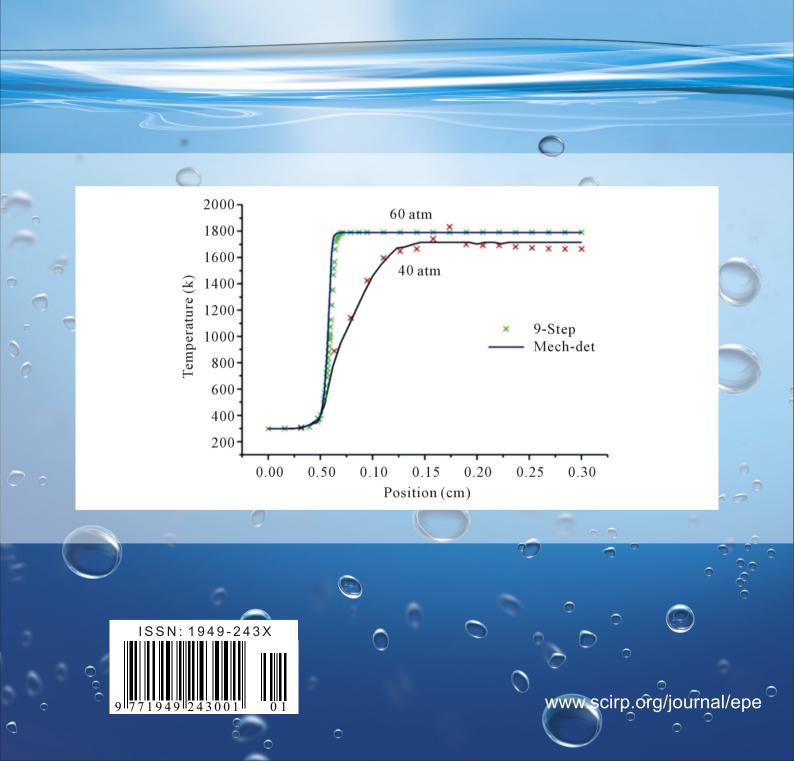
Volume 4, Number 1, January 2012



Energy and Power Engineering



Journal Editorial Board

ISSN: 1949-243X (Print) ISSN: 1947-3818 (Online) http://www.scirp.org/journal/epe

Editor in Chief

Dr. Fermin Mallor

Public University of Navarre, Spain

Editorial Advisory Board

Prof. Qingquan Chen Prof. Ryuichi Yokoyama Prof. Xiaoxin Zhou The University of Hong Kong, China Tokyo Metropolitan University, Japan Chinese Society of Electrical Engineering, China

.....

Editorial Board

Dr. Fabio Bisegna Prof. Ho Chang **Prof. Jiangping Chen Prof. Young Nam Chun** Dr. Philippe Colomban **Prof. Guoliang Ding Prof. Zhen Fang** Prof. Khaled A. M. Gasem Dr. Herbert H. C. Iu Dr. Ruomei Li Dr. Zhengqi Li **Prof.** Kaipei Liu Dr. Lin Ma Prof. Adnan Midilli Dr. Jingchun Min Dr. Meng Ni **Prof. Ping-Feng Pai Prof. Wei-Ping Pan Prof. Pucheng Pei Prof. Constantine D. Rakopoulos** Prof. Nanqi Ren Prof. Marc A. Rosen Dr. Pierluigi Siano **Prof. Yuanzhang Sun Dr. Siu-Chung Wong** Prof. Changhui Ye Prof. Bo Yu **Prof. Yong Zhang**

Sapienza University of Rome, Italy National Taipei University of Technology, Chinese Taipei Shanghai Jiao Tong University, China Chosun University, Korea (South) University Pierre & Marie Curie, France Shanghai Jiao Tong University, China Chinese Academy of Sciences, China Oklahoma State University, USA The University of Western Australia, Australia Chinese Society for Electrical Engineering, China Harbin Institute of Technology, China Wuhan University, China University of Leeds, UK Rize University, Turkey Tsinghua University, China The Hong Kong Polytechnic University, Hong Kong (China) National Chi Nan University, Chinese Taipei Western Kentucky University, USA Tsinghua University, China National Technical University of Athens, Greece Harbin Institute of Technology, China University of Ontario Institute of Technology, Canada University of Salerno, Italy Tsinghua University, China The Hong Kong Polytechnic University, China Chinese Academy of Sciences, China China University of Petroleum-Beijing, China University of Science and Technology Beijing, China

