CPC  COOPERATIVE PATENT CLASSIFICATION

C  CHEMISTRY; METALLURGY
   (NOTES omitted)

CHEMISTRY

C10  PETROLEUM, GAS OR COKE INDUSTRIES; TECHNICAL GASES CONTAINING CARBON MONOXIDE; FUELS; LUBRICANTS; PEAT

C10G  CRACKING HYDROCARBON OILS; PRODUCTION OF LIQUID HYDROCARBON MIXTURES, e.g. BY DESTRUCTIVE HYDROGENATION, OLIGOMERISATION, POLYMERISATION (cracking to hydrogen or synthesis gas C01B; cracking or pyrolysis of hydrocarbon gases to individual hydrocarbons or mixtures thereof of definite or specific constitution C07C; cracking to cokes C10B); RECOVERY OF HYDROCARBON OILS FROM OIL-SHALE, OIL-SAND, OR GASES; REFINING MIXTURES MAINLY CONSISTING OF HYDROCARBONS; REFORMING OF NAPHTHA; MINERAL WAXES (inhibiting corrosion or incrustation in general C23F)

NOTES
1. In this subclass,
   • groups C10G 9/00 - C10G 49/00 are limited to one-step processes;
   • combined or multi-step processes are covered by groups C10G 51/00 - C10G 69/00;
   • refining or recovery of mineral waxes is covered by group C10G 73/00
2. In this subclass, the following terms or expressions are used with the meanings indicated:
   • “in the presence of hydrogen” or “in the absence of hydrogen” mean treatments in which hydrogen, in free form or as hydrogen generating compounds, is added, or not added, respectively;
   • “hydrotreatment” is used for conversion processes as defined in group C10G 45/00 or group C10G 47/00;
   • “hydrocarbon oils” covers mixtures of hydrocarbons such as tar oils or mineral oils.
3. In this subclass, in the absence of an indication to the contrary, classification is made in the last appropriate place.

WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   C10G 73/23 covered by C10G 73/06
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00  Production of liquid hydrocarbon mixtures from oil-shale, oil-sand, or non-melting solid carbonaceous or similar materials, e.g. wood, coal (mechanical winning of oil from oil-shales, oil-sand, or the like B03B)
   1/002 . [in combination with oil conversion- or refining processes]
   1/004 . [Inhibiting of corrosion]
   1/006 . [Combinations of processes provided in groups C10G 1/02 - C10G 1/08]
   1/008 . [Controlling or regulating of liquefaction processes (controlling or regulation in general G05)]
   1/02 . by distillation (destructive distillation of oil-shale C10B 53/06)
   1/04 . by extraction
   1/042 . . [by the use of hydrogen-donor solvents]
   1/045 . . [Separation of insoluble materials]
   1/047 . . [Hot water or cold water extraction processes]
   1/06 . by destructive hydrogenation
   1/065 . . [in the presence of a solvent]
Production of liquid hydrocarbon mixtures from oxygen-containing or organic materials, e.g. fatty oils, fatty acids (production from non-melting solid oxygen-containing carbonaceous materials C10G 3/40; preparation of individual hydrocarbons or mixtures thereof of definite or specified contribution C07C)

WARNING


Groups C10G 3/40–C10G 3/62 and C10G 3/00 should be considered in order to perform a complete search.

Cracking in the absence of hydrogen

Azeotropic or extractive distillation (refining of hydrocarbon oils, in the absence of hydrogen, by extraction with selective solvents C10G 21/00)

Inhibiting corrosion during distillation

Controlling or regulating (controlling or regulating in general G05)

Thermal non-catalytic cracking, in the absence of hydrogen, of hydrocarbon oils

C10G 3/40 . . . (according to the "fluidised-bed" technique)

C10G 3/35 . . [with the use of another activation, e.g. radiation, vibration, electrical or electromagnetic means]

C10G 3/40 . . [from carbon monoxide with water vapor]

C10G 3/50 . . . . [from carbon dioxide with hydrogen]

C10G 3/00 Production of liquid hydrocarbon mixtures from oxygen-containing or organic materials, e.g. fatty oils, fatty acids (production from non-melting solid oxygen-containing carbonaceous materials C10G 3/40; preparation of individual hydrocarbons or mixtures thereof of definite or specified contribution C07C)

WARNING


Groups C10G 3/40–C10G 3/62 and C10G 3/00 should be considered in order to perform a complete search.

