

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 NH₃ and NH₄ 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 NH₄ 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 NH₃ only (possibly in combination with NH₄ salts)}
- C10K 1/122 {containing only carbonates, bicarbonates, hydroxides or oxides of alkali-metals (including Mg)}
- C10K 1/123 {containing alkali-, earth-alkali- or NH₄ 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 NH₄ 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