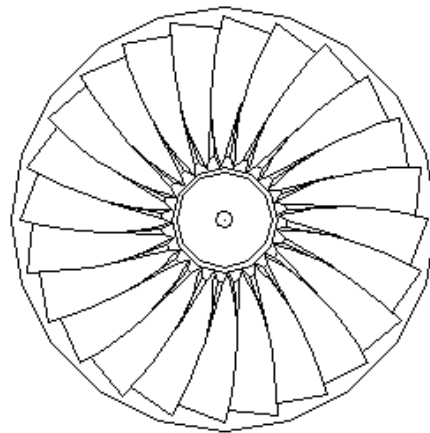
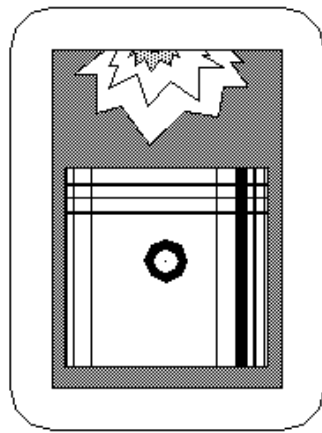


*Dedicated to the 110th Anniversary
of General Designer A.G. Ivchenko*

**National Aerospace University “KhAI”
National Technical University “KhPI”
SE “Ivchenko-Progress”
PJSC “AVTRAMAT”**



**XVIII
INTERNATIONAL
CONGRESS OF
PROPULSION ENGINEERING**

September 14-19, 2013

Invitation and Program

Kharkov – Rybachye – Ukraine

DEAR COLLEAGUE,

Standing Program Committee invites you to participate in the work of XVIII-th International Congress of Propulsion Engineering.

The Congress goals are an exchange of scientific and engineering information, determination of perspectives for creation and development of new equipment and technologies, discovery of new approaches for creation of engines of untraditional design and dimensions, establishment of business contacts and commercial connections.

Congress is held on September 14 to 19, 2012 in the Sporting and Health-Improving Camp “Ikar” (Rybachye settlement, Crimea Republic) of Zhukovsky National Aerospace University “KhAI”.

CONGRESS ORGANIZERS:

- Zhukovsky National Aerospace University “KhAI”;
- National Technical University “KhPI”;
- National Enterprise “Progress” Zaporozhye Machine Building Design Bureau Ivchenko;
- PJSC “AVTRAMAT”

Congress work languages: Ukrainian, Russian, English.

Telephones for contacts in Kharkov:

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Sergey YEPIFANOV, Dr. of Eng.	E-mail: aedlab@gmail.com +38 (057) 19-05-40, +38 (057) 788-43-41, +38 (057) 788-47-78

Time-limits:

Report at Plenary Meeting	25 min.
Report at Section Meeting	12 min.
Discussions note	5 min.

Facilities:

Computer with digital projector (Power Point is recommended).

Arrival of Congress Participants: September 14

Registration from 9⁰⁰ to 20⁰⁰

Work days: September 15-18

Departure of Participants: September 19

Information for Participants: 1) Arrival from your country to **Simferopol** (capital of Crimea) – by airplane, or from your country to **Kiev** (capital of Ukraine) or **Kharkov** – by airplane; from Kiev or Kharkov to **Simferopol** – by airplane or by train; 2) taxi from **Simferopol** airport or railway station to **Rybachye** or bus from Simferopol railway station to **Rybachye**.

Organization Committee asks Congress Participants:

- To book tickets for return way beforehand;
- To inform about the date and time of your arrival;
- To prepare stand reports (in the author’s format) taking into account possible changes in time-limits.

ORGANIZATIONAL PROGRAM COMMITTEE

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Dr. Eng., Prof. **V.S. Krivtsov**
- Vice- Chairmans** – Pro-rector of National Technical University «KhPI»,
Dr. Eng., Prof. **A.P. Marchenko**;
Chief Designer of “Ivchenko-Progress” State Enterprise
PhD, Ass. Prof. **I.F. Kravchenko**;
- Academic Secretary** – Technical Director of PJSC «AVTRAMAT»,
Dr. Eng., Ass. Prof. **A.V. Belogub**

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- Dr. Eng., Prof. Yeroschenkov S.A. (Railroad Academy, Ukraine)
- Dr. Eng., Prof. Yepifanov S.V. («KhAI» University, Ukraine)
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E-mail: aedlab@gmail.com

CONGRESS WORK PROGRAM

September 15

10⁰⁰ – 13⁰⁰

PLENARY MEETING

Chairmen: **I.F. Kravchenko, Ph.D.**
(SC “Ivchenko-Progress”, Zaporozhye);
V.S. Krivtsov, Dr. Eng. (KhAI, Kharkov);
A.P. Marchenko, Dr. Eng. (KhPI, Kharkov);
Yu.M. Matsevity, Dr. Eng.
(IPMash NAS Ukraine, Kharkov)

Secretary: **A.V. Belogub, Dr. Eng.** (PJSC “AVTRAMAT”, Kharkov)

1. **I.F. KRAVCHENKO (Zaporozhye). 110 YEARS FROM GENERAL DESIGNER A.G. IVCHENKO BIRTHDAY**
2. **A.V. GAYDACHUK (Kharkov). REMARKABLE DATES AND EVENTS OF PROPULSION ENGINEERING**
3. **N.A. IVASCHENKO, N.D. CHAYNOV (Moscow) SCIENTIFIC AND TECHNICAL DEVELOPMENT OF THE DIESEL ENGINES IN 2011-2015**
4. **V.T. SHEPEL (Rybinsk). PROBLEMS OF GTE CERTIFICATION TESTS**
5. **YU. VOROBYOV (Kharkiv). KHAI-ERA –INTEGRATE THE NATIONAL AEROSPACE UNIVERSITY (KHAI) INTO ERA. REVIEW OF PROJECT.**

Evening Meeting of Section

GENERAL PROBLEMS OF PROPULSION ENGINEERING

September 15, 14⁰⁰ – 19⁰⁰

Chairmen: V.P. Ischiuk, **Ph.D.** (SE “ANTONOV”, Kiev) ;
V.V. Loginov, **Dr. Eng** (KhAFU, Kharkov);
V.P. Parafeynik, **Dr. Eng.** (SKB TKM, Sumy)
Secretary: **S.M. Stepanenko, Ph.D.**
(SC “Ivchenko-Progress”, Zaporozhye)

1. M.A. KIRICHKOV, A.V. YELANSKY, I.F. KRAVCHENKO. (Zaporozhye). **DEVELOPING A SMALL-SIZE FAMILY OF GAS TURBINE ENGINE BASED ON SINGLE CORE**
2. V.V. GRIGORIEV, A.V. YELANSKYI, A.I. POPUGA (Zaporozhye). **PROMISING SCHEMES OF AIRCRAFT ENGINES WITH HIGH FUEL EFFICIENCY**
3. Yu.A. ULITENKO, A.V. YELANSKYI, I.F. KRAVCHENKO (Zaporozhye). **PROBLEMS OF SELECTION OF CONFIGURATION FOR POWERPLANT INTENDED FOR SPACE TRANSPORTATION SYSTEM STAGE**
4. V.I. RODITELEV, V.G. NESTERENKO (Moscow). **CONSTRUCTIVE WAY TO LOWER LIFE CYCLE COST OF MODERN AND ADVANCED AIR PROPULSION ENGINE**
5. Y. GIRKA, I. GANGAN, Yu. KRASHANITSA (Kharkov). **AERODYNAMIC CHARACTERISTIC OF ENGINE BASED AT COANDA EFFECT**
6. A.N. SOROCHKIN, V.V. LOGINOV, A.V. YELANSKYI (Kharkov, Zaporozhye). **ANALYSIS OF WAYS TO CARRY OUT MODERNIZATION OF ATTACK AIRCRAFT SU-25 IN ORDER TO IMPROVE ITS OPERATING PERFORMANCE**
7. E.Yu. ILLENKO (Kharkov). **THE ANALYSIS OF STATISTICAL DATA OF THE L-39 PLANES EXPLOITATION**
8. V.V. LOGINOV (Kharkov). **MUTUAL RELATIONSHIP BETWEEN GENERATIONS FIGHTER AIRCRAFT, AIRCRAFT WEAPONS AND THE LEVEL OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT AIRCRAFT ENGINES**
9. V.V. VOITENKO V.V. LOGINOV (Kharkov). **LIFE CYCLE ASSESSMENT ENGINE PROPULSION SYSTEM OF THE AIRCRAFT FOR MILITARY PURPOSES**

10. S.A. ALYOKHIN, G.K. POPOV (Kharkov). **AUXILIARY POWER UNITS OF VEHICLES AND PROSPECTS OF THEIR DEVELOPMENT**
11. V.N. GOLOSCHAPOV, YU.P. ANTIPTSEV, O.V. KOTULSKAYA, T.N. PARAMONOVA (Kharkov). **THE DEVELOPMENT OF PEAK POWER ON BASE OF OPERATING UNITS OF TPS**
12. V.G. NESTERENKO, N.N. SIROTIN, A.A. AGULNIK, Y.A. RAVIKOVITCH (Moscow). **COMPREHENSIVE TRAINING OF UNIVERSITY STUDENTS IN «AIRCRAFT ENGINES AND POWER PLANTS»**
13. V.P. MOGILNIKOV, A.V. IONOV (Zhukovsky). **AIR QUALITY FLIGHT RESEARCH METHODS, BLEED AIR FROM ENGINES FOR AIRCRAFT AIR SYSTEM**
14. V.P. MOGILNIKOV, A.V. IONOV (Zhukovsky). **EQUIPMENT FOR AIR SAMPLING FROM ENGINE**
15. Y.P. VASILEV, M.V. PAVLOVA, V.T. SHEPEL (Moscow, Rybinsk). **METHOD OF FIRE CERTIFICATION TEST OF AIRCRAFT ENGINE PIPES**
16. N.V. OSADCHII, A.A. SERGEEV, V.T. SHEPEL (Rybinsk). **THE ASSURANCE OF CERTIFICATION REQUIREMENTS SHOWN TO THE TURBOFAN ENGINE FAN CASE**
17. G.V. SNIZHNOI, A.B. TOMASHEVSKIY, V.S. TEROSHINA (Zaporozhye). **CERTIFICATION AND QUALITY OF AIRCRAFT ENTERPRISE**
18. S.M. STEPANENKO (Zaporozhye). **ITEMS OF PROJECT MANAGEMENT STANDARTIZATION ACCORDING TO APU-21 AVIATION REGULATIONS**
19. S.M. STEPANENKO, A.A. TEVS, V.G. KHARCHENKO (Zaporozhye). **ESTIMATION OF QMS PROCESS EFFECTIVENESS OF COMPANIES INVOLVED IN DESIGN OF AVIATION PRODUCTS**
20. M.A. DANOVA (Kharkov). **METHODS OF SELECTION PRIORITIES FOR FORECASTING THE SCIENTIFIC AND TECHNICAL DEVELOPMENT OF LARGE-SCALE OBJECTS ON THE BASIS OF TECHNOLOGY FORESIGHT**
21. M.A. DANOVA (Kharkov). **SYNTHESIS MODEL SELECTION OF PRIORITIES FOR PREDICTING THE SCIENTIFIC AND TECHNICAL DEVELOPMENT USING TECHNOLOGY FORESIGHT**
22. I.B. TURKIN S.N. STARIKOV I.V. SHOSTAK (Kharkov). **THE TECHNOLOGY OF STANDARD PROFILE FORMATION WHICH SERVES TO CERTIFICATE THE SOFTWARE SYSTEMS**

23. A.S. DANOV (Kharkov). **INFORMATION - ENERGY APPROACH TO PROJECTION PROBLEM**
24. I.I. BUTENKO (Kharkov). **THE GENERALIZED MODEL OF THE KERNEL**
25. I.I. BUTENKO (Kharkov). **METHOD MACHINE PROCESSING LANGUAGE UNITS IN THE CLASS «LANGUAGE SOFTWARE STANDARDS»**

Evening Meeting of Section

DESIGN AND STRENGTH

September 15, 14⁰⁰ – 19⁰⁰

Chairmen: **A.L. Mihaylov, Dr.Eng.** (JSC “Saturn”, Rybysk)

A.N. Petuhov, Dr. Eng. (CIAM, Moscow);

D.F. Simbirskiy, Dr. Eng. (“KhAI”, Kharkov)

Secretary: **A. Mihalkin** (SC “Ivchenko-Progress”, Zaporozhye)

