

INFORMATION

COAL CHEMISTRY AT THE TURN OF THE MILLENNIUM

INTERNATIONAL CONFERENCE AND SEMINAR OF UNESCO
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II. CHEMICAL PRODUCTS AND LIQUID MOTOR FUELS FROM COALS, OIL SHALES, CRUDE OIL WASTES AND SYNTHETIC GAS

THERMAL DECOMPOSITION OF ENRICHED OIL SHALE IN H-DONOR SOLVENTS

V. A. Proskuryakov, A. M. Syroejko

St.-Petersburg Institute of Technology (Technical University),
St.-Petersburg, Russia

The influence of various H-donor additives on the yield of liquid products at kerogene thermal decomposition is investigated. The maximum yield of liquid products is obtained using paraffin additives, the maximum yield of semicoke – using bitumen additives.

THERMOCHEMICAL PROCESSING OF SHALES AND OIL RESIDUES TOGETHER WITH POLYMER ADDITIONS

P. V. Bodyagin, E. G. Gorlov, S. S. Makaryev

Fossil Fuel Institute, Moscow, Russia

A. V. Rudensky

GUP RosDorNII, Moscow, Russia

Experimental data on thermochemical co-processing of shales and oil residues with 5–15 % addition of crushed polyethylene and polyester-polyether wastes, aimed to produce ash binders for road construction and motor fuel components, are given. It has been established that under 415–420 °C, 3–6 MPa pressure and 1-hour contact time, the shale organic mass conversion constitutes 87–90 %. The yield of end product is about 45 %, with polymer wastes being completely converted. Composition and properties of liquid products obtained vary considerably.

PROCESSING OF RUSSIAN HIGH-SULFUR OIL SHALES
USING THE METHOD OF SOLID HEAT CARRIER TO OBTAIN
SULFUR-ORGANIC PRODUCTS AND LIQUID FUELS

A. I. Blokhin, G. P. Stelmakh, M. I. Zaretsky

Science and Technology Centre *ECOSORB*, Moscow, Russia

The data on technological utilization of low-sulfur oil shales of Baltic deposits and high-sulfur oil shales of the Volga area are presented.

It is shown that it is possible to obtain valuable sulfur-organic compounds – thiofurans – and sulfur-free fuels processing oil shale of Manturovskoye deposit (Kostroma Region) at units with solid heat carrier UTT-500.

The principal scheme of extraction developed by the Institute of Organic Chemistry and STC *ECOSORBS* is presented. The unit allows producing 200 t thiofurans by processing 100 t oil shale a year.

PRODUCTION OF BINDERS FOR ROAD CONSTRUCTION
BY CO-PROCESSING OIL SHALES AND OIL RESIDUES

S. E. Gorlova, T. G. Gulemisaryan

I. M. Gubkin Russian State University of Oil and Gas, Moscow, Russia

E. G. Gorlov

Fossil Fuel Institute, Moscow, Russia

A. V. Rudensky,

GUP DOR NII, Moscow, Russia

This work presents the results of experiments on thermolysis of oil residues (of native and destructive origin) mixed with oil shales. The process enables to perfect oil treatment to get light oil products. It has been established that cracking residues, depending on their initial boiling temperature, may be successfully used as liquid or viscous oil-derived road bitumen.