100-300/DOA
/DOS (/LD50)	Dose	Milligram/Kilogram	mg/kg	S DOS>0.8
/DV	Viscosity, dynamic	Pascal * Second	Pa*s	S DV>5000
/ECH (/CHA)	Electric Charge	Coulomb	C	S 0.0001-0.001/ECH
/ECO (/ECND)	Electrical Conductivity	Siemens/Meter	S/m	S ECO>800 S/M (15A) AQUEOUS
/ELC (/ECC)	Electric Current	Ampere	A	S 1-10/ELC
/ELF (/ECF)	Electric Field	Volt/Meter	V/m	S 200/ELF
/ENE	Energy	Joule	J	S DROPLETS (10A) 40 JOULE - 70 JOULE /ENE
/ERE (/ERES)	Electrical Resistivity	Ohm*Meter	Ohm*m	S ERE>0.1
/FOR	Force	Newton	N	S 50 N /FOR
/FRE (/F)	Frequency	Hertz	Hz	S OSCILLAT?/BI (S) 1- 3/FRE

Property Fields[1] (cont'd)

Field Code	Property	Unit	Symbol	Search Examples
/IU	International Unit	none	IU	S IU>1000 (P) VITAMIN A
/KV	Viscosity, kinematic	Square Meter/Second	m2/s	S METHYLPOLYSILOXANES/BI (10A) 200-300 CST /KV
/LEN (/SIZ)	Length, Size	Meter	m	S 1-4/LEN
/LUME	Luminous Emittance, Illuminance	Lux	lx	S 10-50/LUME
/LUMF	Luminous Flux	Lumen	Lm	S LUMF>1000
/LUMI	Luminous Intensity	Candela	cd	S LUMI<4
/M	Mass	Kilogram	kg	S ALLOY/BI (30A) 1E-10-1E-5/M
/MCH	Mass to Charge Ratio	none	m/z	S MCH=1
/MFD (/MFS)	Magnetic Flux Density	Tesla	T	S MFD>102
/MFR (/MFL)	Mass Flow Rate	Kilogram/Second	kg/s	S MFR<0.1
/MFST	Magnetic Field Strength	Ampere/Meter	A/m	S 10-20/MFST
/MM (/MW, /MOM)	Molar Mass	Gram/Mol	g/mol	S 2000-3000 G/MOL/MM
/MOLS	Molality of Substance	Mol/Kilogram	mol/kg	S 01.-10 MOL/KG/MOLS
/MVR	Melt Volume Rate, Melt Flow Rate	none	g/10 min	S 3/MVR
/PER	Percent (Proportionality)	none	%	S POLYMER?/AB (5A) 4/PER
/PHV (/PH)	pH Value	pH	pH	S 7.4-7.6/PHV
/POW (/PW)	Power	Watt	W	S "HG-XE-?"/BI (S) 100-200 WATT/POW
/PPM	Parts per million	Ppm	ppm	S 100 PPM /PPM (10A) ADDITIVE/BI
/PRES (/P)	Pressure	Pascal	Pa	S (VACUUM (5A) DISTILL?)/BI (S) 1000-1100/PRES
/RAD	Radioactivity	Becquerel	Bq	S 10-20/RAD
/RES	Electrical Resistance	Ohm	Ohm	S SENSOR /BI (S) 10- 100/RES
/RI	Refractive Index	none		S 3-4/RI
/RSP	Rotational Speed	Revolution/Minute	rpm	S 2 RPM - 100 RPM /RSP (S) ENGINE/BI
/SAR	Area /Surface Area	Square Meter	m2	S PLATE/BI (S) 10 M**2 - 100 M**2 /SAR
/SOL (/SLB)	Solubility	Gram/100 gram	g/100g	S SOL>20 G/100G (5A) WATER
/SSAM	Specific Surface Area, Mass	Square Meter/ Kilogram	m2/kg	S 1-10/SSAM
/STSC	Surface Tension	Joule /Square Meter	J/m2	S 60 J/M**2/STSC
/TCO (/TCND)	Thermal Conductivity	Watt/Meter*Kelvin	W/m*K	S 1/TCO (S) HEAT?
/TEMP (/T)	Temperature	Kelvin	K	S 20-25/TEMP
/TEX	Tex	Gram/Kilometer	g/km	S 1-5/TEX
/TIM	Time	Second	s	S ?INCUB?/BI (10A) 50 S - 150 S /TIM
/VEL (/V)	Velocity	Meter per Second	m/s	S REDUC?/BI (S) 1E-3-5E-3/VEL
/VELA	Velocity, angular	Radian/Second	rad/s	S VELA>10
/VLR	Volumetric Flow Rate	Cubic Meter/Second	m3/s	S 1 M**3/S - 2 M**3/S /VLR (S) ABRASIVE
/VOL	Volume	Cubic Meter	m3	S 1E-8-2E-8/VOL.EX
/VOLT	Voltage	Volt	V	S TENSION/BI (10A) 5E-3 V <VOLT<7E-3 V

(1) Exponential format is recommended for the search of particularly high or low values, e.g., 1.8E+7 or 1.8E7 (for 18000000) and 9.2E-8 (for 0.000000092).

International Patent Classification (/IPC) Thesaurus

The classifications, validity and catchwords for the main headings and subheadings from the current (8th) edition of the WIPO International Patent Classification (IPC) manual are available. The classifications from the previous editions (1-7) are also available as separate thesauri. To EXPAND and SEARCH in the thesauri for editions 1–7, use the field code followed by the edition number, e.g., /IPC2, for the 2nd edition. Catchwords are included only in the thesauri for the 8th, 7th, 6th , and 5th editions.