1. A. MIHALKIN (Zaporozhye). **THE FAN BLADES OF PERSPECTIVE TURBOJETS**
2. A.V. SALNIKOV (Moscow). **GAS-TURBINE ENGINE IMPELLER UNIT'S DESIGN-STRESS MULTICRITERION OPTIMIZATION**
3. Ye.F. PAROVAY (Samara). **GTE FREE TURBINE WITH SLIDE BEARINGS**
4. Ye.F. PAROVAY, F.V. PAROVAY (Samara). **HYDRODYNAMIC BEARING WITH MR ELASTIC SUSPENSION OF SEGMENTS**
5. V.F. SHATOKHIN, S.D. TSIMMERMAN (Kaluga). **EFFECTS OF TURBOGENERATOR PROTECTION SYSTEM SPEED CAPABILITIES ON THE DEVELOPMENT OF THE ROTOR ROLL OVER THE STATOR**
6. V.I. NAZIN (Kharkov). **THEORY OF DOUBLE RADIAL BEARING IN GIDROSTATODINAMICHESKOGO STATIONARY EXTERNAL LOAD**
7. V.I. NAZIN (Kharkov). **MATHEMATICAL MODEL DOUBLE ANGULAR CONTACT HYDROSTATIC BEARINGS**
8. V.M. ANANYEV, D.V. KALININ, E.V. KOZHARINOV (Moscow). **IMPROVING METHODS OF TURBOFAN GEARBOX DESIGN**
9. D.V. KALININ, V.M. ANANYEV, E.V. KOZHARINOV (Moscow). **EXPERIMENT-CALCULATED STRESS ANALYSIS OF STRESS RAISERS IN ROTOR SHAFT OF HELICOPTERS**

10. N.S. SYCHEVA, S.A. RODYUK (Moscow). **NEW APPROACH FOR DESIGNING AND TESTING AN OIL TANK OF A HIGHLY MANUVERING AIR VEHICLE ENGINE**
11. M.A. SHCHERBAKOV (Moscow). **EXPERIMENTAL AND NUMERICAL DETERMINATION OF THERMAL STATE OF TURBINE BLADE**
12. G.A. FROLOV, D.V. BOROVNIK, A.D. KOLOTILO, A.L. LAMEKO, E.V. OLIGOV, V.G. TYKHYY, I.A. GUSAROVA (Kiev, Dnepropetrovsk). **RESEARCH OF INSTALLATION FOR DEFINITION OF THERMAL CONDUCTIVITY AND THERMAL DIFFUSIVITY AT SIMULATION OF SOME SPACE FACTORS**
13. I.F. KRAVCHENKO, A.V. SHEREMETEV, A.V. YAKOVENKO (Zaporozhe). **DEVELOPMENT MANAGEMENT METHOD IMPROVEMENT FOR CTF ENGINE**
14. A.R. LEPESHKIN, N.G. BYCHKOV, P.A. VAGANOV (Moscow). **ADVANCED METHOD OF CALCULATED OF STRESS-DEFORMED STATE AND MODELING OF BREAKAGE OF WORKING WHEEL BLADE AT TESTS CONTAINMENT CASINGS OF AVIATION ENGINES**
15. N.P. VELIKANOVA, P.G. VELIKANOV, A.S. KISELEV (Kazan). **DURABILITY OF THE TURBINE DISK GAS TURBINE ENGINES**
16. F.K. ZAKIEV, A.S. KISELEV, N.P. VELIKANOVA, P.V. IVANOV (Kazan). **ANALYSIS OF STRESS - STRAIN OF POWER COMBUSTION CHAMBER CASING FOR GROUND GAS TURBINE PLANT**
17. A.O. SHKLOVETS, G.M. POPOV, D.A. KOLMAKOVA (Samara). **OPTIMIZATION OF THE COMPRESSOR STAGE BLADING OF GAS TURBINE ENGINE TO ENSURE THE DYNAMIC STRENGTH IN ROTOR BLADE ROW**
18. A.M. SMYSLOV, M.K. SMYSLOVA, A.I. DUBIN (Ufa). **VOLUMETRIC STRESSES OF THE COMPRESSOR'S BLADES OF GTE INVESTIGATION**
19. V.P. GOLUB (Kiev). **THE METHOD OF THE FATIGUE LIFE-TIME CALCULATION OF STRUCTURAL COMPONENTS UNDER BIAXIAL COMBINED LOADING**
20. D.F. SIMBIRSKIY, A.A. BRUNAK (Kharkov). **MODEL ANALYSES OF HOLD IMPACT IN THE CYCLE ON THE MATERIAL RESISTANCE TO THE LOW-CYCLE FATIGUE USING LAWS OF REPEATED-STATIC LOADING**

Evening Meeting of Section

ENGINES AND POWER PLANTS FOR SPACE ROCKET ENGINEERING

September 15, 16⁰⁰ – 19⁰⁰

Chairmen: **N.M. Dron, Dr. Eng.** (DNU, Dnepropetrovsk);
K.V. Bezruchko, Dr. Eng. (“KhAI”, Kharkov);
O.V. Pilipenko, Dr. Eng. (ITM, Dnepropetrovsk)
Secretary: **A.O. Davidov, Dr. Eng.** (“KhAI”, Kharkov)

1. **V.A. ZADONTSEV (Dnepropetrovsk). HERO OF SOCIALISTIC LABOR IVAN IVANOVYCH IVANOV (1918-1999) – THE FIRST CHIEF DESIGNER OF ENGINE DESIGN OFFICE KB-4 OF OKB-586/ YUZHNOYE DESIGN BUREAU**
2. **N.M. DRON, P.G. HOROLSKY, L.G. DUBOVIK (Dnepropetrovsk). FORECASTING OF CHARACTERISTICS OF THE SPECIALIZED SPACECRAFT FOR THE GATHERING SMALL SPACE DEBRIS**
3. **S.I. KUSHNIRENKO, V.Y. SHEVTSOV (Dnepropetrovsk). POSSIBILITY ANALYSIS OF USING DIFFERENT KINDS OF THE SPACECRAFT PROPULSION SYSTEMS FOR STRUGGLE AGAINST POLLUTION OF OUTER SPACE**
4. **V.I. KONOKH, I.I. KALINICHENKO, I.N. GORDIETS, I.Y. KUKSA, A.V. SHPAK (Dnepropetrovsk). CREATION OF HYDRAULIC POWER SYSTEM WITH A PNEUMATIC PISTON ACTUATOR FOR THRUST VECTOR CONTROL SYSTEMS**
5. **A.N. KOVALENKO, Y.V. BLISHUN (Dnepropetrovsk). METHODOLOGICAL FEATURES OF PREPARATION AND TESTING THE OPERABILITY OF HIGH-ALTITUDE LRE WITH FREE GAS INJECTION BLOWDOWN PROPULSION**
6. **D.V. VOSKOBOYNIK, A.M. GRUSHENKO (Kharkov). ANALYSIS OF THE ENERGY ANALYSIS OF ENERGY PERFORMANCE FUEL MIXTURE «LIQUID OXYGEN AND ALCOHOL-AMMONIA SOLUTION» IN SELF-PRESSURISED FEED SYSTEM LPRE LOW TRUST**
7. **E.V. MOISEEVA (Kharkov). THE USE OF GENETIC ALGORITHM TO DETERMINE THE OPTIMAL VARIANTS OF NOZZLES**
8. **R.U. KRIVSYN, I. B. BESKROVNIY, V.G. KOROLYOV (Dnepropetrovsk). DESIGN IMPROVEMENT FOR SPECIAL EQUIPMENT OF SOLID ROCKET MOTOR TEST**
9. **S.A. OGHYENKO (Kharkov). MICROWAVE RANGE RADIATION OF STATIONARY PLASMA THRUSTER AS RESULT OF TRANSFORMATION OF WAVES IN DISCHARGE INTERVAL PLASMA**

10. A.V. LOYAN, E.P. SOLONYNKO (Kharkov). **V-A CHARACTERISTIC CALCULATION OF DIODE GAP IN A SINGLE IMPULSE DURING TESTS OF EMITTERS FOR ELECTRIC PROPULSION**
11. A.I. TSAGLOV, A.V. LOYAN, T.A. MAKSIMENKO, O.P. RYBALOV (Kharkov). **OUTER MAGNETIC FIELD CONFIGURATION OF LOW POWER HELICON PLASMA THRUSTER**
12. T.A. MAKSYMENKO, A.V. LOYAN, O.P. RYBALOV (Kharkov). **INVESTIGATIONS OF INTEGRAL CHARACTERISTICS OF SMALL SPT WITH DISCHARGE CHAMBER MADE OF BN COMPOSITIONS**
13. A.I. TSAGLOV, A.V. LOYAN, E.P. SOLONINKO (Kharkov). **REDUCTION OF TEST SAMPLE SURFACE TEMPERATURE NONUNIFORMITY DURING ELECTRIC PROPULSION CATHODE'S EMITTERS TESTING**
14. A.V. LOYAN, M.Y. TITOV, E.P. SOLONYNKO (Kharkov). **ELECTRIC FIELD HETEROGENEITY MINIMIZATION DURING TESTS OF EMITTERS IN ELECTRIC PROPULSION CATHODES**
15. A.V. LOYAN, M.U. TITOV, E.P. SOLONINKO (Kharkov). **SETTLEMENT WAY OF DETERMINATION OF EFFECTIVE HEAT CONDUCTIVITY OF METALLOPOROUS EMITTERS OF CATHODES OF ELECTRIC PROPULSION**
16. A.V. LOYAN, N.N. KOSHELEV, A.I. TSAGLOV, M.Yu. TITOV (Kharkov). **INVESTIGATION OF THERMAL FLUXES DISTRIBUTION IN THE CONSTRUCTION OF HEATERLESS HOLLOW CATHODE FOR ELECTRIC PROPULSION IN OPERATING CURRENT RANGE UP TO 50 A**

September 16

Morning Meeting of Section

PISTON COMBUSTION ENGINES

September 16, 9⁰⁰ – 13⁰⁰

Chairmen: **N.A. Ivaschenko, Dr. of Eng.** (Bauman MSTU, Russia);

A.P. Marchenko, Dr. Eng. (KhPI, Kharkov);

I.V. Parsadanov, Dr. of Eng. (KhPI, Kharkov, Kharkov);

Secretary: **D.V. Meshkov, Ph.D.** (NTU «KhPI», Kharkov)

1. A.V. GRITSYUK (Kharkov). **NEW INITIATIVE OF «SLOBOZHANSCHINA» ON THE WAY OF REVIVAL OF DOMESTIC DIESEL ENGINE MANUFACTURING**

2. S.A. ALYOHIN, A.P. GERASIMENKO, V.A. OPALEV (Kharkov). **THE COORDINATION OF CHARACTERISTICS OF THE TURBO-SUPERCHARGING AND TWO-STROKE TRANSPORT DIESEL ENGINE**
3. S.A. ALYOHIN, S.V. LYKOV, V.A. PYLYOV (Kharkov). **ANALYSIS OF A TEMPERATURE CONDITION OF BUILT-UP PISTONS BODIES OF TWO-STROKE DIESEL ENGINES OF SPECIAL PURPOSE**
4. N.I. MISHCHENKO, V.G. ZARENBIN, T.N. KOLESNIKOVA, Y.V. YURCHENKO, V.L. SUPRUN, V.S. SHLIAHOV (Gorlovka, Dnepropetrovsk). **DETERMINATION OF MECHANICAL LOSSES IN AN INTERNAL COMBUSTION PISTON ENGINE**
5. V.G. ZARENBIN, N.I. MISCHENKO, V.V. BOGOMOLOV (Gorlovka, Dnepropetrovsk). **TO THE CALCULATION ON SEIZURE OF DETAILS OF ZPG EIC**
6. D.S. MINCHEV, U.L. MOSHENTSEV, A.V. NAGIRNYI, O.S. DYAKONOV (Nikolaev). **SIMULATION OF TURBO-CHARGED DIESEL ENGINE TRANSIENT PERFORMANCE**
7. V.S. VERBOVSKY, I.V. GRITSUK, D.S. ADROV, Z.I. KRASNOKUTSKAYA (Kyiv, Donetsk). **INVESTIGATION OF PRE-START HEATING GAS ENGINE BASED ON THE USE OF THERMAL BATTERY HEAT STORAGE WITH MATERIALS HAVING PHASE TRANSITIONS**
8. J.K. SKLIFUS, V.I. MOGILA (Lugansk). **IMPROVING THE EFFICIENCY OF THE COOLING SYSTEM OF DIESEL ENGINE WITH USING PHASE TRANSITIONS OF HEAT TRANSFER AGENT**
9. I.F. GUMEROV, Y.F. GORTYSHOV, V.M. GUREEV, R.R. SALAKHOV, A.H. HAIRULLIN, I.R. SALAKHOV (Kazan). **DEVELOPMENT AN ADAPTIVE COOLING SYSTEM OF ENGINE**
10. V.P. MATEYCHIK, V.P. VOLKOV, P.B. KOMOV, A.B. KOMOV, I.V. GRITSUK (Kyiv, Kharkiv, Donetsk) **CONTROL PARAMETERS FOR THE WORKFLOW OF ENERGY-POWER UNIT OF A VEHICLE WITH ITS CAPABILITIES OF INFORMATION**
11. O.V. AKIMOV, P.S. PENZEV, A.V. GRITSYUK, A.P. MARCHENKO (Kharkov). **PROSPECTIVE METHODS OF DESIGN AND PROCESS DESIGN CRANK ENGINE WITH THE ABILITY TO CONTROL THE STRUCTURE AND MECHANICAL PROPERTIES OF THE ALLOY**
12. V.I. ALYOKHIN, A.V. BELOGUB, O.V. AKIMOV (Kharkov). **FEATURES OF COMPUTER-INTEGRATED DESIGN OF AUTOMOTIVE PISTON ENGINES**

