

ABSTRACT OF THE DISCLOSURE

An efficient process for desulfurizing catalytically cracked gasoline, in which a reduction in olefin content is controlled to thereby minimize a reduction in octane number. A catalytically cracked gasoline is separated into a plurality of fractions including one or both of a fraction rich in sulfur compounds that are hard to desulfurize and a fraction rich in sulfur compounds that are easy to desulfurize. One or both of the fractions are subjected to hydrodesulfurization. The resulting fractions are then mixed with the remaining fractions.