T

Editorial Assistant

Judy Liu

Guest Reviewers

Paritala Chandrasekhar Ahad Esmaeilian Scientific Research Publishing, USA

Email: epe@scirp.org

Yang Han



TABLE OF CONTENTS

Volume 4 Number 1

January 2012

A New Adaptive Technique for Enhancement of Zone-2 Settings of Distance Relay	
A. N. Sarwade, P. K. Katti, J. G. Ghodekar	1
Energy Systems Maintenance	
O. Opeyemi, F. Al Hassan	8
Grounding Locations Assessment of Practical Power System	
N. A. Shalash, A. M. A. Haidar, K. A. Sattar	19
Reduced Detailed Mechanism for Methane Combustion	
A. A. Msaad, A. Belcadi, M. Mahdaoui, E. Aaffad, M. Mouqallid	28
The Influence of Inflow Condition on the Generation of Tumbling Flow Using Detached Edd	y Simulation
M. Mahdaoui, A. A. Msaad, M. Mouqallid, E. Affad	34
Power Transformer Top Oil Temperature Estimation with GA and PSO Methods	
M. A. Taghikhani	41
A Review of Performance Appraisals of Nigerian Federal Government-Owned Refineries	
I. Badmus, M. O. Oyewola, R. O. Fagbenle	47

The figure on the front cover is from the article published in Energy and Power Engineering, 2012, Vol. 4, No. 1, pp. 28-33 by Abdelouahad Ait Msaad, *et al.*

Energy and Power Engineering (EPE)

Journal Information

SUBSCRIPTIONS

The *Energy and Power Engineering* (Online at Scientific Research Publishing, www.SciRP.org) is published bimonthly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$59 per issue. To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

SERVICES

Advertisements Advertisement Sales Department, E-mail: service@scirp.org

Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA. E-mail: sub@scirp.org

COPYRIGHT

Copyright©2012 Scientific Research Publishing, Inc.

All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as described below, without the permission in writing of the Publisher.

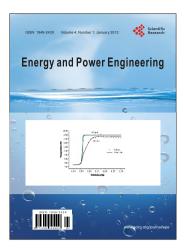
Copying of articles is not permitted except for personal and internal use, to the extent permitted by national copyright law, or under the terms of a license issued by the national Reproduction Rights Organization.

Requests for permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale, and other enquiries should be addressed to the Publisher.

Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assumes no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact: E-mail: epe@scirp.org



Call for Papers

Energy and Power Engineering

ISSN 1949-243X (Print) ISSN 1947-3818 (Online) http://www.scirp.org/journal/epe

Energy and Power Engineering (EPE), a quarterly journal, publishes research and review articles in all important aspects of electric power engineering and other professionals involved in the electric power industry. Both experimental and theoretical papers are acceptable provided they report important findings, novel insights, or useful techniques in these areas.

Editor in Chief

Dr. Fermin Mallor

Public University of Navarre, Spain

Editorial Advisory Board

Prof. Qingquan Chen Prof. Ryuichi Yokoyama Prof. Xiaoxin Zhou The University of Hong Kong, China Tokyo Metropolitan University, Japan Chinese Society of Electrical Engineering, China

Subject Coverage

EPE aims to strengthen relations between the energy sector, research laboratories, and universities. Additionally, accepted ones will immediately appear online followed by printed in hard copy. The topics to be covered by Energy and Power Engineering include, but are not limited to:

- ◆ Analysis of Hybrid Generation Systems ◆Investment Planning for Energy Infrastructures Artificial Intelligence in Complex Power and Energy Systems ◆Organic and Inorganic Photovoltaics ◆Bio-Energy Petroleum Engineering Building Energy Use and Energy Conservation Planning and Operations of Power Systems ♦CO, and Emission Issues • Power Demand Forecasting and Management, Power Market Power Electronic Engineering \bullet CO₂ Capture and Storage ◆Conventional Energy Power Generation Power Forecasting from Wind, Solar and Other Renewal Sources of Energy • Design and Dimensioning of Power Systems Power System Protection Distributed Generation • Power Transmission and Distribution Energy Resources ◆Energy Resources Assessment •Reliability Evaluation and Risk Analysis of Power Systems ◆ Renewable Energy Power Generation Energy Storage Smart Grid Heat Exchanger Hydrogen Energy and Fuel Cells Socio-Economic and Power System Management ◆Impact of Climate Changes on Energy Systems ◆Solar Energy Engineering Transmission and Capacity Planning Integrating Renewable Energy to the Power Grid
 - Wind Energy Engineering
- ◆International Experiences with Energy Infrastructures

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of the EPE.

Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submissions, please access the website.

Website and E-Mail http://www.scirp.org/journal/epe

Email: epe@scirp.org