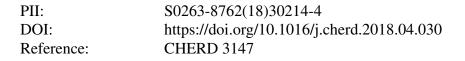
#### Accepted Manuscript

Title: Effects of hydrate-slurry decomposition conditions on gas generation and recovery performance

Authors: Hideo Tajima, Miki Hattori, Hikaru Akagami, Hiroyuki Komatsu, Kazuaki Yamagiwa



To appear in:

 Received date:
 25-10-2017

 Revised date:
 8-3-2018

 Accepted date:
 19-4-2018

Please cite this article as: Tajima, Hideo, Hattori, Miki, Akagami, Hikaru, Komatsu, Hiroyuki, Yamagiwa, Kazuaki, Effects of hydrate-slurry decomposition conditions on gas generation and recovery performance. Chemical Engineering Research and Design https://doi.org/10.1016/j.cherd.2018.04.030

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



### ACCEPTED MANUSCRIPT

# Effects of hydrate-slurry decomposition conditions on gas generation and recovery performance

Hideo Tajima\*, Miki Hattori, Hikaru Akagami, Hiroyuki Komatsu, Kazuaki Yamagiwa

Graduate School of Science and Technology, Niigata University, 2-8050 Ikarashi, Niigata 950-2181, Japan.

Corresponding Author: Hideo Tajima, Associate Professor

Telephone; +81-25-262-7277, E-mail; h\_tajima@eng.niigata-u.ac.jp

Graduate School of Science and Technology, Niigata University, 2-8050 Ikarashi, Niigata 950-2181,

Japan

#### Highlights

- Slurry decomposition conditions affected refrigerant gas recovery and separation.
- Maximum separation factors of ~50 and 20 for R22 and R134a, respectively.
- Pressure and temperature effects differed between refrigerants and N<sub>2</sub>.
- Separation factor variations were explained based on gas-generation rates.

#### Abstract

Many studies have been conducted on the application of hydrate-based gas separation to recover or reduce greenhouse-gas emissions. We evaluated the effects of hydrate-slurry decomposition conditions, specifically depressurization and heating, on gas recovery and separation, by using mixtures of refrigerants R22 or R134a with N<sub>2</sub> as models of a greenhouse gas and a low-pressure gas,

Download English Version:

## https://daneshyari.com/en/article/7005829

Download Persian Version:

https://daneshyari.com/article/7005829

Daneshyari.com