

LIST OF PAPERS

ANDRZEJ AMBROZIK, TOMASZ AMBROZIK, DARIUSZ KURCZYŃSKI, PIOTR ŁAGOWSKI EXTERNAL SPEED CHARACTERISTICS IN ENGINE WITH MULTI-STAGE FUEL INJECTION	9
WIESŁAW BARNAT, PAWEŁ BOGUSZ, PAWEŁ DZIEWULSKI, ROMAN GIELETA ANDRZEJ KICZKO, MARIAN KLASZTORNY, TADEUSZ NIEZGODA, STANISŁAW OCHELSKI EXPERIMENTAL VALIDATION OF THE NUMERICAL MODEL OF A CAR IMPACT ON A ROAD BARRIER	17
AGNIESZKA BONDYRA, PAWEŁ GOTOWICKI INFLUENCE OF A CROSSHEAD RATE AND A NUMBER OF STRESS CYCLES ON MEASUREMENT RESULTS IN THE IN-PLANE SHEAR TEST FOR A CROSS-PLY VINYLESTER-CARBON LAMINATE	29
AGNIESZKA BONDYRA, PAWEŁ GOTOWICKI STATISTICAL ANALYSIS OF EXPERIMENTAL RESULTS IN THE IN-PLANE SHEAR TEST FOR A CROSS-PLY VINYLESTER-CARBON LAMINATE	41
WAĆLAW BORKOWSKI, ZDZISŁAW HRYCIÓW, PIOTR RYBAK, JÓZEF WYSOCKI TESTING THE RESULTS OF A PASSENGER VEHICLE COLLISION WITH A RIGID BARRIER	51
WAĆLAW BORKOWSKI, PIOTR RYBAK, ZDZISŁAW HRYCIÓW, JÓZEF WYSOCKI BOGUSŁAW MICHAŁOWSKI INFLUENCE OF OPERATION CONDITIONS ON THE WHEELED ARMoured CARRIER CHARACTERISTICS	59
WAĆLAW BORKOWSKI, PIOTR RYBAK IMPROVISED EXPLOSIVE DEVICES IN CONFRONTATION WITH THE PROTECTION ARMOUR	67
KONRAD BUCZEK, WŁADYSŁAW MITIANIEC GAS EXCHANGE IN VALVED TWO-STROKE SI ENGINE	73
GRZEGORZ BUDZIK, HUBERT MATYSIAK, RAFAŁ CYGAN, STANISŁAW BĄK MARIUSZ CYGNAR RAPID PROTOTYPING PROCESS OF MONOCRYSTAL AIRCRAFT ENGINE BLADES	81
ROBERT CZABANOWSKI EXPERIMENTAL IDENTIFICATION OF HYPERELASTIC MATERIAL PARAMETERS FOR CALCULATIONS BY THE FINITE ELEMENT METHOD	87
MARIAN DACKO, JACEK NOWAK NUMERICAL SIMULATION OF STRESS AND STRAIN STATE INDUCED BY SHRINKAGE OF CONCRETE IN LARGE-SIZE PLATE	93
ADAM DACKO, JACEK TOCZYSKI STRUCTURAL RESPONSE OF A BLAST LOADED FUSELAGE	101

