

List of Technical Papers for 2003 Annual Conference of GTSJ**The History and Technical Succession of the Japanese Industrial Gas Turbine**

Sugimoto, T. : *Kawasaki Heavy Industries, Ltd.*

History of Large Capacity Gas Turbine Development with Increasing Firing Temperature and Efficiency

Tsukagoshi, K. : *Mitsubishi Heavy Industries, Ltd.*

The Development of the Portable Gas Turbine Generator

Maekawa, H. et al. : *IHI Aerospace Co., Ltd.*

Field Experiment of Micro Gas Turbine Co-generation System in a Cold Region

Tsuzuki, S. et al. : *Kitami Institute of Technology.*

Study on a Small Reheat Gas Turbine

Iki, N. et al. : *National Institute of Advanced Industrial Science and Technology.*

High Speed Generator-Motor Directly Connecting to a Small Gas Turbine

Takahashi, N. et al. : *Toshiba Corporation.*

Development of IM270-IHI-FLECS

Yamamoto, S. : *Ishikawajima-Harima Heavy Industries Co., Ltd.*

Thermal Efficiency Analysis of Existing Combined Cycle Power Generation Unit

Koda, E. et al. : *Central Research Institute of Electric Power Industry.*

Study on the Maximized-efficiency Optimized Reheat-cycle Innovative Gas Turbine Combined-cycle Power Generation System (MORITC)

Moritsuka, H. et al. : *Central Research Institute of Electric Power Industry.*

Study of Application of Steam Recuperation System in Advanced Combined Cycles

Uzunow, N. et al. : *National Institute of Advanced Industrial Science and Technology.*

Study of Power Conversion Unit Design of Gas Turbine High Temperature Reactor (GTHTR300)

Takeda, S. et al. : *Japan Atomic Energy Research Institute.*

Conceptual Design of Advanced FADEC

Sugiyama, N. et al. : *National Aerospace Laboratory.*

Clustered Small Fan Engine for VTOL Engine System

Matsuda, Y. et al. : *National Aerospace Laboratory.*

Combustion Performance and Emission Characteristics of Lean Premixed and Prevaporized Combustor Flameholder

Shimodaira, K. et al. : *National Aerospace Laboratory.*

Combustion Characteristics of Conical Flameholder and Swirl Type Flameholder on Lean Premixed Combustion

Yamamoto, T. et al. : *National Aerospace Laboratory.*

Lean-lean Two-stage Premixed Tubular Flame Combustion

Takagi, H. et al. : *Hosei University.*

Combustion and NO_x Formation of Vaporized Fuel-Air Mixtures Injected into Hot Burned Gas (Second Report, For Rich (Lean) Mixtures into Burned Gas of Lean (Rich) Mixtures)

Aida, N. et al. : *Hosei University.*

Stability Characteristics of Low NO_x Gas Turbine Combustor with Axially Staged Flames

Maeda, F. et al. : *Toshiba Corporation.*

Development of Fuel Oil A Fired Low NO_x Combustor for SMGT (Part. 2)

Doura, Y. et al. : *Kawasaki Heavy Industries, Ltd.*

Understanding of the Problems on Downsizing of Gas Turbine Combustors

Takamatsu, M. et al. : *Keio University.*

Effects of Inlet Configuration on Combustion Characteristics of a Propane Sector Micro Gas Combustor

Uehara, M. et al. : *Tokyo Metropolitan Institute of Technology.*

The Effect of Heat Transfer between Components on the Performance of Ultra Micro Gas Turbine

