
Romanian Journal of Petroleum & Gas Technology

Areas:

Geological, Drilling and Production Engineering

Mechanical Engineering

Electrotechnics, Electronics and Automation Engineering

Chemical and Petrochemical Engineering

Renewable Energies and Environmental Protection

Edited by

Gheorghe-Adrian BRĂNOIU, Dorin George BĂDOIU,
Otilia CANGEA, Timur CHIS, Raluca DRAGOMIR,
Cristian Nicolae EPARU, Casen PANAITESCU

DOI: 10.51865/JPGT

VOL. III (LXXIV) No. 2 / 2022

DOI: 10.51865/JPGT.2022.02

ISSN 2734 – 5319

ISSN-L 2734 – 5319



Scientific Board:

Michel Troquet (Polytech Clermont-Ferrand, France); Clovis Francis (Lebanese University, Lebanon); Rafic Younes (Lebanese University, Lebanon); Jan Golonka (AGH University of Science and Technology, Kraków, Poland); Tefy Raoelivololona (Universite d'Antsirana, Madagascar); Nam Nguyen Dang (Duy Tan University, Vietnam); Zulfan Adi Putra (Universiti Teknologi Petronas, Malaysia); Cătălin Teodoriu (University of Oklahoma, Mewbourne School of Petroleum and Geological Engineering); Mihai Arghir (Université de Poitiers, France); Sorin Radu (University of Petrosani); Valentin Petrescu ("Lucian Blaga" University of Sibiu); Alexandru Ozunu (Babeş-Bolyai University Cluj-Napoca); Vasile Stănculescu (Institute of Research and Technological Design (ICPT) Câmpina, OMV-Petrom); **Florinel Dinu** (Petroleum-Gas University of Ploiesti); Lazăr Avram (Petroleum-Gas University of Ploiesti); Mihai Albulescu (Petroleum-Gas University of Ploiesti); Alin Diniță (Petroleum-Gas University of Ploiesti); Razvan George Rîpeanu (Petroleum-Gas University of Ploiesti); Dragos Ciuparu (Petroleum-Gas University of Ploiesti); Dorin Bombos (Petroleum-Gas University of Ploiesti); Ion Pana (Petroleum-Gas University of Ploiesti); Mihaela Caltaru (Petroleum-Gas University of Ploiesti); Cangea Otilia (Petroleum-Gas University of Ploiesti); Dorel Mihail Dușmănescu (Petroleum-Gas University of Ploiesti)

Romanian Journal of Petroleum & Gas Technology Editor-in-chief:

Gheorghe-Adrian Brănoiu

Romanian Journal of Petroleum & Gas Technology Executive Editors:

Dorin Bădoiu, Otilia Cangea, Timur Chis, Raluca Dragomir, Cristian Nicolae Eparu, Casen Panaitescu, Mihaela Claudia Trifan

Romanian Journal of Petroleum & Gas Technology is an open access, peer-reviewed, international scientific journal in the petroleum and gas field, published two times per year, and continues the long tradition established by the old periodicals of the Petroleum-Gas University Ploiesti, with the first issue appearing in the year 1956, in Bucharest, and continuing in Ploiesti since 1973, and especially Petroleum-Gas University of Ploiesti Bulletin - Technical Series (ISSN 1224-8495) (1992-2019), whose successor it is.

The topic of the published papers covers all the fields linked to the petroleum and gas industry: oil wells drilling, oil and gas reservoirs production, petroleum geology and geophysics, petroleum products transportation and storage, petroleum technology and petrochemistry, renewable energies, environmental protection, petroleum and oilfield equipment (design, optimization, production, materials and technologies), electrotechnics, electronics and automation in the petroleum industry a.o.

website: <http://jpgt.upg-ploiesti.ro/>

Editorial Office: Petroleum-Gas University of Ploiești

Bd. București, No. 39, Ploiești, Romania

Tel.: 0244 575292; Fax: 0244 575847

e-mail: bull-st@upg-ploiesti.ro

* *The authors have the all legal and moral responsibility for the content of the papers*



CONTENTS

1. A METHOD TO DETERMINE THE MASS FLOW TO RECIPROCATING COMPRESSORS – Paul-Octavian Dinu, Ion Pană, Florinel Dinu	05-16
2. MEASUREMENT UNCERTAINTY IN LEGAL METROLOGY – Bogdan-Gabriel Duță, Ionuț Banu, Tania-Ioana Cîmpeanu, Gabriela Bucur	17-24
3. GAUSS-JACOBI'S ITERATION METHOD FOR NATURAL GAS WELLS PRODUCTION FORECAST USING DECLINE CURVE ANALYSIS – Okologume Chinedu Wilfred, Esue Akhuonabor Innocent	25-35
4. MODEL BASED ON BOOLEAN LOGIC FOR SCREENING AND SELECTION OF THE ARTIFICIAL LIFT METHODS – Mark Malatinszky, Mariea Marcu	37-48
5. STUDY AND DESIGN OF AN AUTOMATED PALLET SYSTEM – Otilia Cangea, Vlad-Bogdan Petrescu	49-56
6. AUTOMATION SYSTEM OF A MANEUVERING OPERATION WITHIN A DRILLING INSTALLATION – Cristina Popescu, Andrei Olteanu	57-64
7. THE INFLUENCE OF THE PERFORATION DENSITY AND DAMAGED ZONE PERMEABILITY ON A GAS WELL PRODUCTION – Alexandra Cătălina Damascan, Mihai Albuлесcu, Doru Stoianovici	65-76
8. ANALYSIS OF THE CAUSES OF CIRCULATION LOSS IN THE LOWER CRETACEOUS DEPOSITS DURING THE HORIZONTAL DRILLING UNDERCROSSING THE DANUBE RIVER (GIURGIU-RUSE SECTION) – Dumitru Frunzescu, Gheorghe Branoiu, Ionut-Andrei Lungu	77-90
9. USE OF GENETIC ALGORITHMS IN CREATING OIL BLENDS REQUIRED FOR REFINERY DISTILLATION PLAN – Reem Sabah Mohamed, Marius Bănică, Renata Rădulescu, Timur Chis	91-100
10. EFFICIENT USE OF USED LUBRICANTS – Liana Bogatu	101-106

