

# 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.

<b>1/00</b>	<b>Purifying combustible gases containing carbon monoxide</b> (isolation of hydrogen from mixtures containing hydrogen and carbon monoxide <a href="#">C01B 3/50</a> )	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 <sub>3</sub> and NH <sub>4</sub> salts <a href="#">C01C 1/00</a> ; working-up or purifying tars and tar-oils <a href="#">C10C 1/00</a> )}	1/12	. . . alkaline-reacting {including the revival of the used wash liquors}
1/002	. {Removal of contaminants}	1/121	. . . . {containing NH <sub>3</sub> only (possibly in combination with NH <sub>4</sub> 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 <sub>4</sub> 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 <a href="#">B04C</a> )}	1/143	. . . . . {containing amino groups}
1/028	. . {by electrostatic precipitation (separating dispersed particles from gases or vapour by electrostatic effect in general <a href="#">B03C 3/00</a> )}	1/146	. . . . . {alkali-, earth-alkali- or NH <sub>4</sub> salts}
1/04	. by cooling to condense non-gaseous materials {( <a href="#">C10K 1/001</a> 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 {( <a href="#">C10K 1/165</a> takes precedence)}
1/06	. . combined with spraying with water {( <a href="#">C10K 1/001</a> takes precedence)}	1/20	. by treating with solids; Regenerating spent purifying masses {(separation by adsorption <a href="#">B01D 53/02</a> ; separation by chemical reaction <a href="#">B01D 53/34</a> ; refining of hydrocarbon oils with acids <a href="#">C10G 17/02</a> , <a href="#">C10G 27/02</a> , <a href="#">C10G 29/12</a> )}
1/08	. by washing with liquids; Reviving the used wash liquors (gas washers <a href="#">B01D</a> )	1/205	. . {Methods and apparatus for treating the purifying masses without their regeneration (recovering of sulfur <a href="#">C01B 17/00</a> ; recovering of cyanide compounds <a href="#">C01C 3/00</a> )}
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 <a href="#">C10K 1/12</a> )}	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 <sub>4</sub> 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