3/40 . . . . [Thermal non-catalytic treatment]

3/42 . . . . [Catalytic treatment]

3/44 . . [characterised by the catalyst used]

3/45 . . . . [containing iron group metals or compounds thereof]

3/46 . . . . . . . . . . . . [in combination with chromium, molybdenum, tungsten metals or compounds thereof]

3/47 . . . . [containing platinum group metals or compounds thereof]

3/48 . . . . [further characterised by the catalyst support]

3/49 . . . . [containing crystalline aluminosilicates, e.g. molecular sieves]

3/50 . . . . [in the presence of hydrogen, hydrogen donors or hydrogen generating compounds]

3/52 . . . . . [Hydrogen in a special composition or from a special source]

3/54 . . [characterised by the catalytic bed]

3/55 . . . . [with moving solid particles, e.g. moving beds]

3/56 . . . . . . . . . . . [suspended in the oil, e.g. slurries, ebullated beds]

3/57 . . . . [according to the fluidised bed technique]

3/60 . . . . . [Controlling or regulating the process (controlling or regulating in general G05)]

3/62 . . . . . . [Catalyst regeneration (regeneration or reactivation of catalysts in general B01J 38/00)]

5/00 Recovery of liquid hydrocarbon mixtures from gases, e.g. natural gas

5/02 . . with solid adsorbents

5/04 . . with liquid absorbents

5/06 . . by cooling or compressing

7/00 Distillation of hydrocarbon oils (distillation in general B01D)

7/003 . . . . . . (distillation of lubricating oils)

7/006 . . . . . . (of waste oils other than lubricating oils, e.g. PCB's containing oils)

7/02 . Stabilising gasoline by removing gases by fractioning

7/04 . Dewatering

7/06 . Vacuum distillation

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Cracking in the absence of hydrogen

15/00 Cracking of hydrocarbon oils by electric means, electromagnetic or mechanical vibrations, by particle radiation or with gases superheated in electric arcs
15/08 . . direct contact with inert heated gases or vapours
15/10 . . produced by partial combustion of the material to be cracked

Refining in the absence of hydrogen

17/00 Refining of hydrocarbon oils in the absence of hydrogen, with acids, acid-forming compounds or acid-containing liquids, e.g. acid sludge
17/02 . . with acids or acid-containing liquids, e.g. acid sludge
17/04 . . Liquid-liquid treatment forming two immiscible phases
17/06 . . using acids derived from sulfur or acid sludge thereof
17/07 . . using halogen acids or oxyacids of halogen (acids generating halogen C10G 27/02)
17/08 . . with acid-forming oxides (refining with CO₂ or SO₂ as a selective solvent C10G 21/06)
17/085 . . with oleum
17/09 . . with acid salts
17/095 . . with "solid acids", e.g. phosphoric acid deposited on a carrier
17/10 . Recovery of used refining agents

19/00 Refining hydrocarbon oils in the absence of hydrogen, by alkaline treatment
19/02 . . with aqueous alkaline solutions
19/04 . . containing solubilisers, e.g. solutisers
19/06 . . with plumbites or plumbates
19/067 . . with molten alkaline material
19/073 . . with solid alkaline material
19/08 . Recovery of used refining agents

21/00 Refining of hydrocarbon oils in the absence of hydrogen, by extraction with selective solvents (C10G 17/00, C10G 19/00 take precedence; dewaxing oils C10G 73/02)
21/003 . . [Solvent de-asphalting]
21/006 . . [of waste oils, e.g. PCB's containing oils]
21/02 . . with two or more solvents, which are introduced or withdrawn separately
21/04 . . by introducing simultaneously at least two immiscible solvents counter-current to each other
21/06 . . characterised by the solvent used
21/08 . . Inorganic compounds only
21/09 . . Sulfur dioxides
21/12 . . Organic compounds only

25/00 Refining of hydrocarbon oils in the absence of hydrogen, with solid sorbents

NOTE
When classifying in this group, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned.

