

Contents

Foreword	(v)
KEYNOTE ADDRESSES	
1. Emerging Technologies <i>R.K. Bhattacharya</i>	KN-1
2. Tidal power - A new paradigm for India <i>Anil S. Kane</i>	KN-16
POWER GENERATION	
1. Mini-micro hydel power generation in Madhya Pradesh and Chhattisgarh – A case study <i>S.P. Adhau</i>	PG-1
2. Maintenance and management arrangements for small hydropower stations <i>S.K. Calla, S.L. Ahuja and R.K. Shenoy</i>	PG-9
3. Midlands Dam Project – Mauritius <i>L.D. Schewe</i>	PG-16
4. Cost effective development of canal based hydropower scheme – A case study <i>S.K. Singal and R.P. Saini,</i>	PG-31
5. Installation of a small hydro station into an existing water supply system <i>Axel Slogsnat and Helmut Erdmannsdoerfer</i>	PG-39
6. Engineering geophysics utility in small hydropower development <i>A. Sen</i>	PG-49
7. Assesment of power potential and finalization of installed capacity - A case study on Harabhangi-Padma cascade hydropower development in Orissa (India) <i>Joygopal Jena</i>	PG-56
8. Planning of a SHP at head regulator of Baragarh main canal, Orissa (India) <i>Joygopal Jena and R.C. Acharya</i>	PG-65
9. Planning and design of a 40 MW small scale hydro on river Kam in Taraba state, Nigeria <i>S.T. Dania</i>	PG-75

- | | | |
|-----|---|--------|
| 10. | Performance evaluation of wind power projects
<i>S.R. Purohit and H. Nagana Gouda</i> | PG-85 |
| 11. | Optimum operation of wind turbine energy conversion system on effect of loss modelling on the permanent magnet generators
<i>Kelvin Tan, Yao Tze Tat and Syed Islam</i> | PG-98 |
| 12. | Simulation study on variable speed wind energy conversion system using MATLAB/Simulink
<i>S.P. Srivastava, Pramod Agarwal and K.V.V. Suresh</i> | PG-112 |
| 13. | Analysis of variable speed constant frequency generator
<i>Nadim Ahmad and S.N. Singh</i> | PG-125 |
| 14. | Integration of windpower using cogeneration plants under decreasing space heating consumption
<i>Poul Alberg Østergaard</i> | PG-134 |
| 15. | Wind energy potential in southwest division of Bangladesh
<i>Sanjoy Dey, Md. Tarekul Alam, M. Zakir Hossain and M. Arif Hossain</i> | PG-143 |
| 16. | Renewable energy potential and prospects - emphasis on bioenergy
<i>T.V. Ramachandra</i> | PG-151 |
| 17. | Power generation through municipal waste by biomethanation - Case study of Nashik Municipal Corporation
<i>B.E. Kushare, A.M. Jain, B.D. Wagh and V.E. Kushare</i> | PG-170 |
| 18. | Energy conservation and cogeneration in modern rice mill
<i>R. Senthil, G. Sekar, K. Arivazhagan, R. Balakrishnan, S. Balamurugan, N. Ramaswamy and S. Rajasugumaran</i> | PG-181 |
| 19. | Kyoto protocol and renewable energy development
<i>Devadutta Das</i> | PG-193 |

DECENTRALISED ENERGY

- | | | |
|----|--|-------|
| 1. | New renewable energy sources for rural electrification development and the role of the African Development Bank
<i>G. Mbeshrubusa and B. Ram</i> | DE-1 |
| 2. | Present status, potential and issues of renewable energy technologies in Bangladesh
<i>M.A. Rashid Sarkar, M. Obaidullah and A.M. Aziz Ul Huq</i> | DE-12 |

3. Water mills for augmenting rural energy needs in the north-east India - A case study in Kameng district of Arunachal Pradesh
D.R. Das DE-23
4. Cost effective governing of micro hydropower plant by using electronic load controller
Surendra Pratap Singh and S.N. Singh DE-37
5. New technique for controlled frequency supply from a stand alone wind turbine
Mohamed M.M. Negm DE-51
6. Passive strategies for natural air-conditioning of building for different climate of India
P.C. Agrawal and I.R. Trivedi DE-62
7. Financing solar photovoltaic pumpset for agriculture
N.R. Tankhiwale DE-80
8. Solar PV submersible water pumping for small scale use in Bangladesh
M.A.R. Sarkar, M. Obaidullah, Z. Mahmud and Ivo Martinac DE-91
9. Comparative performance of a double reflector box type solar cooker under tracked and non-tracked conditions
Panna Lal Singh DE-99
10. Thermal studies on a salt gradient solar pond for possible application in dairy industries at Pondicherry region - A case study
N. Sozhan and E. Vijaykrishna Rapaka DE-104
11. Impact of hot water usage pattern and location on economics of solar water heating systems
Indu R. Pillai and Rangan Banerjee DE-112
12. A supercapacitive multilevel voltage source inverter for photovoltaic system
Asif Anwar, M. Shamim Kaiser, R.K. Mazumder and S.K. Aditya DE-125
13. The financial feasibility of a roof-top grid connected photovoltaic system in Bangladesh
M. Shamim Kaiser, Asif Anwer, S.K. Aditya and R.K. Mazumder DE-133

14. Design and development of composite solar water heater cum distillation unit for domestic use
S.H. Sengar, A.K. Kurchania and N.S. Rathore DE-144
15. Development of dual fuel gasifier working on powder and solid dry bio-mass
D.N. Reddy, M.V. Ramana Murthy and Sree Rama Sarma DE-155
16. Biogas development programme in Himachal Pradesh (India)
Shiv P. Singh, Anjan K. Kalia and Harsh N. Verma DE-162
17. Gasifier engine system for water pumping : A case study
Sandip Gangil and Anil K. Dubey DE-173
18. Biogas recovery and utilization from waste
A.K. Kurchania, N.S. Rathore and N. Ali DE-179
19. Study on performance evaluation of solar cum biomass dryer for turmeric drying at farmer scale
Jaishree Prasad and V.K. Vijay DE-192

EMERGING TECHNOLOGIES

1. An effort towards hydrogen energy
Vinod Kurup, K.D. Chudasama, G.S. Grewal V. Shrinet and A.K. Singh ET-1
2. Theoretical study of Jatropha and other vegetable oils as biodiesel fuel for internal combustion engines
Praveen K.S. Yadav, R.P. Singh and Onkar Singh ET-10
3. The Indian 1 MW OTEC plant-technological challenges and development activities
M. Ravindran and Raju Abraham ET-15
4. Tidal power generation
N.S. Lingayat ET-27
5. OTEC Economics - The perception and the future
P. Manivannan, L. Sheela Nair and M. Ravindran ET-37
6. Ocean wave electricity generation
Sree Rama Sarma ET-47