

Title (en)
Process for the production of gasolines with improved octane number

Title (de)
Verfahren zur Erzeugung von Benzin mit verbesserter Oktanzahl

Title (fr)
Procédé de production d'essences à indice d'octane amélioré

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EP 1088879 A1 20010404 (FR)

Application
EP 00402632 A 20000922

Priority
FR 9912337 A 19990930

Abstract (en)
The process is operated with a charge comprising mainly straight chain paraffins obtained from a Fischer-Tropsch synthesis to produce high octane gasolines, middle distillates and oils. The process comprises the following stages :- a) Conversion with simultaneous hydrotreatment of the paraffins in the charge ; the charge has a S content less than 1000 ppm, N content less than 200 ppm, metal content less than 50 ppm and O₂ content less than 0.2 %. The stage is operated at 200 - 500 degrees C., 5 - 25 MPa, and VVH of 0.1-5 h<->1 in the presence of a catalyst containing a noble metal on an acidic amorphous support ; from the effluent obtained, a petrol cut and residue comprising compounds boiling at more than 340 degrees C. are separated off ; b) Separation of the isoparaffins from the petrol cut obtained and recovery of an effluent containing n-paraffins ; c) Isomerisation of the effluent from (b) by contact with a catalyst containing a hydro-dehydrogenating metal an acid solid in the presence of hydrogen to produce an effluent containing isoparaffins of improved octane index ; b<1>) Catalytic de-paraffination of the residue with a catalyst comprising a molecular sieve with a microporous system consisting of channels with pore openings having 9 or 10 atoms T (T is Si, Al, P, B, Ti, Fe or Ga), alternating with an equal number of O atoms ; the distance between two pore openings accessible to 9 or 10 T atoms is no more than 0.75 nm and the product presents a ratio 2-methylnonane /5-methylnonane greater than 5 in the n-decane test.

Abstract (fr)
L'invention concerne un procédé pour la production d'essences à indice d'octane amélioré, accompagné éventuellement de production d'huiles et/ou de distillats moyens, par conversion - hydroisomérisation des paraffines de la charge sur un catalyseur contenant au moins un métal noble déposé sur un support acide amorphe. Sur la coupe essence obtenue les isoparaffines sont séparées et les paraffines normales et éventuellement les paraffines monobranchées contenues dans l'effluent résultant sont isomérisées sur un catalyseur contenant au moins un métal hydro-déshydrogérant et au moins un solide acide. L'ensemble des flux chargés en isoparaffines présentant un indice d'octane amélioré est envoyé au pool essence. Le résidu subit un déparaffinage catalytique. <IMAGE>

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• [A] EP 0471524 A1 19920219 - EXXON RESEARCH ENGINEERING CO [US]
• [A] EP 0295638 A1 19881221 - UNION CARBIDE CORP [US]
• [A] EP 0583836 A1 19940223 - SHELL INT RESEARCH [NL]
• [A] EP 0280476 A2 19880831 - MOBIL OIL CORP [US]

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