

Title (en)
Process for upgrading diesel oils.

Title (de)
Verfahren zur Verbesserung von Dieselölen.

Title (fr)
Procédé de valorisation d'huiles diesel.

Publication
EP 0236021 A2 19870909 (EN)

Application
EP 87301467 A 19870220

Priority
US 83261286 A 19860224

Abstract (en)
A process for upgrading diesel oil to produce an upgraded diesel fuel comprising the steps of: (a) reacting a diesel oil, having a boiling point at normal pressure of about 300 DEG F to about 700 DEG F, derived from a petroleum source with an oxidant selected from the group consisting of nitrogenous oxidizing agents and ozone wherein (1) the reacting is to an extent sufficient to increase the cetane number of the diesel oil obtained in step (a) by at least 5 cetane numbers over the cetane number of the diesel oil feed to step (a), and (2) (i) the reacting is such that when the oxidant is a nitrogenous treating agent, the amount of oxidant, equivalent on a 100% nitric acid basis, is about 10% or less by weight of the diesel oil feed to step (a); and (ii) the reacting is such that when the oxidant is ozone, the amount of oxidant is sufficient to achieve an about 10% or greater reduction in the sulfur content of the reacted diesel oil obtained in step (a) over the diesel oil feed to step (a); b) contacting the diesel oil from step (a) above with an extracting solvent, the extracting solvent (1) having a dipole moment of about 2 or greater, (2) being substantially immiscible with the diesel oil obtained in step (a), (3) being a nonhalogenated solvent, and (4) excluding amines, which are reactive with the oxidant, or a mixture of such solvents or a water mixture of such solvents comprising about 50% by weight or less water; and (c) separating the diesel oil from step (b) above from the extracting solvent to recover upgraded diesel fuel.

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Cited by
CN100404646C; US5824207A; EP0252606A3; US5762655A; CN113234479A; EP1250400A4; CN113061458A; US9365780B2; WO2009098264A1; WO9501411A1; US9006504B2; US9499754B2; US8859833B2; US9518234B2

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