Code	Content	Examples
ADVANCED (ADV)	Advanced Codes for the Core Level IPC Code	E A61K0006-02+ADVANCED/IPC
ALL	All Associated Terms (BT, SELF, NT, RT)	E C01C003-00+ALL/IPC
BRO (MAN)	Complete Class	E C01C+BRO/IPC
BT	Broader Term (BT, SELF)	E C01F001-00+BT/IPC
CORE (COR)	Core Codes for the Advanced Level IPC Code	E G08C0019-22+CORE/IPC
ED	Complete title of the SELF term and IPC manual edition	E C01F001-00+ED/IPC
HIE	Hierarchy Term (Broader and Narrower Term) (BT, SELF, NT)	E C01B003-00+HIE/IPC
INDEX	Complete title of the SELF term	E C01F001-00+INDEX/IPC
KT	Keyword Term (catchwords) (SELF, KT)	E CYANOGEN+KT/IPC
NEXT	Next Classification	E C01C001-00+NEXT5/IPC
NT	Narrower Terms (SELF, NT)	E C01C+NT/IPC
PREV	Previous Classification	E C01C001-12+PREV10/IPC
RT (SIB)	Related Terms (SELF, RT)	E C01C003-20+RT/IPC
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E C01F001-00+TI/IPC

ECLA (/EPC) and ICO Thesauri

These thesauri are available in the /EPC search field (for ECLA codes) and /ICO search field (for 'in-computer-only' codes). All relationship codes can be used with both the EXPAND and SEARCH commands.

Relationship Code	Content	Search Examples
ALL	All usually required terms (BT, SELF, CODE, DEF)	E C12M0001-34H2+ALL/EPC
AUTO **(1)**	Automatic relationship (BT, SELF, CODE, DEF)	E G01J003-443+AUTO/EPC
BT	Broader terms (BT, SELF)	E G01J0003-443+BT/EPC
CODE	Classification Code (SELF, CODE)	E SCRAPER BIASING MEANS+CODE/EPC
DEF	Definition (SELF, DEF)	E B65G0045-16+DEF/EPC
HIE	Hierarchy terms (all broader and narrower terms) (BT, SELF, DEF, NT)	E A01B0001+HIE/EPC
KT	Keyword terms (SELF, KT)	E LASER+KT/EPC
MAX	All associated terms	E G01J0003-44B+MAX/EPC
NEXT	Next classification within the same class (SELF, NEXT)	E A01B0001-24+NEXT/EPC
NEXT(n)	Next n classification within the same class	E A01B0001-24+NEXT3/EPC
NT	Narrower terms	E G05B0001-04+NT/EPC
PREV	Previous Code within the same class (SELF, PREV)	E G05B0019-418N1+PREV/EPC
PREV(n)	Previous n classifications within the same class	E G05B0019-418N1+PREV2/EPC
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E G05B0001-03+TI/EPC

(1) Automatic Relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

CPC Thesaurus

This thesaurus is available in the /CPC search field. All relationship codes can be used with both the EXPAND and SEARCH commands.

Relationship Code	Content	Search Examples
ALL	All usually required terms (BT, SELF, CODE, DEF)	E C12M0001-005+ALL/CPC
AUTO **(1)**	Automatic relationship (BT, SELF, CODE, DEF)	E G01J003-443+AUTO/CPC
BT	Broader terms (BT, SELF)	E G01J0003-443+BT/CPC
CODE	Classification Code (SELF, CODE)	E CARTRIDGES+CODE/CPC
DEF	Definition (SELF, DEF)	E B65G0045-16+DEF/CPC
HIE	Hierarchy terms (all broader and narrower terms) (BT, SELF, DEF, NT)	E A01B0001+HIE/CPC
KT	Keyword terms (SELF, KT)	E LASER+KT/CPC
MAX	All associated terms	E G01J0003-44+MAX/CPC
NEXT	Next classification within the same class (SELF, NEXT)	E A01B0001-24+NEXT/CPC
NEXT(n)	Next n classification within the same class	E A01B0001-24+NEXT3/CPC
NT	Narrower terms	E G05B0001-04+NT/CPC
PREV	Previous Code within the same class (SELF, PREV)	E G05B0019-00+PREV/CPC
PREV(n)	Previous n classifications within the same class	E G05B0019-00+PREV2/CPC
TI	Complete Title of SELF Term and Broader Terms (BT, SELF)	E G05B0001-03+TI/CPC

(1) Automatic Relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

DISPLAY and PRINT Formats

Any combination of formats may be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 1-5 TI AU. The fields are displayed or printed in the order requested.

The information of the latest publication is displayed by default. To display the content for all levels of the record you can combine all display fields and formats with the qualifier .M except FA, SCAN, and TRIAL. The default display format is STD.M, i.e., all publication levels of one family in the STD format.

