

PURPOSE, MODIFICATION AND OPERATION OF CAPACITIVE EQUIPMENT OF BY-PRODUCT PLANTS OF COKE PRODUCTION

© **Ye.I. Kudriavtsev, L.O. Kazak** (STATE ENTERPRISE "STATE INSTITUTE FOR DESIGNING ENTERPRISES OF COKE OVEN AND BY-PRODUCT PLANTS" (SE "GIPROKOKS"), 61002, 60 Sumska str., Kharkiv, Ukraine)

The article presents an overview of capacitive equipment used in chemical shops of coke production. The advantages of metal modern capacitive equipment and the possibility of its long-term operation in present conditions are analysed. The basic principles are highlighted of selection when designing the type and materials of tanks and related equipment, which include heating devices, pumping equipment, various types of stirrers, coils, level, pressure and temperature measuring devices, breathing, hydraulic, safety and emergency valves, etc. In particular, the volume, material, wall thickness, and design of the bottoms and roofs of capacitive equipment depends not only on the technological features of the designed process in which it is used, but also on such factors as seismicity of the installation area, natural conditions, available industrial sites, etc. Information on modern requirements for the design features of capacitive flow-through equipment is provided, and the advantages of various design features are highlighted. The most modern and progressive features of the materials used, the principles of designing tank heating systems, etc. are presented. A generalised classification scheme for capacitive equipment is provided.

The main requirements for modern capacitive equipment for various technological purposes are formulated: reliability and structural strength, due to the choice of technical solutions and materials resistant to the effects of product components present in this equipment.

Examples of designed and installed equipment using different types of steel are given. Brief information is provided on the latest developments of SE "GIPROKOKS" that are of interest for use in coke production, taking into account the positive experience of operation, originality and efficiency of technical solutions, and specific features of particular enterprises.

Keywords: coke production, design, capacitive equipment, tank, collector, heater, mechanised illuminator, material, heating, operation.

Corresponding author Ye.I. Kudriavtsev, e-mail: jonnykvn1979@gmail.com