13. A.V. BELOGUB, V.A. PYLYOV, A.M. BOGYAKO, S.V. GALAGAEV, A.A. BOGYAKO (Kharkov, Mogilev) **MODERNIZATION OF THE PISTON GROUP'S OF THE DIESEL ENGINE K6S310DR**
14. A.V. BELOGUB, A.A. ZOTOV, M.A. MAKSIMOVA (Kharkov). **GEOMETRICAL AND POWER SCOPE TERMS AT ANALYSIS OF THE TENSE-DEFORMED STATE OF PISTONS BY METHOD OF EVENTUAL ELEMENTS**
15. V.A. PYLOV, A.V. BELOGUB, D.K. OBODETS (Kharkov, Kiev). **PREDICTING THE RESOURCE STRENGTH OF PISTON SMALL-ENGINE AIRCRAFT ENGINES**
16. I.N. MOSKALENKO, V.N. DOTSENKO, A.V. BELOGUB (Kharkov). **THE OVERVIEW OF PROFILING METHODS FOR ICE PISTON'S SKIRTS**
17. V.A. PYLYOV, I.A. NESTERENKO, S.N. BAKLANOV (Kharkov). **PRELIMINARY ASSESSMENT OF STRENGTH RESOURCE TRACTOR DIESEL PISTONS WITH LOADS OF TECHNOLOGICAL CYCLE TIME**
18. V.V. SHPAKOVSKY (Kharkov). **INTRODUCTION OF PISTONS WITH CORUNDUM A LAYER AT REPAIR OF DIESEL ENGINES OF DIESEL LOCOMOTIVES CHME-3**
19. V.V. SHPAKOVSKY, S.A. KRAVCHENKO, A.K. OLEJNIK (Kharkov). **LOWERING OF A COEFFICIENT OF FRICTION OF PAIR A BENT SHAFT - THE LOOSE LEAF OF DRIVES THE MAIN DIESEL LOCOMOTIVES APPLICATION OF DISCRETE HARDENING AND GALVANIC-PLASMA TREATMENT**
20. E.M. TAUSENEV, A.E. SVISTULA (Barnaul). **MATERIAL "ASTRATEK METAL" APPLICATION FOR A HEAT INSULATION OF THE FUEL EQUIPMENT OF THE DIESEL**
21. A.V. HIMCHENKO, D.G. MISHIN, A.V. BUZOV (Gorlovka). **REDUCING IRREGULARITY OF TORQUE OF MODULAR ENGINE WITH DISABLING CYLINDERS SYSTEM ON PARTIAL LOAD**
22. A.I. TARASENKO (Nikolayev). **TORSIONAL VIBRATIONS OF A BRANCHED NONSYMMETRICAL MARINE DIESEL PROPULSION COMPLEX**

Morning Meeting of Section

DESIGN AND STRENGTH

September 16, 9⁰⁰ – 13⁰⁰

Chairmen: **Ye.R. Golubovskiy, Dr. Eng.** (CIAM, Moscow);
Yu.S. Vorobev, Dr. Eng. (IPMach NASU)
A.V. Sheremetyev, Ph.D.
(SE “Ivchenko-Progress”, Zaporozhye)

Secretary: **A.A. Brunak** (“KhAI”, Kharkov)

1. **S.V. YEPIFANOV, N.A. RING, I.L. GLIKSON, S.I. SHANKIN** (Kharkov, Zaporozhye). **“RAIN” METHOD MODERNIZING FOR TURBINE ENGINE BASIC COMPONENTS LIFETIME MONITORING**
2. **C. MARAVILLA MODELS IMPROVING FOR MAINTENANCE MONITORING OF ROTOR BLADES THERMOSTRESSED STATE**
3. **S.V. ALEKHINA, A.O. KOSTIKOV, N.A. SAFONOV, A.P. SLESARENKO** (Kharkov). **REGIONAL-STRUCTURAL IDENTIFICATION OF THE BOUNDARY CONDITIONS ON THE SURFACES OF TURBINE ELEMENTS**
4. **I.V. BIBLIK** (Kharkov). **RELIABILITY ASSESSMENT OF PERFORMANCE BASED ON PROBABILISTIC SUMMATION OF FATIGUE DAMAGES**
5. **N.Yu. OVCHAROVA, Yu.S. VOROBIOV** (Kharkov). **INFLUENCE OF HIGH-RATE DEFORMATION ON THE GAS TURBINE CASE UNDER IMPACT LOADING**
6. **N.G. SHULZHENKO, P.P. GONTAROWSKY** (Kharkov). **REACTION OF SHELL ELEMENTS OF SPACE VEHICLES ON THE IMPULSE ACTION**
7. **V.O. POVGORODNY** (Kharkov). **IDENTIFICATION OF THE PARAMETER’S OF THERMOELASTICITY TO THE NONHOMOGENEOUS STRESS CONDITION ON THE SOLUTION INVERSE PROBLEM OF THE THERMOELASTICITY**
8. **V.O. POVGORODNY** (Kharkov). **INVERSE PROBLEMS OF THE THERMOELASTIC’S STRESSES ON UNCONSTANT REGIMEN**
9. **V.O. POVGORODNY** (Kharkov). **THE EXPERIMENTAL AND ANALYTICAL SOLUTION OF INVERSE PROBLEM FOR PLATE WITH ELEMENT’S OF THE TURBINE**

10. **A.S. DANOV, S.A. DANOV (Kharkov). ANALYTICAL DECISION OF TASK ABOUT INTRINSIC PRESSURE IN CYLINDER DURING PERMANENT AXIAL DEFORMATION**
11. **N.P. BRODNIKOVSKIY, N.A. KRAPIVKA, Yu.A. YELANSKIY, G.A. FROLOV, S.A. FIRSTOV (Kiev, Dnepropetrovsk). DEVELOPMENT OF MATERIALS FOR THE INCREASE OF WORKING DESCRIPTIONS OF GAS DRIVES**
12. **W.V. TERAUD (Moscow) STRETCHING OF THE CYLINDER SPECIMEN UNDER HIGH TEMPERATURE MEASURED BASED ON THE CAMERA**
13. **A.N. PETUHOV (MOSCOW) CHARACTERISTICS AND FEATURES LCF and HCF DEFORMABILITY and GRANULAR ALLOY WHEELS FOR GTE IF STRESS CONCENTRATION IN A WIDE RANGE OF TEMPERATURES**
14. **E.R. GOLUBOVSKIY, M.E. VOLKOV, N.M. EMMAUSSKIY (Moscow). ASSESSMENT OF SPEED OF DEVELOPMENT OF THE CRACK OF FATIGUE (SDCF) IN NICKEL ALLOYS FOR DISKS GTE**
15. **S.R. IGNATOVICH, E.V. KARAN, V.S. KRASNOPOLSKY (Kiev). PROCEDURE RESEARCH MULTI-SITE DAMAGE OF THE AIRCRAFT STRUCTURES**
16. **S.S. YUTSKEVYCH (Kiev). STUDY OF D16AT ALUMINUM ALLOY ALCLAD SURFACE MICROSTRAIN UNDER FATIGUE USING OPTICAL NONCONTACT PROFILER**
17. **M.V. KARUSKEVICH (Kiev). INSTRUMENTAL INDICATION OF SINGLE OVERLOADS AT THE STAGE OF THE FATIGUE CRACK PROPAGATION**
18. **A.V. PLASHCHYNSKA (Kiev). FATIGUE CRACK GROWTH IN A THIN FINITE PLATE WITH A STRESS CONCENTRATOR UNDER UNIAXIAL ASYMMETRICAL TENSION-COMPRESSION**
19. **A.R. LEPESHKIN, N.G. BYCHKOV, P.A. VAGANOV (Moscow) NEW METHOD OF CALCULATION OF STRESS STATE OF CERAMIC THERMAL BARRIER COATINGS OF COLUMNAR STRUCTURE IN THE FIELD OF CENTRIFUGAL**
20. **V.I. CUBICH, L.I. IVSCHENKO, YU.V. MILMAN, V.M. KYSIL, M.O. IEFIMOV, N.P. KORZOVA, K.E. GRINKEVYCH, YU.I. YEVDOKIMENKO (Kiev, Zaporozhye). USING OF QUASICRYSTALLINE COATING FOR INCREASE OF HEAT-RESISTANT OF PISTON ALUMINUM ALLOY**

21. O.P. UMANSKYI, O.A. TERENTJEV, M.S. STOROZHENKO, V.M. KYSIL, Y.I. YEVDOKIMENKO, V.T. VARCHENKO (Kiev). **EFFECT OF TITANIUM DIBORIDE ADDITIVES ON THE STRUCTURE AND PROPERTIES OF HVAF-COATINGS OF (Ni-Cr-Si-B) – TiB₂ SYSTEM**
22. O. UMANSKYI, O. POLIARUS, M. UKRAINETZ, A. DOVGAL, L. KAPITANCHUK, V. SUBBOTIN (Kiev). **THE STRUCTURE AND PROPERTIES INVESTIGATIONS OF COMPOSITE MATERIALS AND COATINGS BASED ON NiAl-TiB₂ SYSTEMS**

Morning Meeting of Section

ENGINES AND POWER PLANTS FOR SPACE ROCKET ENGINEERING

September 16, 9⁰⁰ – 13⁰⁰

Chairmen: **A.V. Gaydaychuk, Dr. Eng.** (“KhAI”, Kharkov);
A.V. Loyan, Ph.D. (“KhAI”, Kharkov)
 Secretary: **T.A. Maksimenko** (“KhAI”, Kharkov)

1. S.Yu. NESTERENKO, Sh. ROSHANPOUR. (Kharkov). **PARTICLES VELOCITY DISTRIBUTION FUNCTION MOMENTS EQUATIONS SET IN RARIFIED MEDIUM OF INDUCTIVE SOURCES OF PLASMA, ELECTRONS AND IONS**
2. S.Yu. NESTERENKO, Sh. ROSHANPOUR. (Kharkov). **PECULIARITIES OF ELECTRONS REFLECTION FROM POTENTIAL BARRIER AND THEIR GAS DYNAMICS CHARACTERISTICS FLOWS ON THE BORDERS OF ELECTRIC PROPULSION THROUSTERS PLASMA**
3. K.V. BEZRUCHKO, I.G. BURYM, A.O. DAVIDOV, V.P. FROLOV, S.V. SHIRINSKIY (Kharkov, Dnepropetrovsk). **METHOD OF ESTIMATION OF EFFICIENCY OF SPACEPORTS AND THEIR SYSTEMS DURING THE DESIGN PHASE**
4. V.S. REVA, V.P. FROLOV, K.N. ZEMLYANOI (Dnepropetrovsk). **DEFINITION OF THE OFF-NOMINAL SITUATIONS AND METHODS OF THEIR MANAGEMENT AT THE STAGES OF GROUND COMPLEX POWER-SUPPLY SYSTEMS OPERATION**
5. S.V. SINCHENKO, S.V. SHIRINSKY (Kharkov). **CREATION OF MATHEMATICAL MODELS OF DISCHARGE CHARACTERISTICS OF ELECTROCHEMICAL ACCUMULATORS OF VARIOUS TYPES BY MEANS OF EQUIVALENT CIRCUITS**
6. V.A. DZENZERSKY, Yu.I. KAZACHA, S.V. SHNUROVOY, S.V. BURYLOV, V.Yu. SKOSAR (Dnepropetrovsk). **IMPROVEMENT OF TECHNOLOGIES OF LEAD BATTERY GRID MANUFACTURING**

7. V.A. DZENZERSKY, Yu.I. KAZACHA, Yu.A. ZHULAY, V.A. IVANOV, V.Yu. SKOSAR (Dnepropetrovsk). **DEVELOPMENT OF NEW TECHNOLOGIES IMPROVE THE MECHANICAL PROPERTIES OF BATTERY LEAD ALLOYS**
8. A.S. DANOV (Kharkov). **FUNDAMENTAL ENERGY LEVELS OF MATTER**
9. A.S. DANOV (Kharkov). **VECTOR NATURE OF COMMON FIELD OF INTERACTION**
10. A.S. DANOV (Kharkov). **QUANTIZATION ENERGY OF ELASTIC AND PLASTIC MEDIUMS**
11. V.I. RYABKOV, N.G. TOLMACHEV (Kharkov). **HAVE THE HIGGS BOSON BEEN DISCOVERED?**
12. V.I. RYABKOV, N.G. TOLMACHEV (Kharkov). **ENERGETIC CONDITIONS OF "COLD" FUSION SEMANTIC INTEGRITY OF LANGUAGE OF STANDARDS OF THE SOFTWARE**
13. Yu.A. SYSOIEV (Kharkov). **CONDUCTING FILM GENERATION ON THE NON-CONDUCTOR SURFACE OF STARTING INJECTOR OF PLASMA SOURCES**
14. Yu.A. SHEPETOV, E.A. DOLZHUKOVA (Kharkov). **MODELLING OF INCOMING ENERGY FROM THE SOLAR PANELS OF THE SMALL SPACECRAFT (MICROSATELLITE) FOR EARTH REMOTE SENSING**
15. R.O. BILONENKO (Kharkov). **THE USE OF ALUMINUM IN CHEMICAL CURRENT SOURCE TO GENERATE HYDROGEN**

September 16

Morning Meeting of Section

THEORY AND OPERATION PROCESSES

September 16, 9⁰⁰ – 13⁰⁰

Chairmen: **B.D. Bileka, Dr. Eng. (ITTPh, Kiev);**
B.G. Timoshevsky, Dr. Eng. (NUSh, Nikolayev)
M.R. Tkach, Dr. Eng. (NUSh, Nikolayev)

