

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)	1/105	. . . {containing metal compounds other than alkali- or earth-alkali carbonates, -hydroxides, oxides, or salts of inorganic acids derived from sulfur}
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)}	1/106	. . . . {containing Fe compounds}
1/002	. {Removal of contaminants}	1/107	. . . . {containing As-, Sb-, Sn compounds}
1/003	. . {of acid contaminants, e.g. acid gas removal}	1/108	. . . . {containing Cu compounds}
1/004	. . . {Sulfur containing contaminants, e.g. hydrogen sulfide}	1/12	. . . alkaline-reacting {including the revival of the used wash liquors}
1/005	. . . {Carbon dioxide}	1/121	. . . . {containing NH ₃ only (possibly in combination with NH ₄ salts)}
1/006	. . . {Hydrogen cyanide}	1/122	. . . . {containing only carbonates, bicarbonates, hydroxides or oxides of alkali-metals (including Mg)}
1/007	. . {of metal compounds}	1/123	. . . . {containing alkali-, earth-alkali- or NH ₄ salts of inorganic acids derived from sulfur}
1/008	. . . {Alkali metal compounds}	1/124	. . . . {containing metal compounds other than alkali- or earth-alkali carbonates, hydroxides- or oxides- or salts of inorganic acids derived from sulfur}
1/02	. Dust removal	1/125	. . . . . {containing Fe compounds}
1/022	. . {by baffle plates}	1/126	. . . . . {containing As-, Sb-, Sn compounds}
1/024	. . {by filtration}	1/127	. . . . . {containing Cu compounds}
1/026	. . {by centrifugal forces (cyclones B04C)}	1/128	. . . . . {containing organic oxygen transferring compounds, e.g. sulfoxides}
1/028	. . {by electrostatic precipitation (separating dispersed particles from gases or vapour by electrostatic effect in general B03C 3/00)}	1/14	. . . . . organic
1/04	. by cooling to condense non-gaseous materials (C10K 1/001 takes precedence)}	1/143	. . . . . {containing amino groups}
1/043	. . {adding solvents as vapour to prevent naphthalene- or resin deposits}	1/146	. . . . . {alkali-, earth-alkali- or NH ₄ salts}
1/046	. . {Reducing the tar content}	1/16	. . with non-aqueous liquids
1/06	. . combined with spraying with water (C10K 1/001 takes precedence)}	1/165	. . . {at temperatures below zero degrees Celsius}
1/08	. by washing with liquids; Reviving the used wash liquors (gas washers B01D)	1/18	. . . hydrocarbon oils (C10K 1/165 takes precedence)}
1/085	. . {two direct washing treatments, one with an aqueous liquid and one with a non-aqueous liquid}	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)}
1/10	. . with aqueous liquids {(alkaline reacting aqueous liquids C10K 1/12)}	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)}
1/101	. . . {with water only}	1/22	. . Apparatus, e.g. dry box purifiers
1/102	. . . {containing free acid}	1/24	. . . Supporting means for the purifying material
1/103	. . . {alkali- or earth-alkali- or NH ₄ salts or inorganic acids derived from sulfur}		

C10K

- 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