
EXPERIENCE IN DESIGN AND IMPLEMENTATION OF A SYSTEM OF INDIVIDUAL PRESSURE CONTROL IN THE COKE CHAMBER

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The purpose of this article is to show the possibility of using the GIPRO system, designed for individual pressure regulation in each coking chamber, on existing and new coking batteries.

The prerequisites for the emergence of the technology of individual pressure regulation are described. The basics of processes occurring in coking chambers, which lead to undesirable environmental and production consequences, are explained. These negative effects can be leveled with the use of PROven® and SORRESO individual regulation systems developed in the world.

The article provides a comparative analysis of various systems of individual pressure regulation, which are used in world practice, and the system of maintaining individual pressure in the coking chamber - the GIPRO system, developed by SE "GIPROKOKS" - with other existing global analogues. The history of the introduction of various systems of individual pressure regulation in the world is briefly presented. Design features of the systems themselves are described.

The path of development of the "GIPRO" system from the idea to the experimental installation is described. The results of the design and installation of the "GIPRO" system at some factories in China and India are given. A description of the "GIPRO" system during operation with negative pressure in the gas tank is given, as well as other possible modes of operation of the system are presented.

On the example of the developed projects, the possibility of using the "GIPRO" system for installation, both on large-capacity coke batteries with tamping technology that are being built, and on the local modernization of gas removal equipment on existing coke batteries, has been proven. Conclusions were made about the possibility and expediency of using the developed system for coke batteries of various designs. The developed system can be used to improve the environmental performance of existing coke batteries. Installation of the system on a working coke battery can be implemented with minimal loss of coke production on that battery.

Keywords: hard coal, coking chamber, system of individual pressure regulation, reduction of harmful emissions, experimental installation, riser valve box.

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