Secretary: **I.I. Petukhov, Ph.D. (KhAI, Kharkov)**

1. V.A.SHCHIPAKOV (Moscow). **DESIGN AND EXPERIMENTAL ANALYSIS OF THE TURBOCOMPRESSOR UNIT WITH PULSATING GAS DYNAMIC RESONATORS**

2. **B.D. BILEKA, V.J. KABKOV, R.V. SERGIENKO (Kiev). ABOUT USING PROPANE IN THE POWER THERMODYNAMIC CYCLE WITH ISOTHERMAL COMPRESSION OF WORKING MEDIUM IN POWER UNIT WHICH UTILIZE WASTE HEAT**
3. **V.T. MATVIINKO, V.A. OCHERETUANIJ, G.V. GOROBETC (Sevastopol). POWER BOOST GAS TURBINE ENGINES COMPLETE CYCLES, HEAT RECOVERY**
4. **S.S. RYZKOV, A.N. RADCHENKO, S.G. FORDUY (Nikolayev). APPROACHES OF ENCREASING EFFICIENCY OF TRIGENERATION PLANTS FOR INTEGRATED ENERGY SUPPLY**
5. **D.V. KONOVALOV, S.A. DZHURINSKAYA (Nikolayev). HEAT RECOVERY CHILLER FOR AIR CONDITIONING SYSTEM SHIPS**
6. **B.Sh. MAMEDOV (Zaporozhye). SINGLE THEORY OF MOVERS. TURBO-JET ENGINES THERMODYNAMIC CYCLE IN COORDINATE P-V, T-S CALCULATION**
7. **V.P. SOTNIKOV (Yenakiyev). THERMODYNAMIC ASPECT OF THE GAS MULTI-PROCESS COMPRESSION WITH INTER-COOLING**
8. **M.A. TARASENKO, A.I. TARASENKO (Nikolayev). EXTRANEIOUS TEMPERATURE EFFECT ON THE PARAMETERS OF AIR MODES FOR PARTIAL GTE POWER**
9. **R. ZELENSKYI, S. YEPIFANOV, A. GORLOV (Kharkov). SPECIFICS OF TURBINE ENGINE DYNAMICS SIMULATION**
10. **A.V. SMIRNOV, V.Ye. KOSTYUK, D.A. TKACHENKO, Ye.I. KIRILASH, U.N. SLABKO (Sumy, Kharkov). SUPPORT OF GAS-COMPRESSOR UNIT POWER BLOCK HEAT REGIMEN BY ORGANIZED AIR SUPPLY INTO GAS-TURBINE NOISE-HEAT-INSULATING CASING**
11. **A.V. SMIRNOV, V.A. LEVASHOV, N.S. SCHERBAKOV, S.A. ZHUKOV (Sumy). DETERMINATION OF HYDRAULIC RESISTANCE SNAIL EXHAUST DUCT GTE DU80L1 PUMPING UNIT GPA-25SD/100-1, 44M**
12. **E.L. KARPENKO, Yu.F. AHTEMENKO (Kharkov). FEATURES OF WORKING PROCESS DRIVE TURBOSHAFT GTE ON THE LOWERED MODES AND HIS MATHEMATICAL MODELLING**
13. **O.V. KISLOV (Kharkov). ESTIMATION OF GAS TURBINE ENGINE GAS GENERATOR EFFICIENCY**
14. **O.V. KISLOV (Kharkov). THE GAS TURBINE ENGINE GAS GENERATOR CHARACTERISTICS**

15. O.V. KISLOV (Kharkov). **FEATURES OF OPERATION MODE SELECTION OF CONVERTED GAS TURBINE ENGINE GAS GENERATORS**
16. O.V. KISLOV (Kharkov). **SELECTING THE OPERATING MODE OF THE CONVERTED GTE FREE TURBINE**
17. Ye. MARTSENYUK, S. YEPIFANOV, T. KULIK (Kharkov). **CHOOSING OPTIMAL MODEL OF TEMPERATURE AT COMPRESSOR DISCHARGE SIMULATING FOR MONITORING LIFETIME EXHAUSTION OF MAIN PARTS OF THREE-SPOOL TFE**
18. F.G. SOROGIN, Yu.V. SHAHOV, I.I. PETUHOV, A.V. MINYACHIHIN (Kharkov). **THERMOECONOMIC ANALYSIS OF CYCLIC AIR'S COOLING SYSTEMS FOR GAS TURBINE DRIVES**
19. V.A. SHKABURA (Kharkov). **ANALYSIS OF TURBO-COMPRESSOR WITH GENERAL IMPELLER FOR GAS TURBINE ENGINES**
20. I.M. LUKASHOV, G.A. GORBENKO, P.G. GAKAL, D.V. CHAYKA, R.Y. TURNA (Kharkov). **EXPERIMENTAL RESEARCH OF PROCESS IN THE VAPOR COMPRESSION REFRIGERATION PLANT WITH A SOLENOID VALVE AS A REGULATOR OF THE REFRIGERANT FLOW**
21. Y.A. KRASHANITSA (Kharkov). **AEROHYDROGASDYNAMICS: PROBLEMS & PROSPECTS**
22. A.M. TERESHIN, A.F. CHEVAGIN (Zhukovsky). **DECELERATION OF SUPERSONIC FLOW IN PSEUDOSHOCK, HYDRAULIC DIAMETER CONCEPT**
23. S.N. FETISOV (Moscow). **USING MESH DEFORMATION TO COMPUTE FLOW IN DESIGN WITH MOVABLE ELEMENTS**
24. Yu. KUKHTIN, V. LAPOTKO, G. SLYNKO (Zaporozhye). **VERIFICATION OF THE NUMERICAL METHOD FOR DETACHED FLOWS SOLUTION**
25. J. ZABSKI (Gdansk). **VELOCITY WAVES IN THE BOUNDARY LAYER DISTURBED BY WAKES OF NEGATIVE AND POSITIVE JETS IN ACCELERATING FLOW**
26. V.A. SAFONOV (Sevastopol). **ON THE ROLE OF NON-STATIONARY OF THE CHAMBER HEAT ENGINE THERMOREVERSIBLE**

Evening Meeting of Section

DESIGN AND STRENGTH

September 16, 14⁰⁰ – 19⁰⁰

Chairmen: **A.P. Zinkoskiy, Dr. Eng.** (IPS, Kiev);
V.V. Karachun, Dr. Eng. (“KPI”, Kiev);
A.A. Khorickov, Dr. Eng. (CIAM, Moscow)
Secretary: **Yu.A. Gusev, Ph.D.** (KhAI, Kharkov)

1. **G.V. SNIZHNOI (Zaporozhye). MAGNETOMETRIC EVALUATION OF CORROSION RESISTANCE AUSTENITIC CHROMIUM-NICKEL STEELS WITH DIFFERENT PHASE COMPOSITION**
2. **K.V. VAKULENKO, I.B. KAZAK, E.K. SEVIDOVA (Kharkov). CORROSION RESISTANCE OF STEEL 20X13 WITH VACUUM-PLASMA COATINGS**
3. **S.Y. DANILKIN, D.A. REDKIN, A.A. KHORIKOV, S.I. SHANKIN (Moscow, Zaporozhye). NON-CONTACT DIAGNOSTIC OF THE TURBOMACHINERY ROTOR BLADES RESONANT OSCILLATIONS**
4. **A.A. HORIKOV, S.U. DANILKIN, T.I. MAZIKINA, P.V. MAKAROV (Moscow). RESEARCH OF MECHANISMS OF OCCURRENCE AND DEVELOPMENT OF CLASSICAL FLUTTER IN COMPRESSOR'S BLADES WITH APPLICATION OF MODERN METHODS OF PROCESSING OF DYNAMIC PROCESSES**
5. **A.O. KOSKIN, V.G. SELEZNEV (Moscow). PECULARITIES OF ENGINES BLADED DISKS FREQUENCY CHANGING PARAMETERS**
6. **Yu.S. VOROBIEV, V.N. ROMANENKO, K.D. TIRTISHNIKOV, S.B. KULISHOV, A.N. SKRICKIY (Kharkov, Nikolayev). ANALYSIS OF VIBRATIONS OF GAS TURBINE COMPRESSOR BLADING**
7. **A.P. ZINKOVSKII, I.G. TOKAR', K.V. SAVCHENKO (Kiev). EXPERIMENTAL INVESTIGATION ON THE INFLUENCE OF SHROUDING PARAMETERS ON THE VIBRATION STRESS LEVEL OF TURBINE BLADE MODELS**
8. **A.V. PETROV, V.V. TICHOMIROV, V.V. DONCHENKO (Zaporozhye). BASIC WAYS TO INCREASE ACCURACY OF CALCULATED DEFINITION OF GTE's BLADES NATURAL FREQUENCIES AND MODE SHAPES**

9. M.R. TKACH, Y.G. ZOLOTIY, D.V. DOVGAN, I.Y. GUK (Nikolayev). **AUTOMATION OF OSCILLATION FORMS DETERMINATION OF LOW POWER GTE ELEMENTS**
10. O.S. KAIROV, S.O. MORGUN (Nikolayev). **TURBINE ENGINES BLADED DISKS SUBMITTED AS NON-CYCLICAL SYSTEM VIBRATION, STRESS AND DEFORMATION ANALYSIS**
11. Yu.A. GUSEV, Ye.A. KONONIHIN, KAHRAI KAMBIZ (Kharkov). **RESISTIVE-STRAIN SENSORS WITH BYPASSING-PROTECTION SCREEN**
12. Yu.B. NAZARENKO, A.Yu. POTAPOV (Moscow). **NEW APPROACH OF FLOATING INTERSHAFT BEARING SLIPPING ELIMINATION**
13. Yu.B. NAZARENKO. (Moscow). **AVOIDANCE OF RESONANCE WITH ROTOR'S CRITICAL REVOLUTION FREQUENCY IN CASE OF ELLIPTIC TRAJECTORY OF BEARING SHAFT AXIS REVOLUTION ON SUPPORT BEARING**
14. A.V. SMIRNOV, V.G. GADYAKA, D.V. LEYKIH, I.N. ZINCHENKO (Sumy). **FEATURES OF THE DYNAMICS OF THE HIGH PRESSURE COMPRESSOR ROTOR TAKING INTO ACCOUNT FORCES ARISING IN CROSS-SECTIONAL SEALS**
15. A.N. GORBENKO (Kerch). **ON THE PERMISSIBLE LEVEL OF ANISOTROPY OF THE GYROSCOPIC INERTIA OF THE ROTOR**
16. O.D. NIKOLAYEV, O.S. BILETSKY (Dnepropetrovsk). **AN INTERACTION OF CAVITATION SURGE OSCILLATIONS AND LONGITUDINAL OSCILLATIONS OF A LAUNCHER STRUCTURE IN «ROCKET STRUCTURE – PROPULSION SYSTEM» DYNAMIC SYSTEM**
17. T.F. MEDVEDOVSKAYA, I.Ye. RZHEVSKAYA, Ye.L. MEDVEDEVA, V.N. YEFIMENKO, O.N. ZELENSKAYA (Kharkov). **THE CUP AND LOAD-BEARING STUD OF THE HAES HYDRAULIC UNIT STRENGTH**
18. G.I. SOKOL (Dnepropetrovsk). **SOLUTION OF THE PROBLEM DETERMINING OF THE ACOUSTIC FIELDS CHARACTERISTICS OF THE PROPULSION SYSTEMS BASED ON THE CONCEPTS LAMB**
19. V.N. MEL'NICK, V.V. KARACHUN, G.V. BOIKO (Kiev). **CAUCHY'S TASK FOR TWO COAXIAL CYLINDERS CONNECTED BY ELASTIC COMMUNICATION IN THE ACOUSTIC ENVIRONMENT**
20. V.V. KARACHUN, V.N. MEL'NICK, V.Ju. SHYBETSKIJ (Kiev). **INTERACTION OF CONVEX SHELL WITH A STRONG SHOCK WAVE**

Evening Meeting of Section

PISTON COMBUSTION ENGINES

September 16, 14⁰⁰ – 19⁰⁰

Chairmen: A.V. Belogub, Dr. Eng. (PJSC “AVTRAMAT”, Kharkov);

N.I. Mishchenko, Dr. of Eng. (ARIDNTU, Gorlovka);

V.A. Pylev, Dr. Eng. (NTU «KhPI», Kharkov)

Secretary: A.A. Zotov, Ph.D. (PP «VEKTOR ATTRAKCION», Kharkov)

