Institute of Chemical Engineering

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

Publication date:	30.12.2019
Publication title:	The analysis of the suitability of membrane materials for the enrichment of methane from ventilation air
Authors:	Marek Tańczyk, Manfred Jaschik, Aleksandra Janusz-Cygan, Jolanta Jaschik, Artur Wojdyła, Elżbieta Sołtys
Journal information:	Prace Naukowe Instytutu Inżynierii Chemicznej Polskiej Akademii Nauk
Tags:	membrane separation, ventilation air methane (vam), polymeric membranes, inorganic membranes, mmms membranes

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:

Zeszyt-23-2019 pdf, 2.84 MB

Created at:	04.08.2025
Published by:	Artur Wojdyła
Published at:	05.08.2025 11:26
Number of downloads:	155

Tagi: membrane separation, ventilation air methane (vam), polymeric membranes, inorganic membranes, mmms membranes

Metryczka

Published by:	Artur Wojdyła
Published at:	05.08.2025 14:14
Number of views:	162