
CONTENTS

Introduction of new technologies

Development of New 1.0 L I3 Gasoline Direct Injection Turbocharged Downsizing Engine Kazuki MAEYAMA, Hirotaka KOMATSU, Masaru ASARI, Naoko MACHIDA Akira TERAU, Yu YOSHIO, Mitsuhiro SHIBATA	1
Vehicle Dynamics Performance Enhancing Technology for New CIVIC Mikito KOBAYASHI, Masaya YAMADA	10
Aerodynamic Development for High-speed Stability in New CIVIC Susumu MASHIO, Masayuki MINAGAWA	17
Advanced Technology for Interior Vibration Reduction for New CIVIC Tsutomu MATSUBAYASHI, Osamu MATSUDA	26
Advanced Technology for Road Noise Reduction for New CIVIC Jun TSUTSUMI, Hitoshi TAKATSU, Atsuhiko YAMAZAKI	32
Vehicle Dynamics Performance of CLARITY FUEL CELL Yoshihiro ATSUMI, Hiroyoshi SUZUKI, Takeshi MIYAZAKI Shugo KAMEMOTO, Kaoru KUSAKA	39
Large-sized and Lightweight Aluminum Hollow Diecast Subframe Using High Pressure Diecasting Tomoyuki IMANISHI, Akihiko ASAMI, Yuichiro SANEYOSHI	46
Development of Chassis Performance Design Technologies for MBD of Mass-production Vehicles Takayuki TOYOSHIMA, Toshiaki MATSUZAWA, Kengo ITO Yoshiaki ENDO, Hiroki TAKANO, Tomoya USHIMURA	52
Broadly-applicable Adaptive Damper System without Use of Dedicated Sensors Ryoma KANDA, Yujiro NISHI, Masaki IZAWA	63
Longitudinal 9-speed Dual Clutch Transmission for 2nd-generation NSX Masaru KURIHARA, Takao UENO, Tatsuya NODA Ryuhei KATAOKA, Shunji KAMO, Akio MUTO	72
Development of Sports Car Sound for Hybrid Super Sports Cars Steven EICH, Jared COX, Hiroshi YANAGASE	79
Materials Research Method using Smart Materials Informatics Atsushi FURUKAWA, Tomohiro IKEDA, Tatsuya OKAYAMA	90
Efficient Vehicle-level Coordination in Functional Safety Process for a Whole Vehicle Takashi OHTA, Hiroki SAGAMI	98
Proposal of Development Process Using DSM and Simulation Shigeki FUJIMOTO, Keiji TOJO Shoji KUSUNOKI, Toru SAITO	106

Design Philosophy of Honda WANDER STAND CONCEPT	Takehiro MIYOSHI, Takao KANKI, Shigeru WATANUKI Masahiro SAGAWA, Yu OWAKU, Asagi MIWA.....	117
Design Philosophy of Honda WANDER WALKER CONCEPT	Tadahiro YAGUCHI, Kanna GOTO, Mitsuhiro ABE Takahiko TORII, Asagi MIWA.....	122
Honda Smart Home System Experiment Results.....	Yasushi KANAI, So YAMADA.....	128
Technical papers		
Establishment of Prediction Method for Fatigue Durability Applied for Exhaust System in Motorcycle by Coupled Simulation of Vibrating Stress and Thermal Stress	Hiroshi KURIBARA, Kenichiro NAKAMURA, Hiroshi HORIKAWA Takashi TERAGUCHI, Takanori NAGATA, Daisuke KITAMURA.....	138
Development of Method of Prediction of Lifespan of Rubber Tubes in Oscillation-absorbing Sections of Automotive Engines in Extremely Low-temperature Environments	Takeshi WAKAMATSU, Hidemasa USUI, Hirofumi HANAFUSA Junko EBISUI, Katsushi HASHIMOTO.....	153
Non-linear CAE Technology to Balance Handling and Ride Comfort	Yusuke OTAKI, Kaoru KUSAKA Jun NAKAHARA, Masafumi KYUSE.....	160
Downsizing Technology for Chassis Parts Fastening Structure	Motoki HISHIDA, Masato SATO Akihiko ASAMI, Hisashi ISHIMATSU.....	170
Image Sensor Based V2V Optical Wireless Communication System.....	Chiaki AOYAMA.....	179
Vehicle Performance Design System Using Data Mining Techniques towards Model-based Development	Tokitomo ARIYOSHI, Masatoshi HARUMATSU, Kazushige YANO Takahiro FUKUSHIGE, Kentaro YAMADA, Kaname NARUKAWA.....	188
Strength Design Method of Metallic Separator for Fuel Cell.....	Katsunori SAIKI.....	197
Detailed Structural Analysis of Pd Particles through Use of XAFS and STEM-EELS in Tandem	Tomohiro IKEDA, Atsushi FURUKAWA Tatsuya OKAYAMA, Hisao YOSHIDA.....	205
Research on Skutterudite-type Thermoelectric Materials for On-board Waste Heat Recovery System	Tomohide HARAGUCHI, Kenta KAWANO Takahiro OCHI, Junqing GUO.....	212