1. **A.F. GOLOVCHUK (Dnepropetrovsk). FREE-PISTON ENGINE-AND-HYDRAULIC PUMP**
2. **V.A. KOROHODSKIY (Kharkov). ORGANIZATION OF RATIONAL METHOD OF POWER CONTROL IN A SPARK IGNITION ENGINE**
3. **V.A. KOROHODSKIY (Kharkov). INCREASING FUEL AND ENVIRONMENTAL PERFORMANCE OF A TWO-STROKE INTERNAL COMBUSTION ENGINE WITH SPARK-IGNITION ENGINES BY IMPROVING THE PROCESSES OF INTERNAL MIXING**
4. **A.A. LISOVAL, S.V. KOSTRITSA (Kiev). MODELING THE EXTERNAL INFLUENCES INTO CHANNELS OF THE ELECTRONIC REGULATOR OF DIESEL**
5. **A.F. GOLOVCHUK, Y.I. GABRIYEL (Dnepropetrovsk). UNIVERSAL DESCRIPTIONS OF ELECTRONIC REGULATOR OF DIESEL FOR TRACTOR**
6. **I.I. NEYACHENKO (Togliatti). FEATURES OF ICE TORQUE WHEN USING THE AUTOMATIC AND ROBOTIZED TRANSMISSION**
7. **A.P. SENACHIN, P.K. SENACHIN (Barnaul). SIMULATION OF THE PHENOMENA A KNOCK BEFORE OF THE FLAME FRONT IN THE SPARK IGNITION ENGINE ON THE BASIS OF A DETAILED CHEMICAL KINETICS**
8. **A.V. GRITSJUK, A.N. VRUBLEVSKY, A.A. OVCHINNIKOV (Kharkov). TESTING OF NEW PERFORMANCE CAPABILITIES OF FUEL SYSTEM AT FORMATION OF EXTERNAL SPEED CHARACTERISTIC OF AN AUTOMOBILE DIESEL ENGINE**
9. **N.M. LUKOV, O.N. ROMASHKOVA, A.S. KOSMODAMIANSKIY, G.F. KASHNIKOV (Moscow). AUTOMATIC COMBINED MICRO-PROCESSOR SYSTEM OF PEAK-HOLDING REGULATION OF THE AIR ENTERING DIESEL ENGINE WITH SUPERCHARGING**

10. A.L. GRIGORIEV, A.A. PROKHORENKO, I.V. RYKOVA (Kharkov). **ANALYSIS OF THE STABILITY AND CONVERGENCE OF NUMERICAL METHODS FOR THE INTEGRATION OF DIFFERENTIAL EQUATIONS OF ELECTRO-DIESEL INJECTORS**
11. A.V. TRINJOV, D.G. SIVYH, E.V. SINYAVSKII, O.Y. PYLYPENKO (Kharkov). **THERMAL STATE OF HIGH-SPEED DIESEL VALVE UNIT AUTOMATIC CONTROL**
12. A. SHVETS (Pervomajsk). **METRICS SPECIFICATION OF GAS-AIR FLOW MOVING THROUGH DESIGN OF MIXING**
13. Ye.V. BELOUSOV, V.V. CHERNIAVSKYI (Kherson). **MILLER'S CYCLE AND ITS IMPLEMENTATION IN SHIP DIESEL ENGINES**
14. D.V. MESHKOV, J.V. GORAJCHIJ (Kharkov). **COOLING SYSTEM WITH ELECTRONIC CONTROL**
15. R.A. VARBANETS, Y.N. KUCHERENKO, A.I. GOLOVAN, N.I. ALEXANDROVSKAYA (Odessa). **EFFECT ON THE CHARACTER OF VIT WORKING PROCESS LOW SPEED DIESEL ENGINES MAN-B & W SERIES MC**
16. A.B. BOGAEVSKIY, A.N. BORISENKO, M.S. VOYTENKO (Kharkov). **THE EVALUATION OF REDUCING FUEL CONSUMPTION BY DIESEL GENERATOR SHUNTING LOCOMOTIVES THROUGH BETTER CONTROL**
17. O.K. BEZJUKOV, V.A. ZHUKOV, E.N. NIKOLENKO (Tutaev). **THE IMPROVING OF LIQUID COOLING SYSTEMS FOR TRANSPORT INTERNAL COBUSTION ENGINES**
18. A.A. SIROTA, N.I. RADCHENKO (Nikolayev). **INFLUENCE OF PERFORMANCE FACTORS AND COOLING SYSTEM ON THE TEMPERATURE OF SCAVENGE AIR AT THE INLET OF MARINE DIESEL ENGINE CYLINDERS**
19. R.N. RADCHENKO, A. STACHEL, N.I. RADCHENKO, A.A. SIROTA (Nikolayev, Szczecin). **EVALUATION OF COOLING POTENTIAL OF AIR AT THE INLET OF LOW SPEED DIESEL ENGINE OF TRANSPORT SHIP**
20. N.I. RADCHENKO, T. BOHDAL, R.N. RADCHENKO, A.A. ANDREEV, D.V. KONOVALOV (Nikolayev, Koszalin). **THREE CONTOUR SCAVENGE AIR COOLING SYSTEM OF MARINE LOW SPEED DIESEL ENGINE**
21. A.A. SIROTA, N.I. RADCHENKO, Yu.G. SCHERBAK (Nikolayev). **ASSESSMENT OF THE APPROPRIATENESS OF USE VAPOR-COMPRESSOR FREEZING MACHINE TO COOL THE CHARGE AIR OF DIESELS**

22. N.I. RADCHENKO, A.A. SIROTA, R.N. RADCHENKO, D.V. KONOVALOV (Nikolayev). **COOLING POTENTIAL OF SCAVENGE AIR OF LOW SPEED DIESEL ENGINE OF TRANSPORT SHIP**
23. A.N. GANZHA., N.A. MARCHENKO (Kharkov). **IMPROVING THE EFFICIENCY OF THE INTRODUCTION OF A STATIONARY GAS TURBINE HEAT RECOVERY FROM THE POSSIBLE GAS BYPASS**

September 17

Morning Meeting of Section

THEORY AND OPERATION PROCESSES

September 17, 9⁰⁰ – 13⁰⁰

Chairmen: **V.T. Matveenکو, Dr. Eng.** (SevGTU, Sevastopol’);
S.I. Serbin, Dr. Eng. (NUSh, Nikolayev);
S.V. Yershov, Dr. Eng. (IPMash, Kharkov)

Secretary: **V.Ye. Kostyuk, Ph.D.** (KhAI, Kharkov)

1. A.E. REMIZOV, O.O. KARELIN, I.A. REMIZOV (Rybinsk). **TO THE QUESTION OF CHOICE OF GASODYNAMIC EFFECTIVENESS PARAMETER OF DIFFUSER**
2. I.F. KRAVCHENKO, S.A. KHOMYLYEV, P.P. VARVARUK, E.L. PIKA (Zaporozhye). **THE NUMERICAL AND EXPERIMENTAL RESEARCH OF TURBINE EXHAUST DUCT OF TURBOFAN ENGINE**
3. V.V. KOTKIN (Kharkov). **MATHEMATICAL MODEL OF VISCOUS INTERACTION OF THE JETS AT THE GAS TURBINE ENGINE NOZZLE EXIT OF MULTI-MODE AIRCRAFT UNDER SUBSONIC EXTERNAL FLOW**
4. D.V. ARKHIPOV, R.Z. TUMASHEV (Moscow). **EFFECT OF RADIAL FLOW IRREGULARITY PARAMETERS AT THE ROTOR ENTRY ON GAS-DYNAMIC PROPERTIES OF AXIAL COMPRESSOR STAGE**
5. V.N. MATVEEV, O.V. BATURIN, G.M. POPOV (Samara). **MULTI-STAGE COMPRESSOR PERFORMANCES IMPROVEMENT BY USING OPTIMIZATION METHODS**
6. Ye. RUBLEVSKIY, D. PLAKUSCHIY, V. PISMENNY, Yu. KVASHA (Zaporozhye, Dnepropetrovsk). **NUMERICAL INVESTIGATION OF TWO-STAGE FAN**

7. M.Yu. SHAROVSKY, A.V. KOTOV, M.Yu. SHELKOVSKIY (Nikolayev). **EXPERIMENTAL RESEARCH OF AERODYNAMIC CHARACTERISTICS OF RADIAL CENTRIFUGAL STAGE VANED DIFFUSER**
8. M.Y. SHELKOVSKY (Nikolayev). **AERODYNAMIC OPTIMIZATION METHOD OF COMPRESSOR BLADE VANES**
9. V.P. GERASIMENKO, M.Y. SHELKOVSKY (Nikolayev, Kharkov). **COMPLEX AERODYNAMIC PERFECTION OF COMPRESSORS OF GTE**
10. H. BARYSHEVA (Kharkov). **INLET FLOW RADIAL IRREGULARITY INFLUENCE ON CENTRIFUGAL STAGE CHARACTERISTICS**
11. L.G. BOYKO, E.S. BARISHEVA, A.E. DYOMIN, O.N. DRYNOV (Kharkov, Zaporozhye). **AVIATION ENGINE AXIAL-CENTRIFUGAL COMPRESSOR AXISYMMETRICAL FLOW MODELING**
12. L.G. BOYKO, A.E. DYOMIN, E.L. KARPENKO, J.F. AHTEMENKO (Kharkov, Zaporozhye). **NUMERICAL DESIGN OF THE PERFORMANCE CHARACTERISTICS OF TURBOSHAFT ENGINE WITH MULTI-STAGE AXIAL COMPRESSOR BLADE ROWS DESCRIPTION**
13. E.S. BARYSHEVA, K.V. FESENKO (Kharkov). **DESIGN METHOD FOR CENTRIFUGAL SUPERCHARGER STAGE**
14. L.G. BOYKO, A.E. DEMIN, J.P. MAXIMOV, O.N. DRYNOV (Kharkov, Zaporozhye). **AVIATION ENGINE MULTI-STAGE AXIAL COMPRESSOR AXISYMMETRICAL FLOW MATHEMATICAL MODELING**
15. L.G. BOYKO, A.E. DYOMIN, E.L. KARPENKO, J.F. AHTEMENKO (Kharkov, Zaporozhye). **PERFECTION OF METHOD OF ANALYSIS OF THE PERFORMANCE CHARACTERISTICS TURBOSHAFT GTE, BASED ON AXIAL MULTISTAGE COMPRESSOR BLADE ROWS DESCRIPTION**
16. L.G. BOYKO, E.S. BARYSHEVA, A.E. DYOMIN, O.N. DRYNOV (Kharkov, Zaporozhye). **INFLUENCE OF CHANGE OF AVIATION GTE COMPRESSOR -BLADE CROWNS GEOMETRICAL PARAMETERS ON GTE PERFORMANCES**
17. A. DYOMIN, I. KAKAEV (Kharkov). **PARAMETER-ORIENTED RESEARCH OF FLOW FEATURES IN SUPERCRITICAL CASCADE OF THE COMPRESSOR STAGE**

18. V. LAPOTKO, YU. KUKHTIN, I. KRAVCHENKO (Zaporozhye). **NUMERICAL ANALYSIS OF ACOUSTICAL INTERACTION FOR TURBINE RIMS OF EXPERIMENTAL ENGINE FAN**
19. M.N. GRYZUN, D.A.KOZYRETS, S.V. YERSHOV (Kharkov). **TESTING OF SOFTWARE “F” FOR CALCULATION OF FLOW PROBLEM FOR ISOLATED PROFILES**
20. V.V. VYATKOV, A.E. REMIZOV. A.M. TOSHAKOV (Rybinsk). **RESEARCHING OF LPT NOZZLE BLOCKS WORKING WITH INTER-TURBINE CHANEL IN THE PRESENCE OF INPUT SWIRLING FLOW**
21. N.V. PIZHANKOVA (Kharkov). **GAS TURBINE STAGE FLOW PARAMETERS DEFINITION IN WIDE RANGE REGIMES**
22. L.G. BOYKO, O.V. KISLOV, N.V. PIZHANKOVA (Kharkov). **MODELING PROCESS IN GAS TURBINE IN GAS TURBINE ENGINE**
23. V.V. PANIN, M.O. DIKIY, A.S. SOLOMAKHA, V.G. PETRENKO (Kiev). **FOG COMPRESSION IN GAS TURBINE ENGINES**
24. V.A. GRIGORIEV, D.S. KALABUHOV, V.M. RAD’KO (Samara). **NUMERICAL GAS-DYNAMIC SIMULATION OF SINGLE-STAGE CENTRIPETAL ULTRALOW POWER TURBINE**
25. V.A. GRIGORIEV, V.M. RAD’KO, D.S. KALABUHOV (Samara). **MATHEMATICAL MODELS OF POWER CRITERIA FOR ESTIMATION OF EFFICIENCY OF SINGLE-STAGE TO THE SMALLEST POWER TURBINES**
26. V.A.SAFONOV, PN KUZNETSOV, IL BELETSKY (Sevastopol). **THE THERMOMECHANICAL MOTOR WITH LINEAR GENERATOR WORKING STIRLING CYCLE**

Morning Meeting of Section

PISTON COMBUSTION ENGINES

September 17, 9⁰⁰ – 13⁰⁰

Chairmen: **A.P. Stokov, Dr. Eng.** (IPMach NASU);
A.Ye. Svistula, Dr. Eng. (AGTU, Barnaul);
A.F. Golovschuk Dr. Eng. (DNUZhT, Dnepropetrovsk)
Secretary: **V.V. Matveyenko** (NTU «KhPI», Kharkov)

1. A.N. KONDRATENKO, A.P. STROKOV, N.M. KARASICHENKO (Kharkov). **EXPERIMENTAL INVESTIGATION OF THE WORKING LAYOUT OF FILTER ELEMENT OF DIESEL PARTICLE FILTER WITH BULK NATURAL ZEOLITE. PART 1**