For displaying a particular publication of a database record, you can simply add for certain display field the kind code to the appropriate display format, e.g., ALL.A1. Fields that allow this are indicated by a number (3). Hit-term highlighting is available for all fields. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

Format	Content	Examples
ABEN (AB, ABS)	Abstract (English)	D TI AB 1-5
AG	Agent	D AG
AG.CNY	Agent, Country	D AG.CNY
AI (AP) **(1)**	Application Information	D AI
AN	Accession Number	D L3 AN
APO	Application Number, Original	D APO
CLMEN (CLM) **(3)**	Claims (English)	D CLM
CLMN **(2)**	Number of Claims	D CLMN
CPC	Cooperative Patent Classification	D CPC
CPC.TAB	CPC, Tabular	D CPC.TAB
DETDEN (DETD) **(3)**	Detailed Description (English)	D DETD
DETN **(2)**	Number of Paragraphs in DETD	D DETN
DT (TC)	Document Type	D DT
ED	Entry Date	D ED
EDP	Entry Date Patent	D EDP
EDTX	Entry Date of Fulltext	D EDTX
DED	Data Entry Date	D DED
DUPD	Data Update Date	D DUPD
EPC (ECLA, EPCLA)	European Patent Classification	D EPC
FA	Field Availability (for all publication levels)	D FA
GI	Graphic Image	D GI
IC	International Patent Classification (Version 1-7) (ICM, ICS, ICA, ICI)	D IC
ICM	IPC, Main	D IC
ICO	ICO (in-computer-only) Classification	D ICO
ICS	IPC, Secondary	D ICS
IDT	IDT Classification	D IDT
IN (AU)	Inventor	D IN
IN.CNY	Inventor, Country	D IN.CNY
IPC	International Patent Classification (version 1-8) (IPCI, IPCR, ICM, ICS, ICA, ICI)	D IPC
IPCI	IPC, Initial	D IPCI
IPCR	IPC, Reclassified	D IPCR
LA	Language	D LA
LAF	Language of Filing	D LAF
LCL	Locarno Classification	D LCL
MCLMEN (MCLM)	Main Claim (English)	D MCLM
PA (CS)	Patent Assignee	D PA
PA.CNY	Patent Assignee, Country	D PA.CNY
PAN	Patent Assignee Normalized	D PAN
PAS	Patent Assignee Standardized	D PAS
PI (PN) **(1)**	Patent Information	D PI
PIT	Patent Information Publication Type	D PIT
PNO	Patent Number, Original	D PNO
PRN (PRAI) **(1,5)**	Priority Information	D PRN
PRNO (PRAO) **(2)**	Priority Number, Original	D PRNO
PRYF	Priority Year, First	D PRYF
RLI (RLN)	Related Patent Information (includes RLPI)	D RLI
TIEN (TI)	Title (English)	D TIEN
UO **(5)**	Ultimate Owner	D UO
UOS **(5)**	Ultimate Owner Standardized	D UOS
UP **(1)**	Update Date	D UP
UPTX **(1)**	Update Date Text	D UPTX

DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
ALL **(1,3)**	AN, EDP, ED, EDTX, UP, DED, DUPD, TIEN, IN, PA, PAS, PAN, UO, UOS, AG, LAF, LA, DT, PIT, PI, AI, RLI, PRAI, IPC, CPC, EPC, ICO, IDT, LCL ABEN, DETDEN, CLMEN, KT	D ALL
ALLG **(1)**	ALL, plus graphic image	D ALLG
IALL **(1,3)**	ALL, indented with text labels	D IALL
DALL **(1)**	ALL, delimited for post processing	D DALL
IALLG **(1)**	IALL, plus graphic image	D IALLG
APPS **(1)**	AI, RLI, PRAI	D APPS
BIB **(1)**	AN, EDP, ED, EDTX, UP, DED, DUPD, TIEN, IN, PA, PAS, PAN, UO, UOS, AG, LAF, LA, DT, PIT, PI, AI, RLI, PRAI, IPC, CPC, EPC, ICO, IDT	D BIB
BIBG **(1)**	BIB, plus graphic image	D BIBG
IBIB **(1)**	BIB, indented with text labels	D IBIB
IBIBG **(1)**	IBIB, plus graphic image	D IBIBG
BRIEF **(1)**	AN, EDP, ED, EDTX, UP, DED, DUPD, TIEN, IN, PA, PAS, PAN, UO, UOS, AG, LAF, LA, DT, PIT, PI, AI, RLI, PRAI, IPC, EPC, ICO, IDT, LCL, ABEN, MCLMEN, KT	D BRIEF
BRIEFG **(1,4)**	BRIEF, plus graphic image	D BRIEFG
IBRIEF **(1)**	BRIEF, indented with text labels	D IBRIEF
IBRIEFG **(1,4)**	BRIEFG, indented with text labels	D IBRIEFG
IND	IPC (ICM, ICS, IPCI, IPCR), CPC, EPC, ICO, IDT, LCL	D IND
CPC.TAB	CPC, CPC.KW, CPC.ACD, CPC.VER in tabular format	D CPC.TAB
IPC	International Patent Classification (ICM, ICS, IPCI, IPCR)	D IPC
IPC.TAB	IPC, IPC.KW, IPC.ACD, IPC.VER, in tabular version	D IPC.TAB
MAX (ALL.M) **(1)**	AN, EDP, ED, EDTX, UP, DED, DUPD, TIEN, IN, PA, PAS, PAN, UO, UOS, AG, LAF, LA, DT, PIT, PI, AI, RLI, PRAI, IPC, CPC, EPC, ICO, IDT, LCL ABEN, DETDEN, CLMEN, KT, FA for all levels of publication	D MAX
MAXG (ALLG.M) **(1)**	MAX, plus graphic image	D MAXG
IMAX (IALL.M) **(1)**	MAX, indented with text labels	D IMAX
IMAXG (IALLG.M) **1)**	IMAX, plus graphic image	D IMAXG
PASS	PI, PRAI	D PASS
PATS **(1)**	PI, PNO, RLPI	D PATS
SCAN **(4)**	TI (random display without answer numbers)	D SCAN
STD **(1,6)**	AN, EDP, ED, EDTX, UP, DED, DUPD, TIEN, IN, PA, PAS, PAN, UO, UOS, AG, LAF, LA, DT, PIT, PI, AI, RLI, PRAI, IPC, CPC, EPC, ICO, IDT, LCL	D STD
STDG **(1)**	STD, plus graphic image	D STDG
ISTD **(1)**	STD, indented with text labels	D ISTD
ISTDG **(1)**	ISTD, plus graphic image	D ISTDG
TRIAL (TRI, SAM, SAMPLE, FREE)	EDP, ED, EDTX, UP, DED, DUPD, TIEN, FA, DETN, CLMN	D TRIAL
TX	DETDEN, CLMEN	D TX
HIT	Hit term(s) and field(s)	D HIT
KWIC	Up to 50 words before and after hit term(s) (KeyWord-In-Context)	D KWIC
OCC	Number of occurrences of hit term(s) and field(s) in which they occur	D OCC

