JOURNAL OF THERMAL SCIENCE

CONTENTS

Volume 31, No. 5, September-October 2022

Special Column: International Conference on Efficiency, Cost, Optimization, Simulation & Environmental Impact of Energy Systems (ECOS 2021)

Cloud-Based Optimal Control of Individual Borehole Heat Exchangers in a Geothermal Field	1253
STOFFEL Phillip, KÜMPEL Alexander, MÜLLER Dirk	
CO₂ Plume Geothermal (CPG) Systems for Combined Heat and Power Production:	1266
an Evaluation of Various Plant Configurations	
SCHIFFLECHNER Christopher, WIELAND Christoph, SPLIETHOFF Hartmut	
Performance Assessment of Low-Temperature A-CAES (Adiabatic Compressed Air Energy Storage) Plants	1279
TOLA Vittorio, MARCELLO Francesca Carolina, COCCO Daniele, CAU Giorgio	
Development of a Long-Term Operational Optimization Model for a Building Energy System	1293
Supplied by a Geothermal Field KÜMPEL Alexander, STOFFEL Phillip, MÜLLER Dirk	
Design and Construction Challenges for a Hybrid Air and Thermal Energy Storage System	1302
Built in the Post-Mining Shaft	
WANICZEK Sebastian, OCHMANN Jakub, BARTELA Łukasz, RULIK Sebastian, LUTYŃSKI Marcin,	
BRZUSZKIEWICZ Michał, KOŁODZIEJ Konrad, SMOLNIK Grzegorz, JURCZYK Michał, LIPKA Marian	
»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»	.»»»»» 1318
Pipe Solar Collector XU Rongji, CHEN Jingyan, ZHANG Xiaohui, WANG Ruixiang, XU Shuhui	
Thermal Performances of High-Temperature Thermal Energy Storage System with Tin Embedded	1327
in Copper Matrix by Theoretical Methods LAN Yingying, HUANG Congliang, GUO Chuwen	
Coupled Thermal and Mechanical Dynamic Performances of the Molten Salt Packed-Bed Thermal	1337
Energy Storage System HUANG Lijuan, DU Baocun, LEI Yonggang	
Integration of LNG Regasification Process in Natural Gas-Fired Power System with Oxy-Fuel Combustion	1351
LIU Rong, XIONG Yongqiang, KE Liying, LIANG Jiacheng, CHEN Dengjie, ZHAO Zhongxing, LI Yajun	
Theoretical Performance Analysis of an Ejector Enhanced High-Temperature Heat Pump	1367
with Dual-Pressure Condensation and Evaporation	
BAI Tao, LIU Ye, YAN Gang, YU Jianlin	
A New Cleaner Power Generation System Based on Self-Sustaining Supercritical Water Gasification of Coal	1380
LIU Changchun, HAN Wei, WANG Zefeng, ZHANG Na	
Investigating the Role of Bushehr Nuclear Power Plants (BNPPs) in Line with Achieving the	1392
Perspective of Sustainable Energy Development in Iran	
NASOURI Masoud, DELGARM Navid	
CO₂ Diffusivity in H₂O for Supercritical Conditions: A Molecular Dynamics Study	1407
CHEN Longfei, LIU Dong, LI Qiang	
Performance Study and Multi-Objective Optimization of a Two-Temperature CO₂ Refrigeration	1416
System with Economizer Based on Energetic, Exergetic and Economic Analysis	
LIU Guangdi, ZHAO Hongxia, WANG Zheng, ABDULWAHID Alhasan Ali, HAN Jitian	
Temperature Difference and Stack Plate Spacing Effects on Thermodynamic Performances	1434
of Standing-Wave Thermoacoustic Engines Driven by Cryogenic Liquids and Waste Heat	
GUO Lixian, ZHAO Dan, BECKER Sid	
Investigation on the Performance of the Pump-Free Double Heat Source Ejector Refrigeration	1452
System with R1234yf YU Meihong, ZHAO Hongxia, WANG Xinli, HAN Jitian, LAI Yanhua	
Evaluation on Excess Entropy Scaling Method Predicting Thermal Transport Properties of Liquid	1465
HFC/HFO Refrigerants WANG Xuehui, WRIGHT Edward, GAO Neng, LI Ying	
Experimental Investigation of the Ejector Refrigeration Cycle for Cascade System Application	1476
HAO Xinyue, GAO Neng, CHEN Guangming, VOLOVYK Oleksii, WANG Xuehui, XUAN Yongmei	
Thermodynamic Performance and Flammability Studies of Hydrocarbon Based Low Global Warming	1487
Potential Refrigerant Mixtures Nagarjuna KUMMA, S S Harish KRUTHIVENTI	