2. A.N. KONDRATENKO, A.P. STROKOV, S.P. KHOZHAINOV (Kharkov). **EXPERIMENTAL INVESTIGATION OF THE WORKING LAYOUT OF FILTER ELEMENT OF DIESEL PARTICLE FILTER WITH BULK NATURAL ZEOLITE. PART 2**
3. A.P. POLIVIANCHUK, S.A. LVOV (Lugansk). **INCREASING THE ACCURACY OF THE GRAVIMETRIC MEASUREMENT METHOD OF PARTICULATE EMISSIONS IN THE DIESEL EXHAUST GAS**
4. A.P. POLIVIANCHUK, S.A. LVOV (Lugansk). **A COMPREHENSIVE EVALUATION OF THE PARTICULATE FILTER IN TERMS OF THE COUNTING, SURFACE AND MASS CONCENTRATIONS OF PARTICULATE MATTER**
5. I.V. PARSADANOV., I.P. VASYLIEV (Kharkov, Lugansk). **DEFINITION OF STRUCTURE OF PM OF THE EXHAUST GASES OF DIESEL**
6. A.A. PROKHORENKO, D.E. SAMOILENKO, A.I. GAIDAR (Kharkov). **DESIGN OPTIMIZATION OF EXHAUST MUFFLER OF TRACTOR DIESEL ENGINE USING AVL BOOST LINEAR ACOUSTICS SOFTWARE**
7. A.A. PROKHORENKO, D.E. SAMOILENKO (Kharkov). **THE MODEL OF DIESEL ENGINE TEST BENCH IN AVL AST BOOST SOFTWARE**
8. I.V. PARSADANOV, I.V. RYKOVA, A.N. MAKLAKOV (Kharkov). **FEATURES INTRACYLINDER ENVIRONMENTAL CATALYSIS IN ICE**
9. M.V. VED, N.D. SAHNENKO, E.V. BOGOYAVLENSKAY (Kharkov). **PROCESS ORGANIZATION IN COMBUSTION IN THE PRESENCE OF ICE CATALYTIC MATERIALS**
10. M.R. TKACH, B.G. TIMOCHEVSKIY, S.M. DOCENKO, J.N. GALINKIN (NIKOLAEV). **UTILIZATION OF LOW POTENTIAL HEAT THE LOW SPEED ICE FROM HYDRIDE TECHNOLOGY**
11. M.R. TKACH, B.G. TIMOSHEVSKY, A.S. MITROFANOV, A.S. POZNANSKY, A.Y. PROSKURIN (Nikolayev). **CHARACTERISTICS OF BIOETHANOL CONVERSION EXPERIMENTAL SYSTEM FOR THE 2 CYLINDER 4-STROKE ENGINE 7,2/6**
12. B.G. TIMOSHEVSKY, M.R. TKACH, A.S. MITROFANOV, A.S. POZNANSKY, A.U. PROSKURIN (Nikolayev). **INDICATORS OF SPARK IGNITION ENGINE 2-CYLINDER 4-STROKE 7,2 / 6 WHICH WORK ON THE SYNTHESIS GAS**

13. S.P. KULMANAKOV, S.S. KULMANAKOV, A.V. LYSENKO (Barnaul). **INFLUENCE OF ALTERNATIVE FUELS FOR THE FORMATION OF DIESEL INDICATED EFFICIENCY**
14. V.S. MOROZOVA, V.S. GOUN, V.L. POLYACKO.(Chelyabinsk). **FORECASTING OF THE CONTENT OF SOOT IN THE FUL-FILLED GASES OF THE DIESEL ON THE BASIS OF PROVISIONS BY DETERMINATION OF EFFICIENCY OF PROCESS OF COMBUSTION**
15. A.M. LEVTEROV, L.I. LEVTEROVA, N.Y. GLADKOVA (Kharkov). **RESULTS OF NUMERICAL PROBE OF CHARACTERISTICS OF THE AUTOMOBILE ENGINE WORK ON PETROLETHANOL**
16. A.P. MARCHENKO, D.E. SAMOILENKO, OMAR ADEL HAMZAH (Kharkov). **THE PROBLEMS OF UTILIZATION OF FLARE GASES IN INTERNAL COMBUSTION ENGINES**
17. K.N. OSIPOV, E.L. PERVUKHINA, Yu.L. RAPATSKIY (Sevastopol). **CALCULATION OF TIMING OF FUEL INJECTION FOR REDUCING THE CONCENTRATION OF TOXIC COMPONENTS IN DIESEL COMBUSTION**
18. D.E. OKSEN, E.I. OKSEN (Gorlovka). **THE RESEARCH OF THE FORMATION OF VIBROACOUSTIC FIELDS IN THE MECHANISMS OF AN INTERNAL COMBUSTION ENGINE**
19. A. PROKHORENKO, I. PARSADANOV, D. SAMOILENKO (Kharkov). **AN INNOVATION DESIGN SILENCER ISSUE TRACTOR DIESEL**

Morning Meeting of Section

AUTOMATIC CONTROL SYSTEMS AND DIAGNOSTICS

September 17, 9⁰⁰ – 13⁰⁰

Chairmen: **R.A. Varbanets, Dr. Eng.**; (ONSU, Odessa);
S.R. Ignatovich, Dr. Eng. (NAU, Kiev);
S.V. Yepifanov, Dr. Eng. (“KhAI”, Kharkov)
 Secretary: **M.V. Shevchenko** (“KhAI”, Kharkov)

1. D.I. VOLKOV, N.P. VOLOSHINA, G.S. RANCHENKO (Odessa). **CALLS OF THE MARKET. THE DEVELOPMENT STRATEGY OF THE AVIONICS ENTERPRISE**
2. D.G. FEDORCHENKO, A.V. GLADKOV, V.A. SOLYANNIKOV, A.I. ZHUZHUKIN (Samara). **THE USE OF HOLOGRAPHIC INTERFEROMETRY FOR ROTATING OBJECT VIBRATIONS STUDY**

3. D.G. FEDORCHENKO, A.V. GLADKOV, V.A. SOLYANNIKOV, A.I. ZHUZHUKIN (Samara). **SPECKLE-INTERFEROMETER FOR GAS TURBINE ENGINE LARGE-SIZE PARTS AND COMPONENTS VIBRATIONS STUDY**
4. V.N. NIKOLAYEV, Y.N. KABANOV (Novosibirsk). **A THERMAL-CONVECTION TRANSDUCER OF FLUID CONSUMPTION AND TEMPERATURE IN PIPELINES OF AIRCRAFT ENGINE**
5. I.O. IGUMENTSEV, O.O. PROKOPENKO (Kharkov). **ELECTROMAGNETIC COMPONENTS OF THE CHARGED GYROSCOPE ROTATIONAL FREQUENCY**
6. A.V. KULALAEV, V.V. KULALAEV (Kiev). **ESTIMATION OF THE EFFICIENCY OF INFORMATION TRANSFER CHANNEL CONTROL WHILE OPTIC-ELECTRONIC COUNTERACTION OF UAV WITH OPTICAL GUIDANCE SYSTEM**
7. G.G. KULIKOV, A.I. ABDULNAGIMOV, B.I. BADAMSHIN, A.S. CHEPAIKIN (Ufa). **CALCULATION OF SMALL PARAMETERS IN PROPELLERS CONTROL SYSTEM MODEL OF TURBOFAN ENGINES**
8. S.V. YEPIFANOV, E.O. KONONYKHIN (Kharkov). **SYNTHESIS AND ANALYSIS OF AN ADVANCED GAS TURBINE ENGINE CONTROL**
9. V.V. PANIN, S.V. ENCHEV, S.O. TAKU (Kiev). **FORMATION OF THE STRUCTURE OF INTELLECTUAL AUTOMATIC CONTROL SYSTEM OF GAS TURBINE ENGINES**
10. V.V. PANIN, S.V. ENCHEV, S.S. TOVKACH (Kiev). **COMBINED MODELS OF INFORMATION PROCESSING IN THE ELECTRONIC CONTROL SYSTEMS OF AIRCRAFT ENGINES**
11. M. BRADAC, F. ZOUHAR, J. KRIZAN, M. BLIZNAK, L. VARGOVCIK, O. KONONIKHYN, Ye. PAVLYUK, Y. KRAVCHENKO (Brno, Kharkov). **MODEL BASED DESIGN APPLIED FOR DEVELOPMENT OF FUEL METERING PUMP CONTROL ALGORITHM**
12. Ye.V. PAVLYUK, Yu.I. KRAVCHENKO, S.V. YEPIFANOV, S.I. SUKHOVEY (Kharkov, Zaporozhye). **APPLICATION OF THE STEPPER DRIVE IN THE FUEL METERING SYSTEMS DEVELOPED BY SE "KhADB"**
13. E. MENIAILOV, A. TRONCHUCK, K. UGRYUMOVA, U. BASOV, A. MYENYAYLOV. (Kharkov, Zaporozhye). **METHOD FOR DETERMINING THE LAW ON TILTGUIDE VANES OF MULTI-STAGE AXIAL COMPRESSORS UNDER UNCERTAINTY OF INPUT DATA**

14. **A.I. TARASENKO, A.A. TARASENKO (Nikolaev). DETAILS OF DIGITAL CONTROL FOR POWER PLANT GTE ON STARTING AND OPERATING MODES**
15. **V.A. KASIANOV, A.V. GONCHARENKO (Kiev). SUBJECTIVELY PREFERRED OPTIMALLY CONTROLLED MODES OF OPERATION FOR AN AIRCRAFT MAXIMAL DURATION HORIZONTAL FLIGHT**
16. **A.V. GONCHARENKO (Kiev). SUBJECTIVE ENTROPY EXTREMIZATION PRINCIPLE AS A TOOL OF AN AIRCRAFT MAXIMAL DURATION HORIZONTAL FLIGHT CONTROL**
17. **Y.P. LESCHENKO (Kiev). INTELLECTUAL CONTROL SYSTEM BY MEASURING ROBOT**
18. **G.I. POGORELOV, A.I. ABDULNAGIMOV, A.G. GODOVANYUK (Ufa). HARDWARE-IN-THE-LOOP INTEGRATED SIMULATION TECHNOLOGY FOR GAS TURBINES AND ITS SYSTEMS**
19. **A.S. GOLTSOV, D.F. SIMBIRSKIY (Zavolzhsk, Kharkov). ANALYSIS OF FULL-SCALE POWER TEST OF THE GATE-BLADE TURBINE**

Evening Meeting of Section

AUTOMATIC CONTROL SYSTEMS AND DIAGNOSTICS

September 17, 14⁰⁰ – 19⁰⁰

Chairmen: **S.A. Dmitryyev, Dr. Eng. (NAU, Kiev);**
B.B. Korovin, Dr. Eng. (FRI, Moscow);
G.G. Kulikov, Dr. Eng. (USATU, Ufa)
 Secretary: **F.F. Sirenko ("KhAI", Kharkov)**

1. **A.I. VASILENKO, S.P. SERGEEV, I.I. KOSTYAN (Sumy). DYNAMIC MODES OF POWER SUPPLY UNITS AMNUFAC TURED BY PJSC «SUMY FRUNZE NPO»**
2. **V.F. MIRGOROD, V.D. GOGUNSKI, A.G. BURIACHENKO, V.M. GRUDINKIN (Odessa). ACCURACY EVALUATION OF GTE PIECE WISE-LINEAR DYNAMIC MODELS**
3. **N.V. KHORYAK, A.D. NYKOLAYEV, S.I. DOLGOPOLOV (Dnepropetrovsk). PARAMETRIC IDENTIFICATION OF A MATHEMATICAL MODEL OF THE LOW-FREQUENCY DYNAMICS PUMPS OF LIQUID ROCKET ENGINES**
4. **I.G. BAKHMET (Beijing). BUILDING FLOW CHARACTERISTIC OF FLOW CONTROLLER LJE**

5. O.S. YAKUSHENKO, V.E. MILTSOV, S.I. YOVENKO, V.V. RATYNSKY, O.I. CHUMAK (Kiev). **THE AUTOMATED MONITORING OF RELIABILITY IN AIRLINE**
6. A.G. BURYACHENKO, G.S. RANCHENKO, S.V. RYABOKON (Odessa). **PARAMETRIC RELIABILITY RESEARCH RESULTS OF AIRCRAFT PRESSURE TRANSDUCERS**
7. S.A. DMITRIYEV, V.I. BURLAKOV, A.V. POPOV, D.V. POPOV (Kiev). **AIRCRAFT ENGINES MAINTENANCE PROGRAMS DEVELOPMENT**
8. A.A. TAMARGAZIN, I.I. LINNIK, E.V. BOGAYSKAYA, T.Yu. KRAMARENKO (Kiev). **CORRELATION FUNCTIONS OF THE NUMBER OF APPLICATIONS FOR ELIMINATION OF DAMAGES OF POWER PLANTS IN THE OPERATIONAL MAINTENANCE**
9. O.O. ANTONOV, R.A. TROFYMENKO, L.L. IATSKO, O.O. SUTKOVYI (Kiev). **MODERN METHODS OF DIAGNOSIS AND CONTROL OF GAS TURBINE AIRCRAFT ENGINES**
10. M.V. SHEVCHENKO, S.V. YEPIFANOV (Kharkov). **ESTIMATING NONMETERING PARAMETERS TAKING INTO ACCOUNT GAS PATH TECHNICAL STATE CHANGING**
11. S.V. YEPIFANOV, F.F. SIRENKO, I.I. GOLOVIN (Kharkov). **OVERVIEW OF METHODS FOR SYNTHESIZING MATHEMATICAL MODELS OF GAS TURBINE ENGINES AT SUB-IDLE MODES**
12. V.F. MIRGOROD, I.M. GVOZDEVA, D.S. BURUNOV (Odessa). **CONSTRUCTION AND ANALYSIS OF SURFACE TREND ASSESSMENT IN THE PROBLEMS OF POWER SYSTEMS BASED ON GTD**
13. V.F. MIRGOROD, E.V. DERENG (Odessa, Kiev). **CLUSTERS EXTRACTION AT MULTIDIMENSIONAL TREND ANALYSIS**
14. S.V. YEPIFANOV, B.A. SCHERBAN, A.V. TOVSTIK, N.D. BAGAUDINOV, Y.V. CHERKASOV (Kharkov, Zaporozhye). **ON-GROUND AUTOMATED DIAGNOSIS COMPLEX FOR TURBOFAN**
15. V.V. PANIN, S.V. ENCHEV, O.V. SAVCHIN (Kiev). **ALGORITHMIC MAINTENANCE OF A SYSTEM OF IDENTIFICATION PRESURGE (OF SURGE) PHENOMENA IN COMPRESSORS AVIATION GTE**
16. G.G. KULIKOV, V.S. FATIKOV, V.A. TRUSHIN, A.A. GANEEV, A.I. ABDULNAGIMOV (Ufa). **MONITORING CONCEPT OF THERMAL STRESS STATE AND BLADE RESOURCE FOR HEAVY-DUTY GAS TURBINES**

