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E.V. BRUMA

**MULTILEVEL SCALE OF THE FIRE SAFETY INDICATORS**

**OF THE URBANIZED LAND**

*The estimation of the fire safety level of buildings and structures of different functional purposes by the di-mensionless complex index with the possibility of visiting and staying in them people belonging to the handicapped group is stated in the paper.*

***Keywords:*** *multilevel scale of the fire safety indicators, handicapped groups of people, availability, regula-tory requirements, weight coefficients, expert approach, biospheric compatibility.*

T.N. KOLESNIKOVA, O.A. ZAKHAROVA

**RENOVATION PRINCIPLES OF VALUABLE HISTORICAL-ARCHITECTURAL CITY OBJECTS, DEVELOPING HUMAN BEING**

*The problems of conservation and use of valuable historical-architectural objects, allowing the city to per-form its functions and develop a human being are considered in the paper. The main principles of renovation are stated as well. A special attention is paid to their ecological aspect.*

***Keywords:*** *culture, city, renovation, reconstruction, cultural heritage, monuments, architectural space, ecology.*

V.M. NEDELIN

**A BRIEF SKETCH OF THE PROBLEMS OF BIOSPHERIC COMPATIBILITY ON THE TERRITORY OF VERHNEE POOCHYE (MODERN ORYOL REGION) IN THE HISTORICAL RETROSPECTIVE REVIEW (XII – XIX CENTURIES)**

*The analysis of some features of the Russian town-planning of the XVI-XVIII centuries from the perspective of the concept of biospherecompatible cities and settlements is stated in the historical retrospective. It is shown that in the twentieth century man has managed to cause much more damage to nature than in the previous centuries, eventually creating an environment dangerous for his own accommodation.*

***Keywords:*** *Russian town-planning, biospherecompatible cities and settlements*

N.V. BAKAYEVA, I.V. SHISHKINA, D.V. MATYUSHIN

**PROPOSALS TO THE ECOLOGICAL RECONSTRUCTION OF THE OBJECTS OF MOTOR TRANSPORT INFRASTRUCTURE OF MUNICIPAL ENGINEERING**

*A new classification of the objects of motor transport infrastructure of municipal engineering based on the biospheric compatibility index, which can be the basis for the development of recommendations for ecological re-construction is considered. The principles of ecological reconstruction of the objects of motor transport infrastruc-ture of municipal engineering are stated. The specific design solutions of the ecological reconstruction of the road network of Oryol town, aiming at reducing the harmful effects of motor transport through the implementation of en-vironmental protection measures and the introduction of biosphere compatible technologies on the objects of motor transport infrastructure are developed.*

***Keywords:*** *motor transport infrastructure, biosphere compatibility, criterion of environmental safety, envi-ronmental safety class, ecological reconstruction*

E.A. FEDORINOVA

**DESIGN AND QUALITY OF LIFE**

*Such main issues as the conditions of human life as constituent concepts of life quality, the problems of mod-ern cities and ways of their solutions, a definition of the noosphere - as a rationally organized interaction between society and nature and the importance of design in human life are stated in the paper.*

***Keywords:*** *quality of life, harmonious noosphere, social quality circulation, spiritual society, considered de-sign*

B.I. KOVALEV

**MONITORING OF THE CONDITION OF URBAN FOREST ECOSYSTEMS**

*The concept, goals, objectives, obtained results of the forests monitoring and the purpose-oriented programs for its implementation are stated. The modifying factors, determining the condition of forest and plant ecosystems of urbanized territories and their characteristic according to the selected monitoring objects are stated. The descrip-tion of the basic components in the monitoring system, including information-analytical system, early diagnostics of the ecological violations and control stations is given. The minimal necessary level of information collected at the control stations for various monitoring objects is determined.*

***Keywords:*** *monitoring, ecosystem, urbanization, modifying factors.*

O.A. POSTNIKOVA, N.P. LUKUTSOVA, A.A. MATSAYENKO, D.A. KIRIYENKOV

**TECHNO-ECOLOGICAL FOUNDATION OF USING RAW MATERIALS FOR THE PRODUCTION OF FINE GRAINED CONCRETE, MODIFIED BY NANODISPERSED TITANIUM DIOXIDE**