HUBERT DĘBSKI, JAROSŁAW BIENIAŚ FINITE NUMERICAL ANALYSIS OF COMPOSITE STRUCTURE UNDER LOAD ASSEMBLING CONDITION - OPTIMAL PLY DESIGN OF LAMINATE	111
SŁAWOMIR DUDA SIMULATION OF RAILWAY VEHICLE MOTION ON THE STRAIGHT TRACK	117
ADAM DUŻYŃSKI ANALYSIS OF THE ACTUAL TECHNICAL AND OPERATIONAL PARAMETERS OF GAS COGENERATION SETS WITH COMBUSTION ENGINES	125
TÍMEA FÜLEP, LÁSZLÓ NÁDAI, ANDRÁS RÖVID ON INVESTIGATION OF TRAFFIC SAFETY BASED ON STATISTICAL DATA REGARDING VEHICLE TYPE AND ROAD INFRASTRUCTURE	135
MARCIN GLIWIŃSKI, JANUSZ SZPYTKO APPROACH TO INCREASE BOTH OPERATORS' SAFETY AND DEVICES' AVAILABILITY UNDER OPERATION	143
ZYGMUNT GÓRSKI, ROMUALD CWILEWICZ, MAREK KRYSIAK ENVIRONMENTALLY FRIENDLY FUEL SYSTEM FOR LIQUEFIED GAS CARRIER PROPELLED WITH 45 MW MAIN PROPULSION PLANT	149
ZYGMUNT GÓRSKI, MARIUSZ GIERNALCZYK MAIN PROPULSION OF MODERN CRUISE LINERS AND MAIN PROPULSION POWER ESTIMATION	155
JERZY HERDZIK APPLICATION POSSIBILITIES OF ELECTRIC DRIVEN PROPULSION OF MULTI- MODE SHIPS	163
KRZYSZTOF JAMROZIAK, MIROSLAW BOCIAN IDENTIFICATION OF PIERCED MATERIALS' CHARAKTERISTICS IN THE ASPECT OF SELECTED DEGENERATED MODELS	169
ANTONI JANKOWSKI, STANISŁAW W. KRUCZYŃSKI NOVEL CATALYTIC CONVERTER OXIDE FOR SI ENGINES	177
ANTONI JANKOWSKI HEAT TRANSFER IN COMBUSTION CHAMBER OF PISTON ENGINES	187
PIOTR KALINA, WŁODZIMIERZ CHOMCZYK, ANDRZEJ IRZYCKI, KRZYSZTOF ŚNOPKIEWICZ BLADE-TYPE PISTON COMPRESSOR INVESTIGATION OF SEALS	199
TOMASZ KAŁACZYŃSKI THE COHERENCE METHOD OF TECHNICAL STATE EVALUATION COMBUSTION ENGINE	205
JACEK KARLIŃSKI, ARTUR KOPCZYŃSKI, ARTUR ILUK DYNAMIC STUDIES OF TOP-HAT THIN-WALLED ELEMENTS JOINED BY SPOT-WELDING	216
SŁAWOMIR KCIUK, ARKADIUSZ MĘŻYK, GABRIEL MURA MODELLING OF TRACKED VEHICLE DYNAMICS	223

WIESŁAW KRASOŃ, JACEK ŁAZOWSKI, JERZY MAŁACHOWSKI, WALDEMAR PAKSZYS NUMERICAL ANALYSIS OF FLUID FLOW IN A SYRINGE – TEST TUBE	233
MARCIN LISIECKI FINITE ELEMENT METHOD IN CAR COMPATIBILITY PHENOMENA	241
DANUTA MIEDZIŃSKA, JACEK ŁAZOWSKI, ANNA BOCZKOWSKA INTRODUCTION TO N-BODY SIMULATION OF MAGNETORHEOLOGICAL ELASTOMER (MRE) MICROSTRUCTURE FORMING PROCESS	249
DANUTA MIEDZIŃSKA, TADEUSZ NIEZGODA, ANNA BOCZKOWSKA VARIOUS APPROACHES TO MAGNETORHEOLOGICAL ELASTOMERS STRUCTURES FE MODELING	255
DANUTA MIEDZIŃSKA, GRZEGORZ SŁAWIŃSKI, ANNA BOCZKOWSKA NUMERICAL SIMULATION OF THE BEAM MADE OF MAGNETOREOLOGICAL ELASTOMER BENDING IN THE MAGNETIC FIELD	261
DANUTA MIEDZIŃSKA, WIESŁAW SZYMCZYK NUMERICAL MODELING OF THE FOAMED MATERIALS STRUCTURES WITH THE USAGE OF THE 2D AND BEAM ELEMENTS	267
WŁADYSŁAW MITIANIEC SELF-REGENERATION METHOD OF DIESEL PARTICULATE FILTER	273
WŁADYSŁAW MITIANIEC, WIESŁAW WIATRAC STUDY OF COMBUSTION AND PNEUMATIC SPARK IGNITION ENGINE	283
ANDRZEJ MORKA ON THE MODELLING OF PENETRATION/PERFORATION PROBLEMS	291
ADRIAN IOAN NICULESCU, ANTONI JANKOWSKI NOVEL DAMPER FOR PASSIVE SECURITY INCREASING	299
TADEUSZ NIEZGODA, STANISŁAW OCHELSKI, MARIAN KLASZTORNY, WIESŁAW BARNAT ANDRZEJ KICZKO, PAWEŁ DZIEWULSKI EXPERIMENTAL-NUMERICAL ANALISIS OF STEEL – FOAM ENERGY – ABSORBING PANELS FOR ROAD BARRIERS MODERNIZATION	309
STANISŁAW OCHELSKI, PAWEŁ BOGUSZ, ANDRZEJ KICZKO INFLUENCE OF HARDNESS ON MECHANICAL PROPERTIES OF ELASTOMERS	317
PAWEŁ OLEJNIK, JAN AWREJCIEWICZ REDUCTION OF DEFORMATION IN A SPRING-MASS REALISATION OF HUMAN CHEST OCCURRED AFTER ACTION OF IMPACT	327
MARIUSZ PTAK, JACEK KARLIŃSKI, ARTUR KOPCZYŃSKI ANALYSIS OF PEDESTRIAN PASSIVE SAFETY WITH THE USE OF NUMERICAL SYMULATION	337
PIOTR REYMER, ANDRZEJ LESKI ANALYSIS OF RESIDUAL STRENGTH OF A HELICOPTER TAIL BOOM	343