Oshimi, K. et al. : *Tokyo Metropolitan Institute of Technology.*

Combustion Characteristics of Dimethyl-etherKoizumi, H. et al. : *Hitachi, Ltd.***Three-Dimensional Computation of Hydrogen-Fuelled Combustion within Turbine Blade Passage (Influence of Injection Hole Configuration)**Nagumo, T. et al. : *Tokyo University of Science.***Dynamic Analysis on Pulse Detonation Engine for Power Generator**Sakurai, T. et al. : *Saitama University.***Compact Plate Heat Exchanger with Minute Offset Fin of Heat-resist Alloy**Yoshikawa, T. et al. : *Japan Defense Agency.***Optimization of an Integrated Impingement Cooling System using Multi-Objective Genetic Algorithm**Funazaki, K. et al. : *Iwate University.***Research of an Integrated Impingement Cooling Configuration**Nakamata, C. et al. : *Ishikawajima-Harima Heavy Industries Co., Ltd.***Aerodynamic Design Concept of Advanced High Turning Compressor Airfoil for Low Reynolds Number Region**Sonoda, T. et al. : *Honda R&D Co., Ltd.***Design of a 1000C Class Radial Turbine Rotor**Yagi, M. et al. : *Hitachi, Ltd.***Fan Driven by Multi Stage Tip Turbine with Single Rotor Blade**Iwase, S. et al. : *National Aerospace Laboratory.***Design and Prototyping of Micro Centrifugal Compressor**Hirano, T. et al. : *Hosei University.***Numerical Investigation on Passive Injection Control of 3 Dimensional Shock Wave / Turbulent Boundary Layer Interaction**Toda, K. et al. : *Tokyo University of Science.***Analysis of Unsteady Aerodynamic Characteristics in a Turbine Stage (Evaluation by CFD and EFD)**Yamada, K. et al. : *Iwate University.*

Self-Sustained Flow Oscillation Due to Breakdown of Tip Leakage Vortex in a Transonic Axial Compressor Rotor

Furukawa, M. et al. : *Kyushu University.*

Numerical Simulation of Main-Stream Gas Ingestion into the Turbine Disc Cavity

Hamabe, M. et al. : *Ishikawajima-Harima Heavy Industries Co., Ltd.*

Unsteady Flow Induced by Circular Cascade (Effect of a chord length of flat plate)

Takama, N. et al. : *The University of Tokyo.*

Experimental Study of Shock Wave Fluctuation and Pressure Fluctuation on an Symmetrical Airfoil and Cascade in Transonic Flow

Takahashi, K. et al. : *Tokyo Metropolitan Institute of Technology.*

Variation of Blade Surface Pressure following the Shock Wave Movement in the Transonic Compressor Cascade

Hirano, T. et al. : *Takushoku University.*

Unsteady Midspan Flow of a Turbine Rotor at Part-Loaded Conditions

Matsunuma, T. et al. : *National Institute of Advanced Industrial Science and Technology.*

Surge Control of Centrifugal Compressor by Flow Injection at Impeller Inlet

Asaga, Y. et al. : *Hosei University.*

Numerical Analysis of Active Control on Cascade Flutter by Trailing Edge Flapping

Kazawa, J. et al. : *The University of Tokyo.*

Study of Blade Vibration Reduction Methodology in High Pressure Compressors using Multi-Blade-Row CFD Analysis

Kato, D. et al. : *Ishikawajima-Harima Heavy Industries Co., Ltd.*

Comparison between Unsteady Multistage CFD Analysis and Single Blade Row Analysis in Transonic Multistage Compressors

Yamagami, M. et al. : *Ishikawajima-Harima Heavy Industries Co., Ltd.*

Study on the Internal Flow of Radial Turbine Scroll for Turbochargers

Osako, K. et al. : *Mitsubishi Heavy Industries, Ltd.*

Development of Next Generation Single Crystal Superalloy

Koizumi, Y. et al. : *National Institute for Materials Science.*

Investigation of Numeric Difference by Difference of High Temperature Elastic Modulus Measurement Method on CMS247LC-DS Alloy

Sakurai, Y. et al. : *AGNE Gijutsu Center.*

Thermal Cycling Deformation Behavior of Vertical Cracked TBC by APS

Arai, M. et al. : *Central Research Institute of Electric Power Industry.*

Effect of Specimens and Environments on TGO Process of TBC

Arai, M. et al. : *Central Research Institute of Electric Power Industry.*

Impact Characteristics of Ceramic Material for Turbine Blade Use : 2nd Report

Yoshida, H. et al. : *National Institute of Advanced Industrial Science and Technology.*

Reliability Improvement Technology of Thermal Barrier Coating for Industrial Gas Turbine

Kaneko, H. et al. : *Mitsubishi Heavy Industries, Ltd.*

Large Heavy Gas Turbines Reliability and Enhancement

Akagi, K. : *Mitsubishi Heavy Industries, Ltd.*