25/003 . . [Specific sorbent material, not covered by C10G 25/02 or C10G 25/03]
25/006 . . [of waste oils, e.g. PCB's containing oils]
25/02 . . with ion-exchange material
25/03 . . with crystalline alumino-silicates, e.g. molecular sieves
25/05 . . . Removal of non-hydrocarbon compounds, e.g. sulfur compounds
25/06 . . . with moving sorbents or sorbents dispersed in the oil
25/08 . . . according to the “moving bed” method
25/09 . . . according to the “fluidised bed” technique
25/11 . . . Distillation in the presence of moving sorbents
25/12 . . . Recovery of used adsorbent

27/00 Refining of hydrocarbon oils in the absence of hydrogen, by oxidation
27/02 . . with halogen or compounds generating halogen; Hypochlorous acid or salts thereof
27/04 . . with oxygen or compounds generating oxygen
27/06 . . . in the presence of alkaline solutions
27/08 . . . in the presence of copper chloride
27/10 . . . in the presence of metal-containing organic complexes, e.g. chelates, or cationic ion-exchange resins
27/12 . . . with oxygen-generating compounds, e.g. per-compounds, chromic acid, chromates (plumbites or plumbates C10G 19/06)
27/14 . . . with ozone-containing gases

29/00 Refining of hydrocarbon oils in the absence of hydrogen, with other chemicals
29/02 . . Non-metals
29/04 . . Metals, or metals deposited on a carrier
29/06 . . Metal salts, or metal salts deposited on a carrier
29/08 . . containing the metal in the lower valency
29/10 . . . Sulfides
29/12 . . . Halides
29/16 . . . Metal oxides
29/20 . . . Organic compounds not containing metal atoms
29/205 . . . [by reaction with hydrocarbons added to the hydrocarbon oil]
Refining in the absence of hydrogen

NOTE

By reforming is meant the treatment of naphtha, in order to improve the octane number or its aromatic content.

45/02 . . . containing oxygen as the only hetero atom
45/24 . . . Aldehydes or ketones
45/26 . . . Halogenated hydrocarbons
45/28 . . . containing sulfur as the only hetero atom, e.g. mercaptans, or sulfur and oxygen as the only hetero atoms

31/00 Refining of hydrocarbon oils in the absence of hydrogen, by methods not otherwise provided for (by distillation C10G 7/00)
31/06 . . by heating, cooling, or pressure treatment
31/08 . . by treating with water
31/09 . . by filtration
31/10 . . with the aid of centrifugal force
31/11 . . by dialysis

32/00 Refining of hydrocarbons oils by electric or magnetic means, by irradiation or by using microorganisms
32/02 . . by electric or magnetic means
32/04 . . by particle radiation

33/00 Dewatering or demulsification of hydrocarbon oils (by distillation C10G 7/04)
33/02 . . with electrical or magnetic means
33/06 . . with chemical means
33/06 . . with mechanical means, e.g. by filtration
33/08 . . Controlling or regulating (controlling or regulating in general G05)

35/00 Reforming naphtha

By reforming is meant the treatment of naphtha, in order to improve the octane number or its aromatic content.

