

processes of CT processing and technologies of the coal tar treatment with ozone in coke chemistry will make it possible to increase the degree of beneficial use of native raw hydrocarbons and to improve the quality of the produced distillates and individual chemicals.

CRedit authorship contribution statement

Zh.K. Kairbekov: Supervision. **N.T. Smagulova:** Conceptualization, Methodology. **A.S. Maloletnev:** Investigation, Data curation. **N.A. Abik:** Writing - review & editing. **Y.B. Otyshiyev:** Writing - review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- [1] N.Yu. Beilina, V.V. Zamano, A.A. Krichko, A.A. Ozerenko, E.A. Ozerenko, S.B. Frosin New concept of the processing of coke chemical coal tar // Solid fuel chemistry. 5 (2006) 22-29.
- [2] A.A. Krichko, A.A. Ozerenko, V.V. Zamanov, and S.B. Frosin Proc. II Russian Conf. Topical Problems of Petroleum Chemistry, Ufa: Bashgiproneftekhim, 2005, pp. 36.
- [3] V.F. Kamyarov, A.K. Lebedev, P.P. Sivirilov, Ozonolysis of Crude Oil, Tomsk, 1997, pp. 271.
- [4] V.F. Kamyarov, P.P. Sibirilov, I.Yu. Litvintsev, T.V. Antonova Ozonolysis in the processing of the natural hydrocarbon crude materials // Chemistry for sustainable development, 7 (1999) 141-155.
- [5] S.D. Razumovsky, G.E. Zaikov Ozone and its reactions with organic compounds, Moscow, Nauka, 322 (1974).
- [6] S.A. Semenova, O.M. Gavrilyuk, N.I. Fedorova, Z.R. Ismagilov Oxidative modification of the coal tar with ozone in different environments, Solid fuel chemistry. 6 (2012) 23-28.
- [7] M.S. Litvinenko, I.M. Nosalevich, Chemical products of coking for the production of polymeric materials, Kharkov, 1962, pp. 278.
- [8] G.N. Makarov, G.D. Kharlampovich, Chemical technology of solid fossil fuels, Moscow, Khimiya, 1986, pp. 312.
- [9] S.A. Semenova, O.M. Gavrilyuk, Yu.F. Patrakov Compositional analysis of the group fractions of the coal coke-chemical tar, Bulletin of the Kuzbass State Technical University Journal, 5 (2010), 135-138.