

## A way for thermooxidizing cracking of heavy oil residues

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### Abstract

It has been shown that initiation of thermal cracking of fuel oil by the oxygen of the air can be used in industry as an effective way to produce additional light fractions. The thermal cracking in conditions described in the work ( $T = 430-440$  °C,  $P = 3-7$  atm.) via homolytic cleavage of the C–C, as is customary in the literature, hardly occurs. Cracking is a catalytic process and the compounds of both oxygen and sulfur can be used as catalysts. Analysis of the modernization cost of the existing plants suggests that material expenditures on upgrading by this method will be a fraction of the cost of construction of new plants by the existing technologies, and their payback period is about 2 years.