35/02 . . Thermal reforming
35/04 . . Catalytic reforming
35/06 . . characterised by the catalyst used
35/065 . . . {containing crystalline zeolitic molecular sieves, other than aluminosilicates}
35/085 . . . containing platinum group metals or compounds thereof
35/09 . . . Bimetallic catalysts in which at least one of the metals is a platinum group metal
35/095 . . . containing crystalline alumino-silicates, e.g. molecular sieves {C10G 35/06 takes precedence}
35/10 . . . with moving catalysts
35/12 . . . according to the "moving-bed" method
35/14 . . . according to the "fluidised-bed" technique
35/16 . . with electric, electromagnetic, or mechanical vibrations; by particle radiation
35/22 . . Starting-up reforming operations
35/24 . . Controlling or regulating of reforming operations (controlling or regulating in general G05)

Hydrotreatment processes (reforming of naphtha C10G 35/00)
45/00 Refining of hydrocarbon oils using hydrogen or hydrogen-generating compounds

NOTE

By reforming is meant the treatment of naphtha, in order to improve the octane number or its aromatic content.

45/02 . . to eliminate hetero atoms without changing the skeleton of the hydrocarbon involved and without cracking into lower boiling hydrocarbons; Hydrofinishing
45/04 . . characterised by the catalyst used
45/06 . . . containing nickel or cobalt metal, or compounds thereof
45/08 . . . in combination with chromium, molybdenum, or tungsten metals, or compounds thereof
45/10 . . . containing platinum group metals or compounds thereof
45/12 . . . containing crystalline alumino-silicates, e.g. molecular sieves
45/14 . . . with moving solid particles
45/16 . . . suspended in the oil, e.g. slurries
45/18 . . . according to the "moving-bed" technique
45/20 . . . according to the "fluidised-bed" technique
45/22 . . . with hydrogen dissolved or suspended in the oil
45/24 . . . with hydrogen-generating compounds
45/26 . . . Steam or water
45/28 . . . Organic compounds; Autofinishing
45/30 . . . characterised by the catalyst used
45/32 . . . Selective hydrogenation of the diolefin or acetylene compounds
45/34 . . . characterised by the catalyst used
45/36 . . . containing nickel or cobalt metal, or compounds thereof
45/38 . . . in combination with chromium, molybdenum or tungsten metals, or compounds thereof
45/40 . . . containing platinum group metals or compounds thereof
45/42 . . . with moving solid particles
45/44 . . . Hydrogenation of the aromatic hydrocarbons
45/46 . . . characterised by the catalyst used
45/48 . . . containing nickel or cobalt metal, or compounds thereof
45/50 . . . in combination with chromium, molybdenum or tungsten metal, or compounds thereof
45/52 . . . containing platinum group metals or compounds thereof
45/54 . . . containing crystalline alumino-silicates, e.g. molecular sieves
45/56 . . . with moving solid particles
45/58 . . . to change the structural skeleton of some of the hydrocarbon content without cracking the other hydrocarbons present, e.g. lowering pour point; Selective hydrocracking of normal paraffins (C10G 32/00 takes precedence; improving or increasing the octane number or aromatic content of naphtha C10G 35/00)
45/60 . . . characterised by the catalyst used
45/62 . . . containing platinum group metals or compounds thereof
45/64 . . . containing crystalline alumino-silicates, e.g. molecular sieves
45/66 . . . with moving solid particles
45/68 . . . Aromatisation of hydrocarbon oil fractions (of naphtha C10G 35/00)
45/70 . . . with catalysts containing platinum group metals or compounds thereof
Hydrotreatment processes

49/00 Cracking of hydrocarbon oils in the presence of hydrogen or hydrogen generating compounds, to obtain lower boiling fractions, (C10G 15/00) takes precedence; destructive hydrogenation of non-melting solid carbonaceous or similar materials (C10G 1/06)

