

OVERVIEW OF SELECTED NATURAL GAS DRYING METHODS

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Received: 13.07.2020; Revised: 21.08.2020; Accepted: 21.08.2020

Abstract

The gas produced from the deposit usually contains various types of pollution. They are the reason for limiting its use, often making its use impossible. Therefore, it requires appropriate treatment. One of the main pollutants in gas is water. Its occurrence causes a lot of problems, especially at the stage of gas transport, such as the formation of hydrates blocking pipelines and apparatus, causes the phenomenon of condensation and corrosion of pipelines, especially if there is carbon dioxide or hydrogen sulphide in the gas. The paper presents a number of methods that enable drying of gas after extraction. Each of them has different parameters that will be achieved for the gas after it is dried. Depending on the required degree of drying, the economics of the process and compatibility with other dependent processes, the individual methods are more or less used in gas engineering. The paper discusses methods of absorption in ethylene glycol solutions, adsorption methods using silica gel, molecular sieves or calcium chloride and low-temperature processes such as Twister® supersonic separator, IFPEX-1® process and DexPro™ process.

Keywords: Gas drying; Glycol; Adsorption; Absorption; Silica gel; Molecular sieve.