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PROCESS FOR THE PRODUCTION
OF HIGH CETANE VALUE CLEAN FUELS

ABSTRACT

The 177°-343°C (350°-650°F) portion of the product from the oligomerization of light olefin with surface-deactivated shape selective medium pore zeolite catalyst particles comprises olefinic hydrocarbons having unique and desirable structures as precursors for high cetane value clean fuels. These oligomers are near linear in structure and contain no aromatics. Following hydrogenation they produce cetane values between 50 and 75. When the near linear olefinic hydrocarbons from surface-deactivated zeolite catalyzed oligomerization of light olefins are subjected to ethene metathesis to alpha olefins and oligomerization following the process of U.S. Patent No. 4,962,249, the overall process reaction product comprises a mixture of a 343°C+ (650°F+) portion comprising high VI lubricant and a 177°-343°C (350°-650°F) portion comprising high cetane clean fuels precursor. Hydrogenation of the 177°-343°C (350°-650°F) portion provides an aromatics-free fuel with a cetane value between 50-70 containing less than 0.5 weight % naphthenes. The combined process results in the co-production of high cetane clean fuels and high VI synthetic lubricant.

FIGURE 1 IS SUGGESTED FOR PUBLICATION.

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