49/02 . characterised by the catalyst used
49/04 . Oxides
49/06 . Sulfides
49/08 . Halides
49/10 . with catalysts deposited on a carrier
49/12 . . Inorganic carriers
49/14 . . . . the catalyst containing platinum group metals or compounds thereof
49/16 . . . . Crystalline alumino-silicate carriers
49/18 . . . . . . the catalyst containing platinum group metals or compounds thereof
49/20 . . . . . . . the catalyst containing other metals or compounds thereof
49/22 . Non-catalytic cracking in the presence of hydrogen
49/24 . with moving solid particles
49/26 . suspended in the oil, e.g. slurries
49/28 . according to the "moving-bed" technique
49/30 . according to the "fluidised-bed" technique
49/32 . in the presence of hydrogen-generating compounds
49/34 . Organic compounds, e.g. hydrogenated hydrocarbons
49/36 . Controlling or regulating (controlling or regulating in general G05)

49/00 Treatment of hydrocarbon oils in the presence of hydrogen or hydrogen-generating compounds, not provided for in a single one of the groups C10G 45/02, C10G 45/32, C10G 45/44, C10G 45/58 or C10G 47/00

49/02 . (Apparatus for fixed bed hydrotreatment processes)
49/05 . (Inhibiting corrosion in hydrotreatment processes)
49/07 . (in the presence of hydrogen from a special source or of a special composition or having been purified by a special treatment)
49/02 . characterised by the catalyst used
49/04 . containing nickel, cobalt, chromium, molybdenum, or tungsten metals, or compounds thereof
49/06 . containing platinum group metals or compounds thereof
49/08 . containing crystalline alumino-silicates, e.g. molecular sieves
49/10 . with moving solid particles
49/12 . suspended in the oil, e.g. slurries
49/14 . according to the "moving-bed" technique
49/16 . according to the "fluidised-bed" technique
49/18 . in the presence of hydrogen-generating compounds, e.g. ammonia, water, hydrogen sulfdie
49/20 . Organic compounds
49/22 . Separation of effluents
49/24 . Starting-up hydrotreatment operations
49/26 . Controlling or regulating (controlling or regulating in general G05)

50/00 Production of liquid hydrocarbon mixtures from lower carbon number hydrocarbons, e.g. by oligomerisation (preparation of individual hydrocarbons or mixtures thereof of definite or specified constitution C07C)

50/02 . of hydrocarbon oils for lubricating purposes

Multi-step processes

NOTE

Groups C10G 51/00 - C10G 69/00 cover only those combined treating operations where the interest is directed to the relationship between the steps.

51/00 Treatment of hydrocarbon oils in the absence of hydrogen, by two or more refining processes only
51/02 . plural serial stages only
51/023 . . (only thermal cracking steps)
51/026 . . (only catalytic cracking steps)
51/04 . . including only thermal and catalytic cracking steps
51/06 . . plural parallel stages only

53/00 Treatment of hydrocarbon oils in the absence of hydrogen, by two or more refining processes
53/02 . plural serial stages only
53/04 . . including at least one extraction step
53/06 . . . including only extraction steps, e.g. deasphalting by solvent treatment followed by extraction of aromatics (refining in one step with two or more solvents which are introduced or withdrawn separately C10G 21/02)
53/08 . . including at least one sorption step
53/10 . . including at least one acid-treatment step
53/12 . . including at least one alkaline treatment step
53/14 . . including at least one oxidation step
53/16 . . plural parallel stages only

55/00 Treatment of hydrocarbon oils in the absence of hydrogen, by at least one refining process and at least one cracking process
55/02 . plural serial stages only
55/04 . . including at least one thermal cracking step
55/06 . . including at least one catalytic cracking step
55/08 . . plural parallel stages only

57/00 Treatment of hydrocarbon oils in the absence of the hydrogen, by at least one cracking process or refining process and at least one other conversion process
57/005 . . (with alkylation)
57/02 . . with polymerisation

59/00 Treatment of naphtha by two or more reforming processes only or by at least one reforming process and at least one process which does not substantially change the boiling range of the naphtha
59/02 . plural serial stages only
59/04 . . including at least one catalytic and at least one non-catalytic reforming step
59/06 . . plural parallel stages only

