

Title (en)

Treatment of organic sulfur gases especially in kraft pulping systems and processes.

Title (de)

Behandlung von organischen, schwefligem Gas, insbesondere beim Kraft-Aufschluss.

Title (fr)

Traitement de gaz contenant des composés organiques sulfurés spécialement dans des systèmes et procédés de lessivage kraft.

Publication

EP 0532491 A1 19930317 (EN)

Application

EP 92890034 A 19920210

Priority

US 75684991 A 19910910

Abstract (en)

Gases (in line 18) containing water vapor and over 10% (e.g. about 15-80%) by weight organic sulfur compounds, such as off gases (13, 20) from a kraft or sulfite digester (12), black liquor evaporator (19), or apparatus (17) for heating black liquor to reduce its viscosity, are converted into a gas stream (30) comprising primarily hydrogen sulfide and methane. Hydrogen can be added to the gas, and the gas in the presence of the added hydrogen may be passed past a hydrogen desulfurization catalyst (nickel or cobalt molybdenum, in 28). Preferably the vast majority of the water vapor is removed (in dryer 27) before it is passed past the catalyst. The hydrogen source may be provided by the gas itself, by passing a portion through a methane/steam reformer (42) and separating hydrogen from the stream, to produce a gas containing primarily methane and carbon dioxide which is used for a combustion gas. Hydrogen sulfide may be removed from the gas stream by passing it into contact with white or green liquor from kraft paper pulping processes. Alternatively, substoichiometric combustion (in 73) of at least some of the gas may be effected, and after soot removal (in 76) the gas may be passed into contact with a dirty shift catalyst (an alumina catalyst containing oxides of cobalt and molybdenum, in 77) to produce a gas stream (79) comprising primarily hydrogen sulfide and methane with some carbon dioxide.

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B01D 53/36; D21C 11/06

IPC 8 full level

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CPC (source: EP)

D21C 3/022 (2013.01); **D21C 3/26** (2013.01); **D21C 11/0064** (2013.01)

Citation (search report)

- [A] EP 0329301 A2 19890823 - ICI PLC [GB]
- [E] WO 9213994 A1 19920820 - AHLSTROEM OY [FI]
- [A] DATABASE WPIL Week 9113, Derwent Publications Ltd., London, GB; AN 91-089818

Cited by

AU2012271758B2; US8940129B2; WO2012091906A3; WO2012174094A1; US10870810B2; US11505755B2

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