(1) By default, patent numbers, application and priority numbers are displayed in STN Format. To display them in Derwent format, enter SET PATENT DERWENT at an arrow prompt. To reset display to STN Format, enter SET PATENT STN.
(2) Custom display only.
(3) You can combine this display field with the qualifier .PK (Patent Kind Code) to display the content for a certain publication level of a record, e.g., CLM.B2.
(4) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.
(5) If priority information is not available for a certain document, this information is taken from the application information of this document and marked with an asterisk (*).
(6) The default display format is STD.M, i.e., all publication levels of one family in the STD format.

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

You can combine all fields except FA with the qualifier .M to SELECT/ANALYZE the content of all publication levels.

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abstract (English)	ABEN (AB)	Y	Y
Agent	AG	Y	Y
Agent, Country	AG.CNY	Y	Y
Agent Address	AGA	Y	Y
Agent, Total	AG.T	Y	Y
Accession Number	AN	Y	Y
Application Country	AC	Y	Y
Application Date	AD	Y	Y
Application Information Group	APPS	Y	Y
Application Kind Code	AK	Y **(3)**	Y
Application Number	AP (AI)	Y **(2)**	Y
Application Number, Original	APO	Y	Y
Application Year	AY	Y	Y
CPC Classification	CPC	Y	Y
Data Entry Date	DED	Y	Y
Data Update Date	DUPD	Y	Y
Document Type	DT (TC)	Y	Y
Entry Date	ED	Y	Y
Entry Date Fulltext	EDTX	Y	Y
Entry Date Patent	EDP	Y	Y
European Patent Classification	EPC (ECLA, EPCLA)	Y	N
Field Availability	FA	Y	N
International Patent Classification	IC	Y	N
Inventor	IN (AU)	Y	Y
Inventor, Country	IN.CNY	Y	Y
ICO (in-computer-only) Classification	ICO	Y	Y
IdT Classification	IDT	Y	Y
IPC (ICM, ICS, ICA, ICI, IPCI, IPCR)	IPC	Y	Y
IPC, Additional	ICA	Y	Y
IPC, Advanced Level Symbols	IPC.A	Y **(4)**	N
IPC, Advanced Level Symbols for Invention	IPC.AI	Y **(4)**	N
IPC, Core Level	IPC.C	Y	N
IPC, Core Level, Invention	IPC.CI	Y	N
IPC, Initial	ICI	Y	Y
IPC, Initial	IPCI	Y	Y
IPC, Main	ICM	Y	Y
IPC, Reclassified	IPCR	Y	Y
IPC, Reform	IPC.REF	Y	N
IPC, Secondary	ICS	Y	Y
Key Terms	KT	Y	N
Language	LA	Y	Y
Language of Filing	LAF	Y	Y
Locarno Classification	LCL	Y	Y
Number of Claims	CLMN	Y	Y
Number of Paragraphs in DETD	DETN	Y	Y
Occurrence Count of Hit Terms	OCC	N	Y
Patent Assignee	PA (CS)	Y	Y
Patent Assignee, Country	PA.CNY	Y	Y
Patent Assignee, Total	PA.T	Y	Y

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Patent Assignee Normalized	PAN	Y	Y
Patent Assignee Standardized	PAS	Y	Y
Patent Country	PC	Y	Y
Patent Information Publication Type	PIT	Y	Y
Patent Kind Code	PK	Y	Y
Patent Number	PN (PI)	Y (default)	Y
Patent Number Group	PATS	Y	Y
Patent Number, Original	PNO	Y	Y
Patent Number/Kind Code	PNK	Y **(3)**	Y
Pre-IPC8 Symbols from the ICM and first IPC8 values from 2006-present	IPC.F	Y	N
Priority Country	PRC	Y	Y
Priority Date	PRD	Y	Y
Priority Date, First	PRDF	Y	Y
Priority Number Kind Code	PRK	Y	Y
Priority Number	PRN (PRAI)	Y	Y
Priority Number, Original	PRNO	Y	Y
Priority Year	PRY	Y	Y
Priority Year, First	PRYF	Y	Y
Publication Date	PD	Y	Y
Publication Year	PY	Y	Y
Related Application Country	RLC	Y	Y
Related Application Number	RLN	Y	Y
Related Application Date	RLD	Y	Y
Related Application Year	RLY	Y	Y
Related Patent Country	RLPC	Y	Y
Related Application Number	RLPN	Y **(3)**	Y
Related Application Date	RLPD	Y	Y
Related Application Year	RLPY	Y	Y
Title (English)	TIEN (TI)	Y	Y
Ultimate Owner Normalized	UO	Y	Y
Ultimate Owner Standardized	UOS	Y	Y
Update Date	UP	Y	Y
Update Date Text	UPTX	Y	Y

(1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT TI.
(2) Selects or analyzes application numbers with /AP appended to the terms created by SELECT.
(3) SELECT or ANALYZE HIT are not valid with this field.
(4) Appends /IPC.REF to the terms created by SELECT.