61/00 Treatment of naphtha by at least one reforming process and at least one process of refining in the absence of hydrogen
61/02 . plural serial stages only
Multi-step processes

67/00 Treatment of hydrocarbon oils by at least one hydrotreatment process and at least one other conversion process (C10G 67/00) takes precedence

69/00 Treatment of hydrocarbon oils by at least one hydrotreatment process and at least one other conversion process

69/02 plural serial stages only

69/04 including at least one step of catalytic cracking in the absence of hydrogen

69/06 including at least one step of thermal cracking in the absence of hydrogen

69/08 including at least one step of reforming naphtha

69/10 hydrocracking of higher boiling fractions into naphtha and reforming the naphtha obtained

69/12 including at least one polymerisation or alkylation step

69/123 [alkylation]

69/126 [polymerisation, e.g. oligomerisation]

69/14 plural parallel stages only

70/00 Working-up undefined normally gaseous mixtures obtained by processes covered by groups C10G 9/00, C10G 11/00, C10G 15/00, C10G 47/00, C10G 51/00

70/002 [by forming adducts or complexes]

70/004 [with solutions of copper salts]

70/006 [with the use of acids or sulfur oxides]

70/008 [with the use of organometallic compounds]

70/02 by hydrogenation

70/04 by physical processes

70/041 [by distillation]

70/042 [with the use of auxiliary compounds]

70/043 [by fractional condensation]

70/044 [by crystallisation]

70/045 [using membranes, e.g. selective permeation]

70/046 [by adsorption, i.e. with the use of solids]

70/047 [by molecular sieve technique]

70/048 [by liquid-liquid extraction]

70/06 [by gas-liquid contact]

71/00 Treatment by methods not otherwise provided for of hydrocarbon oils or fatty oils for lubricating purposes (by Fischer-Tropsch C07C 1/00, lubricating compositions C10M)

71/02 Thickening by volatilising (chemical modification of drying oils by volatilising C09F 7/04)

73/00 Recovery or refining of mineral waxes, e.g. montan wax (compositions essentially based on waxes C08L 91/00)

73/02 Recovery of petroleum waxes from hydrocarbon oils; Dewaxing of hydrocarbon oils

73/025 [by filtration]

73/04 with the use of filter aids

73/06 with the use of solvents

73/08 Organic compounds

73/10 Hydrocarbons

73/12 Oxygen-containing compounds

73/14 Halogen-containing compounds

73/16 Nitrogen-containing compounds

73/18 containing sulfur, selenium or tellurium

73/20 containing phosphorus

73/22 Mixtures or organic compounds

73/24 by formation of adducts

73/26 by flotation

73/28 by centrifugal force

73/30 with electric means
Multi-step processes

73/32 . . . Methods of cooling during dewaxing
73/34 . . . Controlling or regulating (controlling or regulating in general G05)
73/36 . . . Recovery of petroleum waxes from other compositions containing oil in minor proportions, from concentrates or from residues; De-oiling, sweating
73/38 . . . Chemical modification of petroleum
73/40 . . . Physical treatment of waxes or modified waxes, e.g. granulation, dispersion, emulsion, irradiation
73/42 . . . Refining of petroleum waxes
73/44 . . . in the presence of hydrogen or hydrogen-generating compounds

75/00 Inhibiting corrosion or fouling in apparatus for treatment or conversion of hydrocarbon oils, in general (C10G 7/10, C10G 9/16 take precedence; protection of pipes against corrosion or incrustation F16L 58/00)

75/02 . by addition of corrosion inhibitors
75/04 . by addition of antifouling agents

99/00 Subject matter not provided for in other groups of this subclass

2300/00 Aspects relating to hydrocarbon processing covered by groups C10G 1/00 - C10G 99/00

