

Chemistry and Technology of Fuels and Oils 2015 vol.50 N6, pages 579-583

Features of mathematical modeling of in-situ combustion for production of high-viscosity crude oil and natural bitumens

Isakov D., Nurgaliev D., Shaposhnikov D., Chernova O.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2015 Springer Science+Business Media New York. Features of mathematical modeling of the process of recovery of high-viscosity crude oils and natural bitumens with use of in-situ combustion is examined based on a review of recent foreign publications. Hydrodynamic modeling is increasingly widely used. The importance of physical simulation on a "combustion-tube" apparatus, the results of which are irreplaceable in scaling-up the model to field dimensions, is demonstrated.

<http://dx.doi.org/10.1007/s10553-015-0566-0>

Keywords

combustion, heavy oil, hydrodynamic modeling, in-situ, THAI