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26TH SCIENTIFIC-TECHNICAL MEETING "HIPNEF '98"

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Mechanical and Electrotechnical Engineers and Technicians Society of Serbia (SMEITS)
Belgrade

Engineering and technical society of Serbia in Belgrade was cite where the 26th scientific-technical meeting "HIPNEF '98" was held, on October 28-30, 1998. The Ministry of science and technology of Serbia was a patron, while the sponsorship of the meeting was given by companies "eXpert" - Požarevac and "Vedus" - Sombor. The meeting organizer was Mechanical and Electrotechnical engineers and technicians Society of Serbia (SMEITS). This traditional meeting cover the areas of oil hydraulics, informatics, pneumatics, new technologies, electrotechnics, electronics and fluids.

The recognized experts have presented their papers which cover the theory, research, development and applications in the areas mentioned above. The papers were presented plenary. Total of 44 papers were presented which mostly present the state of the art in the scientific and technical areas covered by "HIPNEF". All the papers are printed in one volume proceedings which are distributed to the participants.

Three invited lectures were given by the eminent scientists. The following areas were treated:

- hydromechanical hereditary systems modelling (*Katica (Stevanović) Hedrih*)
- active systems in engineering (*academician Miomir Vukobratović*) and
- quality and quality systems (*Vidosav Majstorović* and *Milan Rakić*).

All three invited lectures were followed by great interest and discussion took place after.

The papers in the area of OIL HYDRAULICS covered the different problems such as the control of operating modes of fan by means of hydrodynamic junction, the running time calculation of hydrodynamic junction driven by electric motor, hydraulic presses and their improvement, the universal spreader electrohydraulic system, the control of hydrodynamical power transmission, the control of load limits and the development of hydrostatic traction drives for wheeled machines.

The papers in the area of PNEUMATICS treated the pneumatic control of sciotic

board, electropneumatic pressure controller, the mathematical modelling of pressure controller, the special purpose pneumatic valves, two-hand safety press activation and its problems, intelligent robot control and the diagnostics of pneumatic systems.

Just one paper was presented in the area of INFORMATICS, which covered the Internet accessible data bases on electro, pneumo and hydraulic systems.

In the area of NEW TECHNOLOGIES the problem of laser cutting machines was treated out.

A novel rotary acceleration sensor was presented in the area of ELECTRONICS, as well as the solution of the intelligent positioner.

In the FLUID session, the problems of boundary layer theory were presented, pump cavitation as well as the wave propagation in two-phase flow.

The AUTOMATIC CONTROL papers cover the problems such as zeolite drying process dynamics (three papers), the finite-time stability of linear singular systems and the finite-time stability of discrete linear syngular systems by Bellman-Gronval approach, the dynamics of complex mills, the mathematical modelling of mill's plant and finite-time stability of time-delay systems.

A few papers were categorized into a SPECIAL session. The main issues are the new trends in hydraulic system development, the hydraulic system maintenance, the control system reconstruction for gas boilers, the problems and the solutions to the isostatic presses, the new materials and new technologies in hydraulics and pneumatics.

A session chairmen were the eminent professors in its areas, coming from the Mechanical engineering faculties in Yugoslavia. Due to this fact, both the papers and the corresponding discussion on were very qualitative and significant.