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<p>(21) International Application Number: PCT/US98/09581</p> <p>(22) International Filing Date: 12 May 1998 (12.05.98)</p> <p>(30) Priority Data: 08/862,229 ☒ 23 May 1997 (23.05.97) ☒ US</p> <p>(71) Applicant: MOBIL OIL CORPORATION [US/US]; 3225 Gallows Road, Fairfax, VA 22037 (US).</p> <p>(72) Inventors: BORGHARD, William, Stern, 1355 Knox Drive, Yardley, PA 19067 (US). COLLINS, Nick, Allen, 746 West Campground Road, Fall Branch, TN 37656 (US). DURAND, Paul, Pierce, 9 Ross Court, Wilmington, DE 19810 (US). HILBERT, Timothy, Leg, 17 Charles Lane, Sewell, NJ 08080 (US). TREWELLA, Jeffrey, Charles, 283 Hickory Drive, Kennett Square, PA 19348 (US).</p> <p>(74) Agents: PRATER, Penny, L. et al.; Mobil Oil Corporation, 3225 Gallows Road, Fairfax, VA 22037 (US).</p>		<p>(81) Designated States: BR, CA, CN, CZ, KR, MX, PL, RU, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).</p> <p>Published With international search report.</p>
<p>(54) Title: BENZENE CONVERSION IN AN IMPROVED GASOLINE UPGRADING PROCESS</p> <p>(57) Abstract</p> <p>Low sulfur gasoline is produced from an olefinic, cracked, sulfur-containing naphtha by treatment over an acidic catalyst, preferably an intermediate pore size zeolite such as ZSM-5 to crack low octane paraffins and olefins under mild conditions with limited aromatization of olefins and naphthenes. A benzene-rich co-feed is co-processed with the naphtha to reduce the benzene levels in the co-feed by alkylation. This initial processing step is followed by hydrodesulfurization over a hydrotreating catalyst such as CoMo on alumina. In addition to reducing benzene levels in the combined feeds, the initial treatment over the acidic catalyst removes the olefins which would otherwise be saturated in the hydrodesulfurization, consuming hydrogen and lowering product octane, and converts them to compounds which make a positive contribution to octane. Overall liquid yield is high, typically at least 90 % or higher. Product aromatics are typically increased by no more than 25 wt.% relative to the combined feeds and may be lower than the feed.</p>		