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)

1/001 . {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)}

1/002 . {Removal of contaminants}

1/003 . . {of acid contaminants, e.g. acid gas removal}

1/004 . . . {Sulfur containing contaminants, e.g. hydrogen sulfide}

1/005 . . . {Carbon dioxide}

1/006 . . . {Hydrogen cyanide}

1/007 . . {of metal compounds}

1/008 . . . {Alkali metal compounds}

1/02 . Dust removal

1/022 . . {by baffle plates}

1/024 . . {by filtration}

1/026 . . {by centrifugal forces (cyclones B04C)}

1/028 . . {by electrostatic precipitation (separating dispersed particles from gases or vapour by electrostatic effect in general B03C 3/00)}

1/04 . by cooling to condense non-gaseous materials {(C10K 1/001 takes precedence)}

1/043 . . {adding solvents as vapour to prevent naphthalene- or resin deposits}

1/046 . . {Reducing the tar content}

1/06 . . combined with spraying with water {(C10K 1/001 takes precedence)}

1/08 . by washing with liquids; Reviving the used wash liquors (gas washers B01D)

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)}

1/101 . . . {with water only}

1/102 . . . {containing free acid}

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}

1/106 . . . . {containing Fe compounds}

1/107 . . . . {containing As-, Sb-, Sn compounds}

1/108 . . . . {containing Cu compounds}

1/12 . . . alkaline-reacting {including the revival of the used wash liquors}

1/121 . . . . {containing NH_3 only (possibly in combination with NH_4 salts)}

1/122 . . . . {containing only carbonates, bicarbonates, hydroxides or oxides of alkali-metals (including Mg)}

1/123 . . . . {containing alkali-, earth-alkali- or NH_4 salts of inorganic acids derived from sulfur}

1/124 . . . . {containing metal compounds other than alkali- or earth-alkali carbonates, hydroxides- or oxides- or salts of inorganic acids derived from sulfur}

1/125 . . . . . {containing Fe compounds}

1/126 . . . . . {containing As-, Sb-, Sn compounds}

1/127 . . . . . {containing Cu compounds}

1/128 . . . . {containing organic oxygen transferring compounds, e.g. sulfoxides}

1/14 . . . . organic

1/143 . . . . . {containing amino groups}

1/146 . . . . . {alkali-, earth-alkali- or NH_4 salts}

1/16 . . with non-aqueous liquids

1/165 . . . {at temperatures below zero degrees Celsius}

1/18 . . . hydrocarbon oils {(C10K 1/165 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)}

1/205 . . {Methods and apparatus for treating the purifying masses without their regeneration (recovering of sulfur C01B 17/00; recovering of cyanide compounds C01C 3/00)}

1/22 . . Apparatus, e.g. dry box purifiers

1/24 . . . Supporting means for the purifying material

1/26 . . Regeneration of the purifying material {contains also apparatus for the regeneration of the purifying material}
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