

R E V I E W S

DESIGNING A BETTER WORLD WITH THE JOURNAL OF OCCUPATIONAL SAFETY AND ERGONOMICS

The first issue of the Journal of Occupational Safety and Ergonomics has found its way into readers' hands. Journal is edited in the Central Institute for Labor Protection in Warsaw. It is the first international journal issued in Eastern and Central Europe dealing chiefly with safety and ergonomics.

This event seems to be of great significance for Polish and not only Polish society of scientists and practitioners who are involved into occupational safety problems. Ergonomics and occupational safety is the basis for prevention of accidents and work-related health problems. Both disciplines integrate various fields of natural, technical and social sciences. Both are interested in the design of human hardware systems that are productive, efficient and safe. They are concerned with improving both the design of machines, vehicles and tools, as well as the design of work methods and work environment in general. They are designing our world to be better, more comfortable, familiar and safer.

The modern world is in permanent process of changing. The introduction and spread of new techniques in many industrial sectors has set in motion far-reaching transformation processes in all industrialized countries. It is no doubt that recent breakthroughs in the development of new materials and the rapid development of new technology in the computer and telecommunications industries will fundamentally alter the character of work in offices and factories during this decade. In general, we have entered a true information age and age of automation that would profoundly affect work organization and related human machine interfaces.

Industry in particular countries is being progressively forced to compete with high quality product from other industrialized countries of the world. Considering this increasingly competitive world market, the future survival of any large company will depend upon efficiency of operation and state-of-the art high quality products. Most likely, the primary difference between successful and unsuccessful competitors will be the quality of ergonomic and safety design. And these elements are likely to be interrelated.

Industrial safety survey indicates a growing concern over the incidence of ergonomic injuries. Ergonomics is fast becoming today's hottest issue in workplace safety, especially in the field of cumulative trauma disorders (CTDs). Sparked by the rise in lost workdays from CTDs, ergonomists seek ways to prevent these disabling "new age" illnesses, which include carpal tunnel syndrome, nerve entrapment, bursitis, back problems and tendon disorders. CTD-related illnesses mainly result from activities involving repetitive motion and cramped posture. Since they affect workers' health and reduce productivity, their prevention is receiving priority from management and safety professionals across industries.

Completely new systemic concepts of accident prevention and occupational health prophylaxis have emerged recently. Loss control has become partly syno-

nymous with safety management. Loss control monitors, the flow of money and safety management helps to reduce losses. Strategies for safety in the past have been mostly concentrated on risk awareness, individual motivation and instruction of users. Now we try to input safety in design process, trying to foresee the behavior of real and potential users.

It seems that the enlightened management and empowered workers are our best hope for achieving safe and healthy working conditions. Total Quality Management (TQM) and similar systems have gained great popularity throughout the modern industry. The goal of continuous improvement of industry through managing statistical process control, focusing on customers and empowering workers is the subject of conferences, and publications in scientific magazines. Respect for people, empowering each individual, continuous improvement, the quest for knowledge and balance, team work, and complexity are essential in the "quality" philosophy. Implementing the philosophy of quality requires the practice of prevention — the bottom line of occupational safety and health. Organizational design and management (ODAM) is now formally recognized focus of ergonomics. Those ideas must be verified, discussed and distributed as widely as possible.

The fax unwinds. The modem beeps. The courier jet takes off. The world shrinks. A decade ago distance and time would have been the biggest barriers among the countries. Now the unprecedented advance of technology has made it easy to overcome the distances in space. With distances made less significant, the greater problem is more likely to be the distance in peoples' conscious from country to country. Without overcoming those distances some countries will be only the spectators in our global village. There is no doubt that it was the urgent need for information exchange that contributed to the establishment of the International Journal of Occupational Safety and Ergonomics in Poland. Knowledge about work environment and humanity is an essential part of the process of integration in politics, economy and commerce. Poland should cope with the necessity of global reform of the economic system. In recent years the structure of ownership in Poland have undergone radical changes. The necessity to establish economic mechanisms that would compel business to begin observing requirements of industrial safety should be obvious to everyone.

There is no doubt that the application of ergonomics and safety is still understood and realized in practice in fundamentally different way in highly industrialized countries and in Central and Eastern Europe. The idea of the Journal was born in June 1993 at the Central Institute for Labour Protection. At that time Warsaw was hosting a World Conference of the International Ergonomics Association. The IEA Conference on Materials Handling and Information Processing at Work brought together scientists and practitioners from all over the world.

The idea of the Journal that would join continents and be the bridge between countries in rapid transformation process was supported by Prof. Hal Hendrick, President of the IEA, Prof. Gavriel Salvendy and Prof. Waldemar Karwowski, Co-Chairman of the Conference who immediately became involved in the project. Support also came from the International Labour Office in Geneva and especially from Dr Jukka Tukkala, Head of the International Occupational Safety and Health Information Center. In Poland, the climate for this ambitious venture was particularly favorable thanks to the open-minded policy of the Polish State Research



Committee and its former Chairman, Prof. Witold Karczewski. Spontaneous interest was expressed also by scientists from Central and East Europe as well as those from the former Soviet Union.