2300/10 . . . Feedstock materials
2300/103 . . . Waste materials
2300/107 . . . Used oils
2300/1011 . . . Biomass
2300/1014 . . . of vegetal origin
2300/1018 . . . of animal origin
2300/1022 . . . Fischer-Tropsch products
2300/1025 . . . Natural gas
2300/1029 . . . Gas hydrates
2300/1033 . . . Oil well production fluids
2300/1037 . . . Hydrocarbon fractions
2300/104 . . . Light gasoline having a boiling range of about 20 - 100 °C
2300/1044 . . . Heavy gasoline or naphtha having a boiling range of about 100 - 180 °C
2300/1048 . . . Middle distillates
2300/1051 . . . Kerosene having a boiling range of about 180 - 230 °C
2300/1055 . . . Diesel having a boiling range of about 230 - 330 °C
2300/1059 . . . Gasoil having a boiling range of about 330 - 427 °C
2300/1062 . . . Lubricating oils
2300/1066 . . . Special oils
2300/107 . . . Atmospheric residues having a boiling point of at least about 538 °C
2300/1074 . . . Vacuum distillates
2300/1077 . . . Vacuum residues
2300/1081 . . . Alkanes
2300/1085 . . . Solid paraffins
2300/1088 . . . Olefins
2300/1092 . . . C2-C4 olefins
2300/1096 . . . Aromatics or polyaromatics
2300/20 . . . Characteristics of the feedstock or the products
2300/201 . . . Impurities

2300/202 . . . Heteroatoms content, i.e. S, N, O, P
2300/203 . . . Naphthenic acids, TAN
2300/205 . . . Metal content
2300/206 . . . Asphaltenes
2300/207 . . . Acid gases, e.g. H₂S, COS, SO₂, HCN
2300/208 . . . Sediments, e.g. bottom sediment and water or BSW
2300/30 . . . Physical properties of feedstocks or products
2300/301 . . . Boiling range
2300/302 . . . Viscosity
2300/304 . . . Pour point, cloud point, cold flow properties
2300/305 . . . Octane number, e.g. motor octane number [MON], research octane number [RON]
2300/307 . . . Cetane number, cetane index
2300/308 . . . Gravity, density, e.g. API
2300/40 . . . Characteristics of the process deviating from typical ways of processing
2300/4006 . . . Temperature
2300/4012 . . . Pressure
2300/4018 . . . Spatial velocity, e.g. LHSV, WHSV
2300/4025 . . . Yield
2300/4031 . . . Start up or shut down operations
2300/4037 . . . In-situ processes
2300/4043 . . . Limiting CO₂ emissions
2300/405 . . . Limiting CO, NOx or SOx emissions
2300/4056 . . . Retrofitting operations
2300/4062 . . . Geographical aspects, e.g. different process units form a combination process at different geographical locations
2300/4068 . . . Moveable devices or units, e.g. on trucks, barges
2300/4075 . . . Limiting deterioration of equipment
2300/4081 . . . Recycling aspects
2300/4087 . . . Catalytic distillation
2300/4093 . . . Catalyst stripping
2300/42 . . . Hydrogen of special source or of special composition
2300/44 . . . Solvents
2300/70 . . . Catalyst aspects
2300/701 . . . Use of spent catalysts
2300/703 . . . Activation
2300/705 . . . Passivation
2300/706 . . . Catalytic metal recovery
2300/708 . . . Coking aspect, coke content and composition of deposits
2300/80 . . . Additives
2300/802 . . . Diluents
2300/805 . . . Water
2300/807 . . . Steam

2400/00 Products obtained by processes covered by groups C10G 9/00 - C10G 69/14

2400/02 . . . Gasoline
2400/04 . . . Diesel oil
2400/06 . . . Gasoil
2400/08 . . . Jet fuel
2400/10 . . . Lubricating oil
2400/12 . . . Electrical isolation oil
2400/14 . . . White oil, eating oil
2400/16 . . . Residues
2400/18 . . . Solvents
2400/20 . . . C2-C4 olefins
2400/22 . . . Higher olefins
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