

**REDUCTION OF CORROSIVE ACTIVITY OF OPERATING OIL IN THE BENZENE DEPARTMENT OF COKE PRODUCTION OF PJSC «ARCELORMITTAL KRYVVI RIH»**

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*This paper analyzes and formulates the optimal technological solutions to reduce the corrosiveness of the absorption oil. The problem of reducing the corrosiveness and the ability of the absorbing oil to form the precipitates becomes especially actual in view of the introduction in the technological scheme of a new tube furnace ThyssenKrupp (Germany) for heating the absorption oil in the benzene section. All major work has now been completed at this facility, and soon the new furnace will be commissioned, which should significantly improve the regeneration of the absorption oil.*

*Research of quality indicators of fresh oil and potentiodynamic testing of its water extracts has been fulfilled. To verify that the tube furnace tube material meets the requirements, a spectral analysis of a sample of the damaged tube was performed. The suspended solids of the circulating oil were observed under a microscope at a magnification of  $\times 250$ .*

*It was revealed that recycled absorption oil can lose quality as a result of tube furnace wear, frequent stoppages for repairs and watering of oil with coke oven gas condensate in scrubbers. Exit from the state of watering occurs during the operation of the distillation department due to "steaming" in the column. As a result, the concentration of salts in the oil occurs and, as a result, its corrosiveness increases.*

*Oil watering in the distillation column occurs when the heating temperature drops.*

*Before starting a new tube furnace, it is advisable to renew the entire working volume with fresh oil with preliminary flushing of the equipment. This will make it possible not to water it in the future during the smooth operation of the distillation and to maintain the proper quality of the absorption oil.*

**Keywords:** capture of benzene hydrocarbons, absorbing oil, distillation column, regeneration, tubular furnace, corrosiveness, survey, watering, suspended particles, aggregation.

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