MACIEJ RUSIN COMPARATIVE RESEARCH OF ORGANIC COMPONENTS OF EMISSIONS USING COMPRESSION IGNITION ENGINE FUELLED WITH DIESEL OIL OR RAPE SEED METHYL ESTERS	351
PIOTR RYBAK PROTECTING PANELS FOR SPECIAL PURPOSE VEHICLES	359
BRONISŁAW SENDYKA, WŁADYSŁAW MITIANIEC, MARCIN NOGA WŁADYSŁAW WACHULEC DETERMINATION OF THERMAL EFFICIENCY OF THE SPARK IGNITION SYSTEMS	365
BRONISŁAW SENDYKA, WŁADYSŁAW MITIANIEC, MARCIN NOGA WŁADYSŁAW WACHULEC SIMULATION OF INJECTION AND COMBUSTION PROCESSES IN 4-STROKE SPARK IGNITION ENGINE WITH CNG DIRECT INJECTION	373
BRONISŁAW SENDYKA, MARCIN NOGA AN IMPACT OF USING A DUAL-INJECTION SYSTEM ON A COMBUSTION ENGINE'S WORKING PARAMETERS	379
BRONISŁAW SENDYKA, MARCIN NOGA EFFECTS OF USING A DUAL-INJECTOR FUEL SYSTEM ON A PROCESS OF COMBUSTION IN A SPARK-IGNITION ENGINE	389
BRONISŁAW SENDYKA, MARCIN NOGA SIMULATION OF THE WORK OF A SPARK-IGNITION ENGINE WITH A DUAL- INJECTOR FUEL SYSTEM	399
BARBARA SIEMINSKA RESEARCH RESULTS OF NOVEL COMPOSITE MATERIALS WITH LOW HYSTERESIS DURING HEATING AND COOLING FOR PISTONS OF COMBUSTION ENGINES	421
BARBARA SIEMINSKA, ZENON ŚLAWIŃSKI RESEARCH OF ENGINE PISTONS FORM POINT OF VIEW OF THERMAL SHOCKS	411
PIOTR SZURGOTT, LESŁAW KWAŚNIEWSKI, JERRY W. WEKEZER EXAMPLE OF EXPERIMENTAL VALIDATION AND CALIBRATION OF A FINITE ELEMENT MODEL OF A HEAVY VEHICLE	433
ELŻBIETA SZYMCZYK THE INFLUENCE OF RESIDUAL STRESS FIELDS AND SHEET THICKNESS ON STRESS DISTRIBUTIONS IN RIVETED JOINT	441
WIESŁAW SZYMCZYK, DANUTA MIEDZIŃSKA FAILURE ANALYSIS OF CHOSEN 3D NUMERICAL MODELS OF AN OPEN CELL FOAM	449
JAROSŁAW TOKARCZYK, KRZYSZTOF TUREWICZ, GRZEGORZ SMOLNIK, MAREK ROTKEGEL NUMERICAL ANALYSIS OF IMPACT LOAD OF ARCH YIELDING SUPPORT	455

TADEUSZ WEGNER, MAREK KOKOT INFLUENCE OF A SURFACE FRICTION ON THE DEFORMATION PROCESS OF RING MADE OF NONLINEAR PROPERTIES MATERIAL	465
WITOLD WIŚNIEWSKI EFFECT OF CHANGES IN SOME DESIGN PARAMETERS ON THE DYNAMIC PROPERTIES OF AIRCRAFT	479
WITOLD WIŚNIEWSKI INNOVATIONALITY IS THE TRANSFER PROCESS FROM THE IDEA TO COMMERCIALIZATION	485
ANDRZEJ WOJCIECHOWSKI, RYSZARD MICHALSKI, ARTUR GOŁOWICZ, ANDRZEJ EMINGER CHANGE OF THE FRICTION COEFFICIENT AS A FUNCTION OF THE COMPOSITE BRAKE DISC TEMPERATURE IN THE TEST RIG TRIALS	489
PIOTR WYGONIK THE INFLUENCE OF ON-DESIGN BYPASS TURBINE ENGINE PARAMETERS ON MULTIPURPOSE AIRCRAFT MISSIONS ENERGY-CONSUMING	499

