

CPC COOPERATIVE PATENT CLASSIFICATION

C CHEMISTRY; METALLURGY

(NOTES omitted)

CHEMISTRY

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

C10K PURIFYING OR MODIFYING THE CHEMICAL COMPOSITION OF COMBUSTIBLE GASES CONTAINING CARBON MONOXIDE

WARNING

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 | Purifying combustible gases containing carbon monoxide (isolation of hydrogen from mixtures containing hydrogen and carbon monoxide C01B 3/50) | 1/106 | {containing Fe compounds} |
| | | 1/107 | {containing As-, Sb-, Sn compounds} |
| | | 1/108 | {containing Cu compounds} |
| 1/001 | . {working-up the condensates (recovering of NH ₃ and NH ₄ salts C01C 1/00 ; working-up or purifying tars and tar-oils C10C 1/00)} | 1/12 | . . . alkaline-reacting {including the revival of the used wash liquors} |
| 1/002 | . {Removal of contaminants} | 1/121 | {containing NH ₃ only (possibly in combination with NH ₄ salts)} |
| 1/003 | . . {of acid contaminants, e.g. acid gas removal} | 1/122 | {containing only carbonates, bicarbonates, hydroxides or oxides of alkali-metals (including Mg)} |
| 1/004 | . . . {Sulfur containing contaminants, e.g. hydrogen sulfide} | 1/123 | {containing alkali-, earth-alkali- or NH ₄ salts of inorganic acids derived from sulfur} |
| 1/005 | . . . {Carbon dioxide} | 1/124 | {containing metal compounds other than alkali- or earth-alkali carbonates, hydroxides- or oxides- or salts of inorganic acids derived from sulfur} |
| 1/006 | . . . {Hydrogen cyanide} | | |
| 1/007 | . . {of metal compounds} | 1/125 | {containing Fe compounds} |
| 1/008 | . . . {Alkali metal compounds} | 1/126 | {containing As-, Sb-, Sn compounds} |
| 1/02 | . Dust removal | 1/127 | {containing Cu compounds} |
| 1/022 | . . {by baffle plates} | 1/128 | {containing organic oxygen transferring compounds, e.g. sulfoxides} |
| 1/024 | . . {by filtration} | 1/14 | organic |
| 1/026 | . . {by centrifugal forces (cyclones B04C)} | 1/143 | {containing amino groups} |
| 1/028 | . . {by electrostatic precipitation (separating dispersed particles from gases or vapour by electrostatic effect in general B03C 3/00)} | 1/146 | {alkali-, earth-alkali- or NH ₄ salts} |
| 1/04 | . by cooling to condense non-gaseous materials {(C10K 1/001 takes precedence)} | 1/16 | . . with non-aqueous liquids |
| 1/043 | . . {adding solvents as vapour to prevent naphthalene- or resin deposits} | 1/165 | . . . {at temperatures below zero degrees Celsius} |
| 1/046 | . . {Reducing the tar content} | 1/18 | . . . hydrocarbon oils {(C10K 1/165 takes precedence)} |
| 1/06 | . . combined with spraying with water {(C10K 1/001 takes precedence)} | 1/20 | . by treating with solids; Regenerating spent purifying masses {(separation by adsorption B01D 53/02 ; separation by chemical reaction B01D 53/34 ; refining of hydrocarbon oils with acids C10G 17/02 , C10G 27/02 , C10G 29/12)} |
| 1/08 | . by washing with liquids; Reviving the used wash liquors (gas washers B01D) | 1/205 | . . {Methods and apparatus for treating the purifying masses without their regeneration (recovering of sulfur C01B 17/00 ; recovering of cyanide compounds C01C 3/00)} |
| 1/085 | . . {two direct washing treatments, one with an aqueous liquid and one with a non-aqueous liquid} | | |
| 1/10 | . . with aqueous liquids {(alkaline reacting aqueous liquids C10K 1/12)} | 1/22 | . . Apparatus, e.g. dry box purifiers |
| 1/101 | . . . {with water only} | 1/24 | . . . Supporting means for the purifying material |
| 1/102 | . . . {containing free acid} | 1/26 | . . Regeneration of the purifying material {contains also apparatus for the regeneration of the purifying material} |
| 1/103 | . . . {alkali- or earth-alkali- or NH ₄ salts or inorganic acids derived from sulfur} | | |
| 1/105 | . . . {containing metal compounds other than alkali- or earth-alkali carbonates, -hydroxides, oxides, or salts of inorganic acids derived from sulfur} | 1/28 | . . Controlling the gas flow through the purifiers |

- 1/30 . . with moving purifying masses
- 1/32 . with selectively adsorptive solids, e.g. active carbon
- 1/34 . by catalytic conversion of impurities to more readily removable materials

3/00 Modifying the chemical composition of combustible gases containing carbon monoxide to produce an improved fuel, e.g. one of different calorific value, which may be free from carbon monoxide

- 3/001 . {by thermal treatment}
- 3/003 . . {Reducing the tar content}
- 3/005 . . . {by partial oxidation}
- 3/006 . . . {by steam reforming}
- 3/008 . . . {by cracking}
- 3/02 . by catalytic treatment
- 3/023 . . {Reducing the tar content}
- 3/026 . . {Increasing the carbon monoxide content, e.g. reverse water-gas shift [RWGS]}
- 3/04 . . reducing the carbon monoxide content {, e.g. water-gas shift [WGS]}
- 3/06 . by mixing with gases