Sample Records

DISPLAY MAXG (STN format)

```
AN      2009001486   AUPATFULL EDP 20110629  ED 20110629 UP 20200823 EDTX
        20110629 UPTX 20200130
        DED 20091027 DUPD 20200818 Full-text
TIEN    Method for producing ethanol from steam exploded sweet potato by
        fermentation
IN      Chen, Hongzhang; Fu, Xiaoguo; Wang, Weidong
PA      Institute of Process Engineering, Chinese Academy of Sciences
        Hu Nan Qiangsheng Medicine Co. Ltd.
PAS     INSTITUTE OF PROCESS ENGINEERING CHINESE ACADEMY OF SCIENCES; HU NAN
        QIANGSHENG MEDICINE
UO      HU NAN QIANGSHENG MEDICINE
UOS     HU NAN QIANGSHENG MEDICINE
AG      Phillips Ormonde Fitzpatrick, 367 Collins Street, Melbourne, VIC, 3000
LAF     English
LA      English
DT      Patent; (Fulltext)
PI      AU 2009201220            A1    20091015
PIT     AUA1 OPEN TO PUBLIC INSPECTION [FROM 20010524 ONWARDS]
AI      AU 2009-201220           A     20090327
PRAI    CN 2008-10102979               20080328
        CN 2008-10102980               20080328
ICM     C12P0007-10
IPCI    C12P0007-10 [I,A]
CPC     C12P0007-06; C12P0019-14; Y02E0050-10; C12P0007-10
EPC     C12P0007-06; C12P0007-10; C12P0019-14
ICO     Y02E0050-16; Y02E0050-17

AB
        ocr
        The invention provides a method for producing ethanol from steam
        exploded sweet potato by fermentation which includes the steps of: 1)
        subjecting sweet potato to a steam explosion treatment; 2) subjecting
        the sweet potato after the steam explosion to saccharification and
        fermentation; and 3) collecting ethanol produced by the fermentation. In
        the invention, sweet potato is subjected to a pre-treatment utilizing a
        short-time, low-pressure steam explosion technology, which omits the
        long-time cooking process for the starch-based raw material and reduces
        the energy consumption for producing ethanol by fermentation; and
        because the steam explosion treated sweet potato is subjected directly
        to saccharification and solid-state fermentation, the water content in
        fermentation mash is reduced greatly so as to increase the concentration
        of ethanol in fermentation mash, reduce the energy consumption for
        …

DETDEN
        [DESC0001] METHOD FOR PRODUCING ETHANOL FROM STEAM EXPLODED SWEET POTATO
        BY FERMENTATION Our Ref : 851019 POF Code: 299774/491920, 491921 The
        following statement is a full description of this invention, including
        the best method performing it known to applicant(s):
           Method for Producing Ethanol from Steam Exploded Sweet Potato by
        Fermentation This application claims priority from Chinese Application
        No.200810102979.8 filed, on 28 March 2008; and from Chinese Application
        No.200810102980.0 filed on 28 March 2008; the contents of which are to
        be taken as incorporated herein by this reference.
           FIELD OF THE INVENTION The present invention relates to a method for
        producing ethanol, and particularly, a method for producing ethanol from
        steam exploded sweet potato by fermentation.
           BACKGROUND With the rapid development of the human society, the
        energy source and resource crisis has become prominent increasingly, and
        …

CLMEN
        [CLM0001] 1. A method for producing ethanol from steam exploded sweet
        potato by fermentation, including the steps of:
```

[CLM0002] 1) subjecting sweet potato to a steam explosion treatment;

[CLM0003] 2) subjecting the sweet potato after the steam explosion to saccharification and fermentation; and

[CLM0004] 3) collecting ethanol produced by the fermentation.

[CLM0005] 2. The method according to claim 1 , wherein the steam explosion treatment is performed in a steam explosion tank under a steam pressure of 0.5-0.8 MPa for 2-4 min.

[CLM0006] 3. The method according to claim 1 , wherein, in the step 2), the solid-state fermentation is carried out after the saccharification of the steam exploded sweet potato.

…

AN **2009001486** AUPATFULL EDP 20110629 ED 20110629 UP 20200816 EDTX 20110629 UPTX 20200128
DED 20101129 DUPD 20200811 Full-text
TIEN Method for producing ethanol from steam exploded sweet potato by fermentation
IN CHEN HONGZHANG; FU XIAOGUO; WANG WEIDONG
PA INST PROCESS ENG CAS
HU NAN QIANGSHENG MEDICINE CO LTD
PAS INST PROCESS ENG CAS; HU NAN QIANGSHENG MEDICINE
UO HU NAN QIANGSHENG MEDICINE
UOS HU NAN QIANGSHENG MEDICINE
LAF English
DT Patent; (Fulltext)
PI AU 2009201220 B2 20101125
PIT AUB2 PATENT PRECEEDED BY A [FROM 19040101 UNTIL 20091231] or PATENT PROCEEDED BY OPI [FROM 20010524 ONWARDS]
AI AU 2009-201220 A 20090327
PRAI CN 2008-10102979 20080328
CN 2008-10102980 20080328
IPCI C12P0007-10 [I,A]
CPC C12P0007-06; C12P0019-14; Y02E0050-10; C12P0007-10
EPC C12P0007-06; C12P0007-10; C12P0019-14
ICO Y02E0050-16; Y02E0050-17