17. E.V. ZAREMBA, I.P. KOVALEV (Taganrog). **RESEARCH OF VIBRATION CHARACTERISTICS OF ENGINE D-436TP FAN ON BE-200ES AMPHIBIAN IN ICING CONDITIONS**
18. N.I. BOURAOU, A.M. PAVLOVSKIJ, L.L. YATSKO, A.V. IVANCHENKO (Kiev). **DEVELOPMENT AND INVESTIGATION OF THE DIGITAL TRACKING FILTERS FOR THE VIBRATION CONTROL SYSTEM OF AVIATION ENGINE AT NON-STEADY-STATE MODES**
19. T.V. YUR, V.N. HARITONOV, V.I. DUBROVIN (Zaporozhye). **MODEL FOR EVALUATION OF GAS-TURBINE ENGINE ELEMENTS TECHNICAL STATE BY VIBRATION PARAMETERS BASED ON WAVELET-TRANSFOR**
20. I.F. KRAVCHENKO, V.N. ZHURAVLEV, S.A. BORZOV (Zaporozhye). **RESEARCH THE IMPACT OF PRESSURE PULSATION IN COMBUSTION CHAMBER ON STABILITY WORK OF GAS TURBINE ENGINE**
21. N.G. SHULZHENKO, Yu.G. EFREMOV, V.I. TSYBULKO, A.V. DEPARMA (Kharkov). **APPLICATION OF METHODS AND MEANS OF VIBRATION DIAGNOSTICS FOR THE ESTIMATION OF RELIABILITY OF WORK OF TURBINE SETS**
22. J. KICINSKI (Gdansk, Poland). **NEW METHOD OF ANALYSIS OF NON-LINEAR STOCHASTIC AND RANDOM VIBRATIONS**

Evening Meeting of Section

TECHNOLOGY

September 17, 14⁰⁰ – 17⁴⁵

Chairmen: **A.I. Dolmatov, Dr. Eng.** (KhAI, Kharkov);
A.Ya. Kachan, Dr. Eng. (NTU, Zaporozhye);
N.E. Kalinina, Dr. Eng. (DGU, Dnepropetrovsk)

Secretary: **M.K. Knyazev, PhD** (“KhAI”, Kharkov)

1. I.V. LYTUVYNNENKO, D.D. ZHURGUNOVA (Kharkov). **HISTORICAL SIGNIFICANCE OF THE SCIENTIFIC SCHOOL OF IMPULSE PROCESSING TECHNOLOGIES AT THE PRESENT STAGE OF TECHNOLOGICAL SOLUTIONS PROBLEMS**
2. V.F. MOZGOVOJ, K.B. BALUCHOK, V.A. PANASENKO, I.I. KOTOV, M.K. BIRUK (Zaporozhye). **STRATEGY OF PROCESSING OF BLADES MONOWHEELS ON THE PROCESSING CENTRES CNC WITH VARIABLE 3D-CORRECTION**

3. **R.V. VARNAS, V.V. KOMBAROV (Kharkov). INCREASING OF MACHINING EFFICIENCY MACHINING ON MODERNIZED MACHINE TOOL WITH CNC**
4. **E.V. KOMBAROVA, V.F. SOROKIN (Kharkov). THE CIRCLE CENTRE CORRECTION ALGORITHMS APPLICATION WITH HIGH-SPEED MACHINING**
5. **E.V. KOMBAROVA, R.V. VARNAS, E.A. AKSENOV (Kharkov). THE APPLICATION OF HARDWARE-SOFTWARE COMPLEX FOR INVESTIGATION OF ALGORITHMS AND PROCESSES WITH ADJUSTMENT OF CNC SYSTEM FOR SPECIAL LONG-MEASURING MACHINE TOOLS FP7MSMN2**
6. **V.F. SOROKIN, T.P. BYT, V.V. KOMBAROV (Kharkov). SYNTHESIS OF INVOLUTE PATHS OF HIGH-SPEED MACHINING OF HOLES**
7. **O.V. KOMBAROVA, V.F. SOROKIN, V.V. KOMBAROV (Kharkov). ADAPTIVE CONTROL OF SPEED MACHINING IN CNC SYSTEM WITH PRIOR PLANNING FEEDRATE BASED ON SMOOTH S-CURVE LAWS OF ACCELERATION AND DECELERATION**
8. **V.F. SOROKIN, V.V. KOMBAROV, I.A. TERNYUK (Kharkov). METHOD OF DIRECT STABILIZATION OF CONTOUR FEEDRATE FOR THE SPLINE INTERPOLATOR CNC SYSTEM**
9. **V.V. KOMBAROV, V.F. SOROKIN (Kharkov). THE PROVIDING STABILITY OF CONTOUR FEEDRATE IN CNC SYSTEM BY HIGH-SPEED EQUIPMENT ON EXAMPLE OF CIRCULAR INTERPOLATION**
10. **R.V. VARNAS, E.V. KOMBAROVA, E.A. KRIZHIVETS (Kharkov). HIGH MACHINING OF WINGLONGITUDIANAL STRUCTURAL MEMBERS ON MODERNIZING REQUIPMENT**
11. **E.O. AKSYONOV (Kharkov). THE RESEARCH OF THE ACCURACY CONTACTLESS SPECKLE-INTERFEROMETRIC METHOD MEASURING MOVEMENTS OF CNC MACHINE TOOL**
12. **E.K. GORDIENKEO, A.V. BELOGUB (Kharkov). FOLLOWER CIRCUIT DEVELOPMENT TOOLS FOR FINISHING THE OUTER SURFACE OF THE PISTON**
13. **T.P. NABOKINA, O.V. GAYDACHUK, O.M. GRUSHENKO (Kharkov). SPEED OF THE UNHARDERING CUTTING BY SUPERSONIC HIGH-TEMPERATURE STREAMS OF THE MATERIALS BASED ON ALUMINUM ALLOYS**
14. **S.V. SERGEEV, M.A. KURIN, T.V. LOZA (Kharkov). TECHNOLOGY SUPPORT INCREASING CAPACITY USE BLADES GTE COMPLETE HARDENING**
15. **A.A. KABATOV, A.P. HARITONYUK, D.N. GOLOVKO (Kharkov). INVESTIGATION POWER PARAMETERS OF DIAMOND SMOOTHING**

Session Of Project

«PROJECT KHAI-ERA – MUTUALLY ADVANTAGEOUS COOPERATION UKRAINE – EUROPEAN UNION IN THE AVIATION TECHNOLOGY»

18⁰⁰ – 19⁰⁰

19. N. NECHYPORUK, Yu. VOROBYOV, I. BYCHKOV (Kharkiv), N. BYCHKOV(Kharkiv). **TECHNOLOGICAL PROCESS OF THE AIRCRAFT STRUCTURES ASSEMBLY AND INFORMATION SUPPORT**
20. Yu. VOROBYOV, N. NECHYPORUK, V. VORONKO, B. YATSOUN (Kharkiv), D. BERND (Magdeburg). **COMPOSITE LAMINATES TITANIUM IMPULSE RIVETING TECHNOLOGY DEVELOPMENT WITH PROCESS PARAMETERS OPTIMIZATION**
21. Yu. VOROBYOV, N. NECHYPORUK, I. VORONKO, B. YATSOUN (Kharkiv), D. BERND (Magdeburg). **EXPERIMENTAL AND NUMERICAL INVESTIGATIONS ON IMPULSE SELF-PIERCE RIVETING OF LIGHT WEIGHT AIRCRAFT ALUMINUM AND MIXED STRUCTURES**
22. Yu. VOROBYOV(Kharkiv). **CREATION CONCEPT OF TECHNOLOGICAL SYSTEMS FOR ASSEMBLAGE OF VEHICLES WITH MANUAL PNEUMATIC IMPACT TOOL**
23. V. VORONKO(Kharkiv). **SCIENTIFIC BASIC PRINCIPLES OF THE AUTOMATED CONVEYOR OF AIRCRAFTPANELS AND UNITS ASSEMBLY**

Evening Meeting of Section

THEORY AND OPERATION PROCESSES

September 17, 14⁰⁰ – 19⁰⁰

Chairmen: **N.I. Radchenko, Dr. Eng.** (NUSh, Nikolayev);
A.V. Rusanov, Dr. Eng. (IPMash, Kharkov);
A.A. Khalatov, NASU Academician (ITTPh, Kiev)
Secretary: **Ye.V. Martsenyuk** (“KhAI”, Kharkov)

1. V. PETELCHYTS, A. KHALATOV, D. PYSMENNYI, Y. DASHEVSKYY (Kiev, Nikolayev). **TO FILM COOLING RANS SIMULATION ACCURACY IMPROVING APPROACH**
2. A.A. KHALATOV, M.V. BEZLIUDNA, Yu.J. DASHEVSKYY, S.D. SEVERIN, I.I. BORISOV (Kiev, Nikolayev). **ADAPTATION OF $k-\varepsilon$ TURBULENCE MODEL FOR THE FLAT PLATE FILM COOLING NUMERICAL SIMULATIONS DOWNSTREAM TWO ROWS OF HOLES ARRANGED IN SPHERICAL DIMPLES**

3. V.V. KOROBKO (Nikolayev). **STUDY OF HEAT TRANSFER AND HYDRODYNAMICS IN COMPONENTS THERMOACOUSTIC ENGINES**
4. I.F. KRAVCHENKO, V.A. SHKABURA, A.V. ELANSKIJ (Zaporozhye, Kharkov). **THE VARIANTS OF AIR-TO-AIR HEAT EXCHANGER FOR COOLING OF GAS TURBINE ENGINE INVESTIGATION**
5. A.V. RUSANOV, P. LAMPART, R.A. RUSANOV, M. SZYMANIAK (Kharkov, Gdansk). **ELABORATION OF THE FLOW SYSTEM FOR COGENERATION UNIT, USING LOW-BOILING WORKING BODY**
6. A.N. MARKUSHIN, A.V. BAKLANOV (Kazan). **HYDRAULIK CHARACTERISTICS OF SHORTENED MULTI-ATOMIZER COMBUSTOR OF GTE**
7. D.A. DOLMATOV (Kharkov). **COMBUSTION OF SINGLE AND TWIN LIQUID FUEL DROPLET DURING FAST EVAPORATION**
8. D.A. DOLMATOV (Kharkov). **HYDROXYL AND ATOMIC OXYGEN OVERSHOOT PROVOCATION BY SMALL PLASMA INCLUSIONS**
9. V.A. BOGUSLAEV, A.I. DOLMATOV, D.A. DOLMATOV, A.V. KUKURUDZA, M. HAJIVAND (Kharkov). **ELECTROCHEMICAL CONTROL OF LOW RATE REACTIONS INTO HEXANE – OXYGEN FLAME**
10. D.A. DOLMATOV, A.V. KUKURUDZA (Kharkov). **INFLUENCE OF THE HIGH-FREQUENCY DISCHARGE ON NOX GENERATION-DISINTEGRATION MECHANISMS**
11. D.A. DOLMATOV, V.G. BUSHANOVA, K.V. FESENKO, M.M. MARIENKO (Kharkov, Uralsk). **NUMERICAL INVESTIGATION OF TRANSSONIC COMPRESSOR STAGE**
12. S.I. SERBIN, N.A. GONCHAROVA (Nikolayev). **THE NUMERICAL SIMULATION OF THE PLASMA COAL OXYGEN AND OXYGEN-STEAM GASIFICATION PROCESSES**
13. A.N. RADCHENKO, A.S. MOROZOVA (Nikolayev). **METHOD OF THE AIR COOLING THERMAL-TIME CAPACITY OF THE GAS PUMPING STATIONS MODERNIZATION PROJECT MANAGEMENT**
14. A.K. CHEREDNYCHENKO M.R. TKACH, B.G. TIMOSHEVSKY, (Nikolayev). **RATIONAL LIMITS OF THE MAIN METHODS OF HEAT RECOVERY**
15. M.S. BONDARENKO, M.O. CHEPLYUKHA (Nikolaev). **THE LNG-TERMINAL REGASIFICATION UNIT WITH GAS-TURBINE FOR ELECTRIC POWER GENERATION**

