

Title (en)

Additive to improve combustion in internal combustion engines and boilers

Title (de)

Additiv zur Verbesserung der Verbrennung in Verbrennungsmotoren und Heizkesseln

Title (fr)

Additif pour améliorer la combustion dans des moteurs à combustion interne et des chaudières

Publication

EP 1310546 A3 20031112 (EN)

Application

EP 02380230 A 20021106

Priority

ES 200102454 A 20011107

Abstract (en)

[origin: EP1310546A2] The present invention relates to additives for internal combustion engine and boiler fuels containing water, to improve combustion, reduce emissions of carbon monoxide (CO) and unburned hydrocarbons (HC), reduce formation of fumes, particles and carbonaceous deposits and reduce fuel consumption, consisting of mixtures of a) aqueous solutions of one or more aminoacids, b) one or more alcohols having 1 to 5 carbon atoms, and optionally c) reaction products of acids and basic nitrogenated products and/or d) methyl esters of fatty acids and/or e) solvents compatible with the fuel. The formulation of the additives for gasoline and diesel engines can also include compounds for improving the octane and cetane numbers, respectively.

IPC 1-7

C10L 10/00; C10L 1/22; C10L 1/18

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [X] EP 0536950 A1 19930414 - BRITISH PETROLEUM CO PLC [GB]
- [X] WO 9424413 A1 19941027 - BP CHEM INT LTD [GB], et al
- [Y] GB 2106135 A 19830407 - ELF FRANCE [FR]
- [Y] US 5229090 A 19930720 - HOFMANN JOHN E [US], et al
- [A] US 6224642 B1 20010501 - DALY DANIEL T [US], et al
- [DA] WO 0069999 A1 20001123 - BERTHA ANDRAS [HU], et al
- [A] DATABASE WPI Section Ch Week 198414, Derwent World Patents Index; Class K04, AN 1984-085246, XP002251745

Cited by

EP1900795A1; CN102899105A; CN112236509A; KR20210019428A; JP2021531165A; WO2019240605A1

Designated contracting state (EPC)

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