
CONTENTS

**THERMAL PHYSICS
AND THERMOLOGY**

Drachuk A. O., Kibkalo A. A.,
Kreven D. V., Molokitina N. S.,
Novikov N. S., Pletneva K. A.
**Effects of biopolymers on methane
hydrate formation in dispersed ice** 10

Shanenkov I. I., Astafiev A. V.,
Gajdabrus M. A., Tabakaev R. B.
**Changes in thermophysical
and thermotechnical characteristics
of flour-milling waste in the process
of slow pyrolysis** 23

Gil A. V., Maltsev K. I., Zavorin A. S.,
Starchenko A. V.
**Mathematical simulation
of furnace processes during fired
pulverized coal** 44

**FLUID, PLAZMA,
AND GAS MECHANICS**

Gubaidullin A. A., Boldyreva O. Yu.,
Dudko D. N.
**Technique of numerical simulation
of wave processes in a heterogeneous
hydrate-containing porous medium** 59

Shevtsov N. O., Korytov A. V.
**Study of the predictive ability
of the CRM analytical material balance
model as a part of a retrospective test
on a real field** 72

Kosyakov V. P., Musakaev E. N.,
Gaydamak I. V.
**Applying proxy-modeling tools
to estimate the effective injection
factor for an oil field** 85

Shabiev F. K., Pakharukov Yu. V.,
Safargaliev R. F., Yezdin B. S.,
Vasiliev S. A.
**Use of nanofluids based on carbon
nanoparticles to displace oil from
the porous medium model** 106

**MATHEMATICAL MODELING,
NUMERICAL METHODS
AND SOFTWARE SYSTEMS.
INFORMATION TECHNOLOGIES**

Bubenchikov A. M., Brazovskiy E. B.,
Konkov N. S.
**The shape of the funnel from
the explosion of the charge
in the plan having the configuration
of a rectangle** 126

Donkova I. A., Yakubovskiy Yu. E.,
Kolosov V. I.
**Modeling and calculation
of a pipeline section repaired
on the basis of composite- coupling
technology** 140

Umanovskiy A. W..
**Proxy modeling of reservoir
hydrodynamics with graph
neural networks.....155**

**ANNIVERSARIES,
SCIENTIFIC EVENTS,
REVIEWS**

**To the 75th anniversary of Professor
Amir Anvarovich Gubaidullin178**