AB

Equivalent from US2009246847A1
A method for producing ethanol from steam-exploded sweet potato by fermentation includes subjecting sweet potato to a steam explosion treatment, subjecting the sweet potato after the steam explosion to saccharification and fermentation, and collecting ethanol produced by the fermentation. The sweet potato can optionally be subjected to a pre-treatment utilizing a short-time, low-pressure steam explosion technology, which omits the long-time cooking process for the starch-based raw material and reduces the energy consumption for producing ethanol by fermentation. The method permits the steam explosion-treated sweet potato t be subjected directly to

…

DETDEN

[DESC0001] METHOD FOR PRODUCING ETHANOL FROM STEAM EXPLODED SWEET POTATO BY FERMENTATION Our Ref : 851019 POF Code: 299774/491920, 491921 The following statement is a full description of this invention, including the best method of performing it known to applicant(s):
[DESC0002] Oeq O O O O O O Method for Producing Ethanol from Steam

Exploded Sweet Potato by Fermentation FIELD OF THE INVENTION The present invention relates to a method for producing ethanol, and particularly, a method for producing ethanol from steam exploded sweet potato by fermentation.

[DESC0003] BACKGROUND A_reference herein to a patent document or other

…

CLMEN

[CLM0001] 1. A method of producing ethanol from steam exploded sweet potato by fermentation, including the steps of:

[CLM0002] 1) subjecting sweet potato to a steam explosion treatment; wherein the steam explosion treatment is performed in a steam explosion tank under a steam pressure of 0.50.8 MPa for 2-4 rain;

[CLM0003] 2) subjecting the sweet potato after the steam explosion to saccharification and fermentation; and

[CLM0004] 3) collecting ethanol produced by the fermentation.

[CLM0005] 2. The method according to claim 1 , wherein, in the step 2), the solid-state fermentation is carried out after the saccharification of the steam exploded sweet potato.

[CLM0006] 3. The method according to claim 2 , wherein an glucoamylase is added in an amount of 100-150 U glucoamylase/g dry steam exploded sweet potato, and the saccharification is performed at 55-60°Cfor 20-60 rain; and then, (NH4)2 SO4 , K-H2 PO4 and activated yeast are added, and the fermentation is performed for 48-60 h under a condition of 30-35°C, wherein, the addition amount of (NH4)2 SO4 is 0.1-0.15 g (NHa)2 SO4 /]00 g sweet potato, the addition amount of KH2 PO4 is 0.1-0.2 g KHzPO4 /100 g sweet potato, and the addition amount of said yeast is 0.10-0.30 g yeast/100 g sweet potato.

…

AN **2009001486** AUPATFULL EDP 20110629 ED 20110629 UP 20200816 EDTX 20110629 UPTX 20200127
DED 20110124 DUPD 20200811 Full-text

TIEN Method for producing ethanol from steam exploded sweet potato by fermentation

IN Chen, Hongzhang; Fu, Xiaoguo; Wang, Weidong

PA Institute of Process Engineering, Chinese Academy of Sciences
Hu Nan Qiangsheng Medicine Co. Ltd.

PAS INSTITUTE OF PROCESS ENGINEERING CHINESE ACADEMY OF SCIENCES; HU NAN QIANGSHENG MEDICINE

UO HU NAN QIANGSHENG MEDICINE

UOS HU NAN QIANGSHENG MEDICINE

AG Phillips Ormonde Fitzpatrick, 367 Collins Street, Melbourne, VIC, 3000

LAF English

LA English

DT Patent; (Fulltext)

PI AU 2009201220 B8 20110120

PIT AUB8 CORRECTED FIRST PAGE OF GRANTED DOC. [FROM 20010524 ONWARDS]

AI AU 2009-201220 A 20090327

PRAI CN 2008-10102979 20080328
CN 2008-10102980 20080328

ICM C12P0007-10

IPCI C12P0007-10 [I,A]

CPC C12P0007-06; C12P0019-14; Y02E0050-10; C12P0007-10

EPC C12P0007-06; C12P0007-10; C12P0019-14

ICO Y02E0050-16; Y02E0050-17

AB

ocr
The invention provides a method for producing ethanol from steam exploded sweet potato by fermentation which includes the steps of: 1) subjecting sweet potato to a steam explosion treatment; 2) subjecting the sweet potato after the steam explosion to saccharification and fermentation; and 3) collecting ethanol produced by the fermentation. In the invention, sweet potato is subjected to a pre-treatment utilizing a short-time, low-pressure steam explosion technology, which omits the long-time cooking process for the starch-based raw material and reduces the energy consumption for producing ethanol by fermentation; and

…

AUPATFULL

DETDEN

[DESC0001] METHOD FOR PRODUCING ETHANOL FROM STEAM EXPLODED SWEET POTATO BY FERMENTATION Our Ref : 851019 POF Code: 299774/491920, 491921 The following statement is a full description of this invention, including the best method performing it known to applicant(s):
Method for Producing Ethanol from Steam Exploded Sweet Potato by Fermentation FIELD OF THE INVENTION The present invention relates to a method for producing ethanol, and particularly, a method for producing ethanol from steam exploded sweet potato by fermentation.
BACKGROUND A_reference herein to a patent document or other matter
…

CLMEN

[CLM0001] 1. A method of producing ethanol from steam exploded sweet potato by fermentation, including the steps of:

[CLM0002] 1) subjecting sweet potato to a steam explosion treatment; wherein the steam explosion treatment is performed in a steam explosion tank under a steam pressure of 0.50.8 MPa for 2-4 rain;

[CLM0003] 2) subjecting the sweet potato after the steam explosion to saccharification and fermentation; and

[CLM0004] 3) collecting ethanol produced by the fermentation.