Numerical Study and Performance Analyses of Mems-Based Particle Velocity Sensor with Combined	1503
Inclined Rib Pair ZHU Linhui, ZENG Yibo, GUO Hang	
Performance Evaluation on the In-Cylinder Heat Transfer of a Reciprocating Compressor using	1518
CO ₂ as a Working Fluid	
LIU Zhan, YANG Xuqing, YANG Xiaohu, ZHAI Hongyan, DUAN Zhenya	
Numerical and Experimental Investigation on the Performance of Battery Thermal Management System	1531
Based on Micro Heat Pipe Array	
YANG Lulu, XU Hongbo, ZHANG Hainan, CHEN Yiyu, LIU Ming, TIAN Changqing	
An In-Situ MRI Method for Quantifying Temperature Changes during Crystal Hydrate Growths	1542
in Porous Medium	
ZHANG Lunxiang, SUN Mingrui, WANG Tian, YANG Lei, ZHANG Xiaotong, ZHAO Jiafei, SONG Yongchen	
Enhancement of Natural Convection for Cooling Active Antenna Unit Device in 5G Base Station	1551
ZHANG Dexin, DING Bin, ZHU Chuanyong, GONG Liang	
Experimental Study on the Penetration of Diesel and Biodiesel Spray Liquid Emerging from an	1565
Equilateral Triangular Orifice under Evaporative Conditions	
YIN Bifeng, YE Ze, JIA Hekun, YU Shenghao, DENG Weixin	
Numerical Research on Effect of Sudden Cross-Section Expansion on Detonation Initiation	1575
JIA Xiongbin, ZHAO Ningbo, MAXWELL Brian, CHEN Xiang, ZHENG Hongtao	.0.0
Thermodynamics-Acoustics Coupling Studies on Self-Excited Combustion Oscillations	1591
Maximum Growth Rate ZHAO Dan	1001
Kinetic Analysis on Pyrolysis Characteristics of Butene Isomer Fuels with CO ₂ Additions	1604
CHEN Chen, ZHAO Rui, YING Yaoyao, LIU Dong	1004
Sensitivity Analysis of Pollutants and Pattern Factor in a Gas Turbine Model Combustor due to Changes	1622
in Stabilizing Jets Characteristics	1022
BAZDIDI-TEHRANI Farzad, TEYMOORI Alireza, GHIYASI Mehdi	
	1642
Mechanistic Insights into Effects of Outer Stage Flare Angle on Ignition and Flame Propagation of	1642
Separated Dual-Swirl Spray Flames	
YANG Siheng, HUI Xin, ZHANG Chi, QIAN Weijia, GAN Xiaohua	4000
Simulation of Combustion Flow of Methane Gas in a Premixed Low-Swirl Burner using a Partially	1663
Premixed Combustion Model	
XIAO Caiyuan, OMIDI Milad, SURENDAR A., ALIZADEH As'ad, BOKOV Dmitry O., BINYAMIN,	
TOGHRAIE Davood	4000
Numerical Investigation of the Load Distribution between the Main Blade and the Splitter Blade in a	1682
High-Loading Centrifugal Compressor OU Jun, JIN Donghai, GUI Xingmin	4000
Cooling Performance of the Endwall Vertical Hole Considering the Interaction between Cooling Jet	1696
and Leading-Edge Horseshoe Vortex CHEN Ziyu, SU Xinrong, YUAN Xin	
Aerodynamic Comparison between Increasing Cascade Pitch and Turning Angle in the	1709
Highly-Loaded Design ZHOU Xun, XUE Xingxu, DU Xin, LUO Lei, WANG Songtao	
Flow Control Effect of Spanwise Distributed Pulsed Arc Discharge Plasma Actuation on Supersonic	1723
Compressor Cascade Flow	
SHENG Jiaming, WU Yun, ZHANG Haideng, WANG Yizhou, TANG Mengxiao	
Characterization of Swirling Inflow Effects on Turbine Performance under Pulsating Flows	1734
DING Zhanming, WANG Cuicui, ZHANG Junyue, LIU Ying, HOU Linlin, ZHUGE Weilin, ZHANG Yangjun	
Effect of Nozzle Vane and Rotor Clearance on Performance of Variable Nozzle Turbine	1745
LEI Xinguo, LI Renfu, XI Zhaojun, YANG Ce	
A Novel Model for CFD-Based Throughflow Analysis of Film-Cooled Turbine Blade	1759
MAO Yinbo, CHEN Ziyu, SU Xinrong, YUAN Xin	
Effect of Squealer Tip with Deep Scale Depth on the Aero-thermodynamic Characteristics of	1773
Tip Leakage Flow BI Shuai, WANG Longfei, WANG Feilong, WANG Lei, LI Ziqiang	
Numerical Investigation of a Turbine Stator with Nonaxisymmetric Endwall Profiling	1790
LIU Wei, WANG Songtao, WEN Fengbo	
Comparison of Flow Mechanism of Blade Sweep between a Transonic Single Rotor and a	1804
Rotor in Stage Environment	
CAO Zhiyuan, GAO Xi, LIANG Yuyuan, HUANG Ping, LEI Peng, LIU Bo	
Brief Information for Authors	1820