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Application of ORC systems at natural gas compression station

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Abstrakty:

EN Natural gas is a mixture of hydrocarbons with combustible methane as the main component, the content of which usually exceeds 90. Among the remaining components of natural gas are ethane, propane, butane, nitrogen, carbon dioxide, sulfur compounds. Helium can be also found in some natural gas fields. The composition of natural gas depends on, e.g. the field from which the gas comes, and also way in which it is transported, i.e. pipelines, LNG technology. The quality of natural gas is regulated by respective standards. Gas transmission pipelines are the most popular method, dominating on the international gas market, though LNG technology has recently started to play the more and more prominent role. The intensive development of renewable energy sources is accompanied by the development of the Power to gas technology - the electric energy excess is used for the hydrogen production, which can be directed to the existing natural gas network and such a mixture of natural gas and nitrogen is transmitted. At present transmission pipelines for nitride natural gas Ls and Lw exist in Poland. The aim of this paper is analyzing the influence of natural gas admixtures on the operation parameters of transmission pipelines.

Słowa kluczowe:

EN natural gas transmission pipelines natural gas composition contamination of natural gas

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