[CLM0005] 2. The method according to claim 1 , wherein, in the step 2), the solid-state fermentation is carried out after the saccharification of the steam exploded sweet potato.
…

KT

sweet potato; simultaneous saccharification; solid-state fermentation; starch cooking; steam explosion tank; energy consumption; biomass fuel ethanol; steam explosion treatment; steam explosion technology; dry steam; treated steam; leanness resistant; foodstuff replaceable crop; steam pressure; secondary steam; alcohol concentration; activated yeast; high starch content; starch type raw material; energy source; resource crisis; inconvenient traffic; behindhand processing; biomass raw material; ultraviolet radiation; potential raw material; hubei yichang angel yeast; fermentation mash; water bath; biological ethanol

DISPLAY BRIEFG.M

AN	2006008329 AUPATFULL EDP 20110630 ED 20120130 UP 20210510 EDTX 20110630 UPTX 20200127 DED 20110919 DUPD 20200814 Full-text		
TIEN	Pyrolysis method and apparatus		
IN	Dam-Johansen, Kim; Jensen, Peter A.; Bech, Niels		
PA	Danmarks Tekniske Universitet		
PAS	DANMARKS TEKNISKE UNIVERSITET		
PAN	DANMARKS TEKNISKE UNIVERSITET		
AG	FB Rice, Level 23 44 Market Street, Sydney, AU		
DT	Patent; (Fulltext)		
PI	AU 2006243568	B2	20110915
PIT	AUB2 PATENT PRECEEDED BY A [FROM 19040101 UNTIL 20091231] or PATENT PROCEEDED BY OPI [FROM 20010524 ONWARDS]		
AI	AU 2006-243568	A	20060503
PRAI	US 2005-676959		20050503
	EP 2005-76034		20050503
	DK2006000241		20060503
RLPI	WO 2006117005		20061109
RLI	WO 2006-DK241		20060503 PCT Application
IPCI	C10B0053-02 [I,A]; C10B0047-22 [I,A]; C10C0005-00 [I,A]		
CPC	C10B0053-02; Y02P0020-145; C10C0005-00; C10B0047-22; Y02E0050-10		
EPC	C10B0047-22; C10B0053-02; C10C0005-00		
ICO	Y02E0050-14		

AB

Original
A fast pyrolysis apparatus (200) for producing pyrolysis liquid, such as oil or tar, char and pyrolysis gas from biomass, such as straw, comprises a centrifuge chamber (204) and a rotor (210) arranged to impart rotation on the biomass in the centrifuge chamber to force the biomass outwardly under the action of centrifugal forces. A furnace (206) arranged coaxially around the centrifuge chamber (204) maintains the temperature at an outer reactive wall of the centrifuge chamber at an elevated temperature to effect the pyrolysis process at or near the reactive wall. The apparatus comprises a condenser (218) arranged coaxially with and surrounded by the centrifuge chamber (204). The apparatus may be accommodated by a mobile unit for simultaneously collecting biomass from a field and processing the biomass in the apparatus.

MCLMEN

[CLM0001] 1. A method for producing pyrolysis liquid from biomass, comprising the step of decomposing the biomass into pyrolysis liquid, char and pyrolysis gas in a fast pyrolysis process, the method comprising the steps of:
- feeding the biomass into a centrifuge chamber; - rotating a rotor to impart rotation on biomass distributed in gas volume in the centrifuge chamber, whereby the biomass is forced towards an outer wall of the centrifuge chamber by centrifugal forces, which centrifugal forces provide an even pressure of biomass against said outer wall of the centrifuge chamber; - decomposing the biomass into pyrolysis vapors and char by maintaining said outer wall at a temperature of 350 - 700 degrees Celsius to effect the pyrolysis process at or near the outer wall of the centrifuge chamber, whereby ablative pyrolysis takes place at or near said outer wall; - separating the pyrolysis vapours and char; - conveying the pyrolysis vapors and char away from the centrifuge chamber; - condensing at least a portion of said pyrolysis vapors to obtain said pyrolysis liquid and pyrolysis gas.

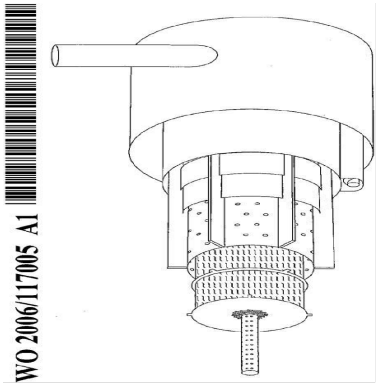
KT

pyrolysis method; pyrolysis vapour; pyrolysis gas; reactive wall; code attd abbreviation; pyrolysis centrifuge; pyrolysis chamber; condenser chamber; pyrolysis process; pyrolysis vapor; pyrolysis liquid; reactor gas phase temperature; two-letter code; pyrolysis condenser; efficient pyrolysis assembly; heat transmission medium; fast pyrolysis apparatus; pct gazette; attce note; regular issue; surface pyrolysis; flash pyrolysis; pyrolysis reaction; reactor wall temperature; centrifuge chamber; processing biomass; improved pyrolysis yield; gas phase retention time; remote pyrolysis facility; art pyrolysis system