The Chief Editor of the JOSE is Prof. Danuta Koradecka, Director of the Central Institute of Labour Protection in Warsaw. The Institute is mandated with the studies of psychophysiological capacities of man in the working environment and research of work-related health and safety factors. The Institute is responsible for testing and approval of all protective equipment manufactured in, and imported to Poland. It serves also as the National Center for Standardization in the field of occupational health, safety and ergonomics. As a Polish partner in the CIS-ILO network, the Institute also serves as the National Information Center. It cooperates with ILO, EEC and many research institutes in the world.

The chances for the success of the Journal are greatly enhanced by the collaboration of prominent scientists from all over the world, who agreed to lead the Journal. The Co-Editor of the Journal is Prof. Waldemar Karwowski, the Director of the Center for Industrial Ergonomics and Associate Professor of Industrial Engineering at the University of Louisville. He is Founder and General Chairman of the biannual International Conference on Human Aspects of Advanced Manufacturing and Hybrid Automation. Prof. W. Karwowski is an editor of the International Journal of Human Factors in Manufacturing. He also serves as editor of the Rapid Communications – section of "Ergonomics" journal. The second Co-Editor is Dr Jukka Takkala, Head of the International Occupational Safety and Health Information Center, CIS of the International Labour Office in Geneva. He is the Editor-in-Chief of the Safety and Health at Work-ILO/CIS Bulletin, and CISDOC on-line and CD-ROM data bases available worldwide. These people will provide to the Journal their rich experience and encouragement.

The International Editorial Board comprises several dozen scholars from Europe and America, including a number of Polish specialists. Those include such names as Dr Gavriel Salvendy, the NEC Professor of Industrial Engineering at the Prude University, USA (he also is a founding editor of the IJHCI), Biman Das from the Technical University of Nova Scotia (Canada), Prof. Antonio Grieco from the University of Milan (Italy), Prof. Janusz Indulski, Director of the Nofer Institute of Occupational Medicine in Lodz, Poland, the Editor of the International Journal of Occupational Medicine and Environmental Health, Prof. Markku Mattila from the Tampere University of Technology (Finland) or Prof. Houshang Shahnavaz from the Lulea University of Technology (Sweden) and many other well known scientists and practitioners from all over the world.

The scope of the Journal is very wide and includes: technical testing and certification, computer modelling, human factors in advanced technology, biomechanics, machine safety, mechanical hazards, risk assessment, acoustics, ergonomics, physiology, occupational medicine and psychological and sociological aspects of work-related human behaviour, dissemination of information and education. JOSE welcomes research papers, application studies, and state-of-the-art articles that expand our understanding and lead to new approaches to improving both the physical aspects and the human interactions of the working environment.

The promise of Editors that they do not overlook valuable potential contributors that originate in non-English speaking countries where linguistic expertise

might not be really available is of great practical value to Polish authors. The Journal is eager to ensure that language problems do not constitute an additional barrier when such important issues are at stake.

The first issue of JOSE presents a wide spectrum of safety problems. Contents includes articles on: work content and eye discomfort in VDT work, protection from dust review of the mechanism of action of fibrous filters and performance of respirators, health effects of job control in computerized office, repetitive strain in work, important aspects of micropore mufflers noise reduction and flow, predictive model on back problems resulting from the compression forces on the intervertebral disks during manual material handling tasks, the study describing musculoskeletal symptoms in electrical industries, using questionnaires.

The issue includes also Book Reviews, presentation of International Editorial Board, Coming International Events and Call for Papers.

JOSE is recognized by the International Ergonomics Association and by the International Labour Organization. The quarterly is published in the USA by Ablex Publishing Corporation in Norwood, New Jersey and is sponsored partially by the Polish State Research Committee. The editorial standard of the Journal is good. The only slight criticism refers to the quality of photographs in the first issue, which were not sufficiently sharp.

It is somewhat surprising, however, that there is no consistency in the names of the institutions with which the members of the Journal's Editorial Board are associated; some of the names are quoted in English, some others in Polish. It seems that the Polish names are not sufficiently informative for the international reader of the Journal and, therefore, all names should be given in English.

The progress in ergonomics and safety depends on the advancement of broad interdisciplinary research focused on human abilities and environment. Exchange of information is the most important factor in the process of permanent transformation and improvement. This enables selection of the best of all possible solutions.

The time and place for editing the new Journal, as well as the capacities of its editorial staff are excellent. We wish the new Journal all the best and hope that in short time this will become an important component in the international process of Designing a Better World.

Krzysztof Swat, Ph. D.

Department of Physiology and Ergonomics
The Nofer Institute of Occupational Medicine in Lodz, Poland