*The possibility of using glauconitic sand for the production of fine grained concrete, modified by the nanodispersed titanium dioxide additive, obtained by the sonochemical method is considered in the paper. The in-vestigation results of the properties of glauconitic sand and fine grained concrete on its basis are stated. The prom-ising directions of the scientific research include ecological efficiency of using technogenic sands as a means of their utilization.*

***Keywords:*** *glauconitic sand, fine grained concrete, nanoadditive, titanium dioxide, hardened cement paste, environmental safety.*

I.A. KUZOVLEVA, T.P. BLAGODER, O.M. POZHELENKOVA

**INNOVATIVE DEVELOPMENT OF THE INVESTMENT AND CONSTRUCTION COMPLEX OF THE BRYANSK REGION IN TERMS OF THE BIOSPHERIC COM-PATIBILITY OF CITIES AND SETTLEMENTS ON THE BASIS OF CLUSTER AP-PROACH**

*The results of the analysis of foreign and domestic experience on creating clusters and the peculiarities of the investment and construction clusters are stated in the paper.*

***Keywords:*** *cluster, competitiveness, innovative development, investment and construction complex, biosphere compatibility of cities and settlements.*

D.V. AZAROV, D.P. BOROVKOV

**ABOUT THE OPTIMIZATION OF SWIRL PARAMETERS IN THE DUST COLLEC-TORS VZP**

*The results of theoretical and experimental studies of the capture efficiency of the dust collector on the coun-ter swirling flows are stated in the paper. The optimal parameter values of the upper entry flow swirling intensity of dust collector VZP are estimated.*

***Keywords:*** *dust collector, counter swirling flows, dust collection efficiency, aerodynamic drag.*

G.V. LEVKIVA, O.V. LAPSKAYA

**ACOUSTIC POLLUTION OF THE URBAN TERRITORIES ON THE EXAMPLE OF VOLODARSKIY DISTRICT OF BRYANSK TOWN**

*The analyses of the acoustic pollution of industrial and municipal facilities of the Volodarskiy district of the town Bryansk, as well as the estimation of motor transport overloading are given in the paper. Measures on noise reduction on the industrial territories are offered.*

***Keywords:*** *acoustic pollution, noise level, urban territories, motor transport overloading.*

V.I. PARKHOMENKO, N.F. PISKUNOV

**TO THE QUESTION OF RADIATION SAFETY OF TOWNS AND SETTLEMENTS ON THE EXAMPLE OF THE BRYANSK REGION**

*The radiation situation of towns and settlements on the territory of Bryansk region and the dynamics of changes in the structure of annual effective radiation dose of the population over the period of 2010-2012 and the distribution of the effective specific activity of the natural radionuclides in the construction materials and the con-centration of the radon descendants in the air of the buildings are stated in the paper.*

***Keywords:*** *effective radiation dose, radionuclides, radiation safety of the population*

A.V. GORODKOV, S.A. VOROBYEV, N.A. KARPESHINA

**SOME ASPECTS OF DEVELOPMENT OF URBANIZED TERRITORIES**

**ON THE BASIS OF BIOTECHNOSPHERE HOMEOSTASIS BALANCE**

*The aim of the research is the estimation of the urban environment quality by such bioindication methods as calculating coefficient of the fluctuating asymmetry on the example of similar in their town-planning parameters sites of Oryol town. In all studied sites motor transport was chosen as the main source of contamination.*

*It was recommended to continue researches concerning designated problem in Bryansk, having significant ecological and town-planning differences from the Oryol town.*

***Keywords:*** *biosphere compatibility, urbanized areas, biotechnosphere homeostasis balance, biospheric com-patibility indicator, bioindication methods, coefficient of fluctuating asymmetry, motor vehicles transport, environ-ment regulating parameters.*

N.P. SADOVNIKOVA, B.K. SANZHAPOV, D.S. PARYGIN, E.P. GNEDKOVA

**PARTICIPATIVE MANAGEMENT OF CITY DEVELOPMENT. IMPLEMENTATION MECHANISMS ON THE BASIS OF INFORMATION TECHNOLOGIES**

*The issues of creating participative city management tools based on the information and telecommunication technologies and the proposed approaches to the solution of the problem of identifying the residents’ preferences and the organization of interaction between government and urban communities are considered in the paper.*

***Keywords:*** *management of city development, participative management, information and communication systems*