AN 2006008329 AUPATFULL EDP 20110630 ED 20110630 UP 20210510 EDTX 20110630 UPTX 20200205
DED 20080111 DUPD 20200814 Full-text
TIEN Pyrolysis method and apparatus
IN Dam-Johansen, Kim; Jensen, Peter A.; Bech, Niels
PA DANMARKS TEKNISKE UNIVERSITET
PAS DANMARKS TEKNISKE UNIVERSITET
PAN DANMARKS TEKNISKE UNIVERSITET
AG FB Rice & Co, Level 23 44 Market Street, Sydney, NSW, 2000
DT Patent; (Fulltext)
PI AU 2006243568 A2 20061109
PIT AUA2 AMENDED POST OPEN TO PUBLIC INSPECTION [FROM 20010524 ONWARDS]
AI AU 2006-243568 A 20060503
PRAI US 2005-676959 20050503
EP 2005-76034 20050503
DK2006000241 20060503
RLPI WO 2006117005 20061109
RLI WO 2006-DK241 20060503 PCT Application
ICM C10B0053-02
ICS C10B0047-22; C10C0005-00
IPCI C10B0053-02 [I,A]; C10B0047-22 [I,A]; C10C0005-00 [I,A]
CPC C10B0053-02; Y02P0020-145; C10C0005-00; C10B0047-22; Y02E0050-10

AUPATFULL

EPC C10B0047-22; C10B0053-02; C10C0005-00
ICO Y02E0050-14
GI



AB

ocr
(57) Abstract: A fast pyrolysis apparatus (200) for producing pyrolysis liquid, such as oil or tar, char and pyrolysis gas from biomass, such as straw, comprises a centrifuge chamber (204) and a rotor (210) arranged to impart) rotation on the biomass in the centrifuge chamber to force the biomass outwardly under the action of centrifugal forces. A furnace (206) arranged coaxially around ti 1 e centrifuge chamber (204)

…

AN **2006008329** AUPATFULL EDP 20110630 ED 20120130 UP 20210510 EDTX 20110630 UPTX 20200127
DED 20110919 DUPD 20200814 Full-text
TIEN Pyrolysis method and apparatus
IN Dam-Johansen, Kim; Jensen, Peter A.; Bech, Niels
PA Danmarks Tekniske Universitet
PAS DANMARKS TEKNISKE UNIVERSITET
PAN DANMARKS TEKNISKE UNIVERSITET
AG FB Rice, Level 23 44 Market Street, Sydney, AU
DT Patent; (Fulltext)
PI AU 2006243568 B2 20110915
PIT AUB2 PATENT PRECEEDED BY A [FROM 19040101 UNTIL 20091231] or PATENT PROCEEDED BY OPI [FROM 20010524 ONWARDS]
AI AU 2006-243568 A 20060503
PRAI US 2005-676959 20050503
EP 2005-76034 20050503
DK2006000241 20060503
RLPI WO 2006117005 20061109
RLI WO 2006-DK241 20060503 PCT Application
IPCI C10B0053-02 [I,A]; C10B0047-22 [I,A]; C10C0005-00 [I,A]
CPC C10B0053-02; Y02P0020-145; C10C0005-00; C10B0047-22; Y02E0050-10
EPC C10B0047-22; C10B0053-02; C10C0005-00
ICO Y02E0050-14

AB

Original
A fast pyrolysis apparatus (200) for producing pyrolysis liquid, such as oil or tar, char and pyrolysis gas from biomass, such as straw, comprises a centrifuge chamber (204) and a rotor (210) arranged to impart rotation on the biomass in the centrifuge chamber to force the biomass outwardly under the action of centrifugal forces. A furnace (206) arranged coaxially around the centrifuge chamber (204) maintains the temperature at an outer reactive wall of the centrifuge chamber at an elevated temperature to effect the pyrolysis process at or near the reactive wall. The apparatus comprises a condenser (218) arranged coaxially with and surrounded by the centrifuge chamber (204). The apparatus may be accommodated by a mobile unit for simultaneously collecting biomass from a field and processing the biomass in the apparatus.

…

MCLMEN

[CLM0001] 1. A method for producing pyrolysis liquid from biomass, comprising the step of decomposing the biomass into pyrolysis liquid, char and pyrolysis gas in a fast pyrolysis process, the method comprising the steps of:
- feeding the biomass into a centrifuge chamber; - rotating a rotor to impart rotation on biomass distributed in gas volume in the centrifuge chamber, whereby the biomass is forced towards an outer wall of the centrifuge chamber by centrifugal forces, which centrifugal forces provide an even pressure of biomass against said outer wall of the centrifuge chamber; - decomposing the biomass into pyrolysis vapors and char by maintaining said outer wall at a temperature of 350 - 700

KT

pyrolysis method; pyrolysis vapour; pyrolysis gas; reactive wall; code attd abbreviation; pyrolysis centrifuge; pyrolysis chamber; condenser chamber; pyrolysis process; pyrolysis vapor; pyrolysis liquid; reactor gas phase temperature; two-letter code; pyrolysis condenser; efficient pyrolysis assembly; heat transmission medium; fast pyrolysis apparatus; pct gazette; attce note; regular issue; surface pyrolysis; flash pyrolysis; pyrolysis reaction; reactor wall temperature; centrifuge chamber; processing biomass; improved pyrolysis yield; gas phase retention time; remote pyrolysis facility; art pyrolysis system