Institute of Chemical Engineering

The analysis of the suitability of membrane materials for the enrichment of methane from ventilation air

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Authors:	Marek Tańczyk, Manfred Jaschik, Aleksandra Janusz-Cygan, Jolanta Jaschik, Artur Wojdyła, Elżbieta Sołtys
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Abstract: An analysis of the possibilities of using existing membrane materials for the separation of methane contained gas mixtures was carried out. A group of materials was selected that could potentially be used for the recovery of methane from mine ventilation air. Simulation of the permeation process for the selected membrane were also carried out. It was found that in such a process the enriched stream containing at least 0.5 vol% of methane can be produced, which should ensure the heat recovery when fed to a thermal reverse-flow reactor.

Attachments:

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