

CONTENTS

Essay

..... M. YOSHIDA(1037)

Special Articles: Production of Fuels from Heavy Oil

(Reviews)

Challenges for the Production of Fuels from Heavy Oil

..... S. SATO(1038)

Current Upgrading Technology of Heavy Oil and Unconventional Crude

..... T. KAYUKAWA, S. NAGAMATSU(1042)

Current Study on Cetane Number Improvement of Diesel Fraction

..... J. FUCHIKAMI(1052)

Type Analysis of Diesel Fuel

..... T. KONDO, S. MIZUNO(1058)

Meanings and Estimation Methods of Octane Number and Cetane Number

..... Y. MITSUI, M. KAGAMI(1064)

Original Paper

Factor X (Eco-Efficiency) Assessment on Global Warming a Household in Japan

..... T. AOE, R. YAMAMOTO, T. IKAGA, Y. KONDO, Y. MATSUOKA, M. FUKUDA(1070)

Effects of Pressure on Laminar and Turbulent Burning Velocities of Ethanol Premixed Flames

K. OHARA, M. TSUKIKAWA, Y. ARAKI, A. HAYAKAWA, S. KOBAYASHI, Y. NAGANO, T. KITAGAWA(1088)

Technical Paper

Construction of Heat Recovery Generation System for Co-generation in Commercial and Residential Sectors

— Improvement of Scroll Shapes for High-power and High-performance in Scroll Steam Expander —

..... S. ISHII, S. IKEGAMI, H. TERAOKA, T. ONO, Y. HAMACHI, K. INAOKA, J. SENDA, M. SENDA(1095)

Lecture Note

Energy Conversion (3-1) :

Science of Energy Conversion - Working Principles of Thermal Power Generation and Nuclear Power Generation

..... S. UMEZAWA(1103)

Coal (3) :

Classification and Rank of Coal

..... T. ARAMAKI, I. MOCHIDA(1109)

Introduction of Research Group (Advanced Fuel Group, Energy Technology Research Institute (ETRI),

National Institute of Advanced Industrial Science and Technology)(1118)

Report on the 47th Conference of Coal Science(1122)

Entropy(1125) JIE Calendar(1126)

Bulletin Board(1127) From the Editors(1129)