16. Ye.I. KIRILASH, V.Ye. KOSTYUK, D.A. TKACHENKO (Kharkov). **VERIFICATION OF THE COMBINED CONVECTIVE AND RADIANT HEAT TRANSFER MODELS UNDER GAS-TURBINE ENCLOSURE CONDITIONS**
17. V.A. SCHUKIN, F.M. VALIEV, O.V. DUNAY (Kazan). **PARTICULARITIES OF THE FORMATION TOXIC SUBSTANCES IN TURBULENT DIFFUSION COMBUSTION GAS**
18. V.S. KORNIENKO (Kherson). **RESEARCH OF SMALL PRODUCTIVITY ROTARY INJECTORS WORK**
19. A.A. BOLOHOVETS, A.A. PAVLENKO (Kharkov). **THE INFLUENCE OF WARMING IMPACT ON FUEL CHARGE MASS**
20. Y.A. BANDURKO, S.B. REZNIK (Zaporozhye). **EXPERIMENTAL-ANALYTICAL EVALUATION OF THE EFFECTIVENESS OF DIFFERENT TYPES OF LABYRINTH SEALS**
21. A.S. VINOGRADOV, I.D. SHPAKOV, Y.S. GORYACHKIN (Samara). **ANALYSIS OF RADIAL FACE CONTACT SEAL EFFICIENCY IN THE SUPPORT OF THE AIRCRAFT ENGINE COMPRESSOR AT VARIOUS OPERATIONAL MODES**
22. A.S. VINOGRADOV, R.R. BADYKOV, A.V. MIRONOV (Samara). **CREATING OF METHOD FOR SUPPORT SEAL AIRCRAFT ENGINE DESIGN WITH THE PARAMETERS OF OIL SYSTEM**
23. A.Yu. TISAREV, N.M. VASILEVICH (Samara). **INVESTIGATION OF LABIRINT SEALS PERFORMANCES WITH DEFORMATIONS OF SEALING SURFACES**
24. A.Yu. TISAREV, N.M. VASILEVICH (Samara). **STUDY OF THE TURBINE RIM SEAL LEAKAGE**
25. D.K. NOVIKOV, D.S. DILIGENSKIY (Samara). **DEVELOPMENT OF MODEL OF SQUEEZE-FILM DAMPER WITH METERING GROOVES**
26. D.K. NOVIKOV, G.M. ERMOLAEV (Samara). **MODELLING OF THE SQUEEZED FILM DAMPER IN A FLUENT**
27. V.A.SAFONOV, PN KUZNETSOV, IL BELETSKY (Sevastopol). **EXPERIMENTAL STUDY OF WORKING PROCESS THERMOMECHANICAL ENGINE.**

September 18

Morning Meeting of Section

AUTOMATIC CONTROL SYSTEMS AND DIAGNOSTICS

September 18, 9⁰⁰ – 13⁰⁰

Chairmen: **V.F. Mirgorod, Dr. Eng.** (JSC “Element”, Odessa);

V.V. Panin, Dr. Eng. (NAU, Kiev);

A.N. Reva, Dr. Eng. (KNTU, Kirovograd)

Secretary: **L.L. Yatsko, Ph.D.** (JSC «STC «Electronpylad», Kiev)

1. **A.N. REVA, I.M. USTIMENKO, V.N. KOLTAKOV** (Kirovograd, Krasnoyarsk). **EFFICIENCY OF THE ORGANIZATION COMMUNICATIONS IN A SYSTEM OF AERONAVIGATION SERVICE OF FLIGHTS (ON THE EXAMPLE OF KRASNOYARSK AIR TRAFFIC SERVICE CENTER)**
2. **A.N. REVA, S.P. BORSUK** (Kirovograd, Kyev) **FUZZY MODEL OF AIR TRAFFIC CONTROLLERS ATTITUDE TO THE RISK OF POTENTIAL CONFLICTS SITUATION APPEARANCE**
3. **A.N. REVA, B.M. MIRZAYEV, P.Sh. MUKHTAROV, Sh.Sh. NASIROV** (Kirovograd, Baku). **LEVEL OF CLAIMS OF AIR TRAFFIC CONTROLLERS FOR RESULTS OF WORKING LOAD**
4. **V.A. SHULGIN** (Kirovograd). **INDISTINCT MEASURE OF INSTRUCTORS DISCERNMENT OF THE PILOTS PROFESSIONAL PREPAREDNESS APPRAISAL LEVEL**
5. **L.V. KAPITANOVA** (Kharkov). **MAIN PARAMETERS INFLUENCE ON DECISION SPEED DURING TAKEOFF OF MODIFIED AIRPLANE**
6. **V.V. LYUBCHENKO** (Kiev). **PROCESSING OF INFORMATION MANAGEMENT SYSTEM INDUSTRIES**
7. **O.V. KHOMIAK** (Kiev). **ASSESSMENT OF LOSS IN RADIO PROPAGATION MODEL FOR POINT-TO-POINT FOR REFLECTION FROM LOCAL ITEMS**
8. **B. DAVIDENKO** (Kharkov). **INFORMATION TECHNOLOGY OF SUPPORT OF DECISION-MAKING ON POPULATION EVACUATION FROM THE ZONE OF EMERGENCY SITUATIONS OF ANTHROPOGENIC CHARACTE**

9. **B. DAVIDENKO (Kharkov). METHOD OF COMPUTER MONITORING OF THE ZONE OF CHEMICAL POLLUTION IN CASE OF EMERGENCY EMISSIONS OF POISONING CHEMICALS IN THE ATMOSPHERE**
10. **M.V. POTAPOVA (Kharkov). BUSINESS PROCESS MANAGEMENT METHODS IN SOFTWARE FIRM ON THE BASIS OF UNDERDETERMINED PRINCIPLE**
11. **M.V. POTAPOVA (Kharkov). INFORMATION TECHNOLOGY OF SCHEDULING IN CASE OF PORTFOLIO MANAGEMENT OF ORDERS OF THE IT COMPANY IN THE CONDITIONS OF UNCERTAINTY**

Morning Meeting of Section

TECHNOLOGY

September, 18, 9⁰⁰ – 13⁰⁰

Chairmen: L.P. Klymenko, Dr. Eng. (ChSU, Nikolayev);

V.F. Sorokin, Dr. Eng. (KhAI, Kharkov)

Secretary: V.V. Kombarov (“KhAI”, Kharkov)

1. **N.E. KALININA, A.E. KALINOVSKAIA, V.T. KALININ (Dnepropetrovsk). MATERIAL SCIENCE ASPECTS OF NANOMODIFICATION MULTICOMPONENT NICKEL ALLOYS**
2. **L. KLYMENKO, V. ANDREEV, L. DYKHTA, O. PRYSHCHEPOV (Nikolayev). THERMO-INSULATION COVERAGES OF WORKING SURFACE OF POROUS CASTING FORMS ARE FOR CASTING OF SHELLS OF CYLINDERS OF ENGINES**
3. **Ya.S. ZHOVNOVATYUK, M.K. KNYAZEVA (Kharkov). INVESTIGATION OF SHEET BLANK LOADING AT UNDERWATER DISCHARGE OF WIRE ARRAY**
4. **M.K. KNYAZEVA Ya.S. ZHOVNOVATYUK (Kharkov). INVESTIGATION OF UNIFORMITY AND REPEATABILITY OF PRESSURE FIELDS AT DISCHARGES INITIATED BY WIRE ARRAYS**
5. **A.V. ONOPCHENKO, V.V. TRETYAK, N.I. CIVINDA, I.V. SKORCHENKO (Kharkov, Krivoy Rog). CALCULATION OF PARAMETERS OF PULSED DEFORMATION VOLUME PARTS WITH THE USE OF SPRUT TECHNOLOGIES**
6. **N.F. SAVCHENKO, N.N. JORAEVA (Kharkov). BY THE ESTIMATE OF THE COEFFICIENT OF METAL USE IN THE MANUFACTURE OF LARGE-SIZED PRODUCTS STAMPING TECHNIQUES**

7. A.A. BYBIN, R.R. NEVYANTSEVA, A.M. SMYSLOV, O.G. SMOLNIKOVA (Ufa). **OPTIMIZATION OF THE CHEMICAL ETCHING PROCESS PROTECTIVE COATINGS FOR GENERALIZED CRITERIA**
8. Yu.A. ZHULAY, V.Yu. SKOSAR (Dnepropetrovsk). **HYDRODYNAMIC CAVITATION AS A TOOL TO INTENSIFY PRODUCTION PROCESSES. EXPERIENCE OF USAGE AND PROSPECTS (REVIEW)**
9. T.P. NABOKINA, O.V. GAYDACHUK, O.M. GRUSHENKO (Kharkov). **PIDVISCHENNYA EFEKTIVNOSTI PURIFIED TEHNOLOGICHNOGO OBLADNANNYA TERMOGAZODINAMICHNIM METHOD FOR BLADES VIROBNITSTVI GTD**
10. M.A. SUVOROV, V.V. TRETYAK, V.D. SOTNIKOV, S.V. HUDYAKOV (Kharkov). **AUTOMATION OF DESIGN PROCESS OF AIRCRAFT ENGINE PARTS IN THE "VERTICAL"**
11. V.V. TRETYAK, N.S. MATUSEVICH, Yu.A. NEVESHKIN, A.V. ONOPCHENKO, M.A. GOLOVANова (Kharkov). **DEVELOPMENT OF INFORMATION AND MATHEMATICAL MODEL FOR CALCULATING THE ECONOMIC EFFICIENCY CAD PULSED PROCESSES**
12. V.V. TRETYAK, N.S. MATUSEVICH, A.V. ONOPCHENKO, I.V. SKORCHENKO, T.G. ZEYNIEV (Kharkov). **DEVELOPMENT AND USE OF THE CURRICULUM OF SYNTHESIS OF TECHNICAL SOLUTIONS FOR DESIGN AIRCRAFT**
13. Yu.A. NEVESHKIN, M. CHEHRESAZ, V.V. TRETYAK, A.V. ONOPCHENKO (Kharkov). **OPTIMIZATION TECHNOLOGY MANUFACTURING DETAIL TYPE COUPLING HALF USING A SOFTWARE PACKAGE DEFORM**
14. M. CHEHRESAZ (Kharkov). **FEATURES OF BITANGETIAL TREATMENT OF DIFFICULT SURFACES OF DETAIL OF AVIATION ENGINE WITH THE USE OF SOFTWARE TOPSOLID**
15. V.S. GUSAREV, Yu.V. YUAROVOY (Odessa). **EXPERIMENTAL STUDY OF DEPENDENCE OF TECHNOLOGICAL SYSTEM ACTION OF FORM-BUILDING MODES**
16. V.A. DEMYANENKO (Kharkov). **THE KNOWLEDGE-ORIENTED METHOD OF SUPPORT OF DECISION-MAKING BY TECHNOLOGICAL PREPARATION OF PRODUCTION OF CONSUMER GOODS AT MACHINE-BUILDING ENTERPRISE**
17. V.A. DEMYANENKO (Kharkov). **INFORMATION SUPPORT OF PRODUCTION OF CONSUMER GOODS AT MULTIPRODUCT MACHINE-BUILDING ENTERPRISE**

18. R.Kh. MAKAYEVA, A.Kh. KARIMOV, A.M. TZAREVA (Kazan). **APPLICATION OF HOLOGRAPHIC INTERFEROMETRY FOR THE TESTING OF QUALITY OF THE SOLDERED AND WELDED JOINT**

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19. L. KORNILOV, V. VORONKO, Yu. VOROBYOV (Kharkiv), D. BERND (Magdeburg). **SYSTEMATIC APPROACH TO THE FORMALIZATION OF THE AUTOMATED PROCESS ENGINEERING IN ASSEMBLING**
20. N. NECHYPORUK, Yu. VOROBYOV, V. VORONKO (Kharkiv). **PROGRAM-INSTRUMENTAL METHOD OF THE AIRCRAFT ASSEMBLY USING RECONFIGURABLE CNC ASSEMBLY JIG**
21. Yu. VOROBYOV, I. VORONKO (Kharkiv). **TECHNOLOGY RESEARCH IMPULSE HARDENING BURNISHING HOLES IN AVIATION PRODUCTS OF TITANIUM ALLOYS RESEARCH ON IMPULSE HOLES BURNISHING OF TITANIUM AIRCRAFT STRUCTURES**
22. N. NECHYPORUK, Yu. VOROBYOV, I. DASHEVSKAYA (Kharkiv), D. BERND (Magdeburg). **REVIEW OF RESEARCHES IN THE FIELD OF MORPHING AIRCRAFT**

PLENARY MEETING

September 18, 18⁰⁰ – 19⁰⁰

- 1. Information of Sections Chairmen on the work results.**
- 2. Consideration of work results of the XVIII-th International Congress of Propulsion Engineering.**
- 3. Approval of the Congress decision.**

**Close
of the XVIII-th International Congress of Propulsion Engineering**