

Title (en)
PROCESS FOR WORKING UP USED LUBRICANTS BY HYDROGENATION

Publication
EP 0299149 A3 19890308 (DE)

Application
EP 88105856 A 19880623

Priority
DE 3723607 A 19870717

Abstract (en)
[origin: EP0299149A2] Spent oils are processed by hydrogenation to give second raffinates in the form of lubricating oils. Ecologically undesired by-products or wastes are avoided in this process, without expensive separation steps or reaction conditions or the use of expensive catalysts being necessary. In particular, the result is that even highly contaminated spent oils, i.e. those which contain organochlorine compounds, especially PCB, chlorinated dioxines and dibenzofurans in concentrations above defined limits, can also be re-utilised as a second raffinate, especially as a lubricating oil; therefore, they no longer have to be destroyed, for example in a high-temperature combustion process. For this purpose, the spent oil is first freed only of coarse solids and then subjected, with addition of hydrogen, to hydrogenation in a liquid phase at pressures of preferably 150 bar and temperatures of preferably 350 DEG C; the reaction products are then separated into the lubricating oil and, in particular, solids- containing by-products.

IPC 1-7
C10M 175/00; A62D 3/00

IPC 8 full level
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CPC (source: EP US)
C10M 175/0041 (2013.01 - EP US); **Y10S 210/909** (2013.01 - EP US)

Citation (search report)
• [X] DE 1182377 B 19641126 - HANS JOACHIM KETTLITZ MINERALO
• [A] DE 1545260 A1 19700409 - CHEMOKOMPLEX VEGYIPARI GEP ES
• [A] DE 2030609 A1 19710318 - PETROLCHEMISCHES KOMBINAT
• [X] US 4522729 A 19850611 - TABLER DONALD C [US]
• [X] US 4151072 A 19790424 - JOHNSON MARVIN M [US], et al
• [XP] EP 0270813 A1 19880615 - METALLGESELLSCHAFT AG [DE]

Cited by
US5490919A; FR2687684A1; EP0545509A1; EP0887087A3

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EP 0299149 A2 19890118; **EP 0299149 A3 19890308**; AU 1909388 A 19890119; AU 620335 B2 19920220; BR 8803532 A 19890208; CA 1314257 C 19930309; DE 3723607 A1 19890126; JP S6436694 A 19890207; PL 152064 B1 19901130; PL 273671 A1 19890320; US 5045179 A 19910903; ZA 883815 B 19890329

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