

CPC**COOPERATIVE PATENT CLASSIFICATION****C10K****PURIFYING OR MODIFYING THE CHEMICAL COMPOSITION OF COMBUSTIBLE GASES CONTAINING CARBON MONOXIDE****C10K 1/00**

Purifying combustible gases containing carbon monoxide (isolation of hydrogen from mixtures containing hydrogen and carbon monoxide [C01B 3/50](#))

- C10K 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](#))}
- C10K 1/002
 - . {Removal of contaminants}
- C10K 1/003
 - .. {of acid contaminants, e.g. acid gas removal}
- C10K 1/004
 - ... {Sulfur containing contaminants, e.g. hydrogen sulfide}
- C10K 1/005
 - ... {Carbon dioxide}
- C10K 1/006
 - ... {Hydrogen cyanide}
- C10K 1/007
 - .. {of metal compounds}
- C10K 1/008
 - ... {Alkali metal compounds}
- C10K 1/02
 - . Dust removal
- C10K 1/022
 - .. {by baffle plates}
- C10K 1/024
 - .. {by filtration}
- C10K 1/026
 - .. {by centrifugal forces (cyclones [B04C](#))}
- C10K 1/028
 - .. {by electrostatic precipitation (separating dispersed particles from gases or vapour by electrostatic effect in general [B03C 3/00](#))}
- C10K 1/04
 - . by cooling to condense non-gaseous materials {([C10K 1/001](#) takes precedence)}
- C10K 1/043
 - .. {adding solvents as vapour to prevent naphthalene- or resin deposits}
- C10K 1/046
 - .. {Reducing the tar content}
- C10K 1/06
 - .. combined with spraying with water {([C10K 1/001](#) takes precedence)}
- C10K 1/08
 - . by washing with liquids; Reviving the used wash liquors (gas washers [B01D](#))
- C10K 1/085
 - .. {two direct washing treatments, one with an aqueous liquid and one with a non-aqueous liquid}
- C10K 1/10
 - .. with aqueous liquids {(alkaline reacting aqueous liquids [C10K 1/12](#))}
- C10K 1/101
 - ... {with water only}
- C10K 1/102
 - ... {containing free acid}
- C10K 1/103
 - ... {alkali- or earth-alkali- or NH_4 salts or inorganic acids derived from sulfur}
- C10K 1/105
 - ... {containing metal compounds other than alkali- or earth-alkali carbonates, - hydroxides, oxides, or salts of inorganic acids derived from sulfur}
- C10K 1/106
 - {containing Fe compounds}
- C10K 1/107
 - {containing As-, Sb-, Sn compounds}
- C10K 1/108
 - {containing Cu compounds}
- C10K 1/12
 - ... alkaline-reacting {including the revival of the used wash liquors}
- C10K 1/121
 - {containing NH_3 only (possibly in combination with NH_4 salts)}
- C10K 1/122
 - {containing only carbonates, bicarbonates, hydroxides or oxides of alkali-metals (including Mg)}

- C10K 1/123 {containing alkali-, earth-alkali- or NH_4 salts of inorganic acids derived from sulfur}
- C10K 1/124 {containing metal compounds other than alkali- or earth-alkali carbonates, hydroxides- or oxides- or salts of inorganic acids derived from sulfur}
- C10K 1/125 {containing Fe compounds}
- C10K 1/126 {containing As-, Sb-, Sn compounds}
- C10K 1/127 {containing Cu compounds}
- C10K 1/128 {containing organic oxygen transferring compounds, e.g. sulfoxides}
- C10K 1/14 organic
- C10K 1/143 {containing amino groups}
- C10K 1/146 {alkali-, earth-alkali- or NH_4 salts}
- C10K 1/16 . . with non-aqueous liquids
- C10K 1/165 . . . {at temperatures below zero degrees Celsius}
- C10K 1/18 . . . hydrocarbon oils {(C10K 1/165 takes precedence)}
- C10K 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)}
- C10K 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)}
- C10K 1/22 . . Apparatus, e.g. dry box purifiers
- C10K 1/24 . . . Supporting means for the purifying material
- C10K 1/26 . . Regeneration of the purifying material {contains also apparatus for the regeneration of the purifying material}
- C10K 1/28 . . Controlling the gas flow through the purifiers
- C10K 1/30 . . with moving purifying masses
- C10K 1/32 . with selectively adsorptive solids, e.g. active carbon
- C10K 1/34 . by catalytic conversion of impurities to more readily removable materials

- C10K 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**
- C10K 3/001 . {by thermal treatment}
- C10K 3/003 . . {Reducing the tar content}
- C10K 3/005 . . . {by partial oxidation}
- C10K 3/006 . . . {by steam reforming}
- C10K 3/008 . . . {by cracking}
- C10K 3/02 . by catalytic treatment
- C10K 3/023 . . {Reducing the tar content}
- C10K 3/026 . . {Increasing the carbon monoxide content, e.g. reverse water-gas shift [RWGS]}
- C10K 3/04 . . reducing the carbon monoxide content {e.g. water-gas shift [WGS]}
- C10K 3/06 . by mixing with gases