



Scientific and technical journal.
The journal is published since 2013.
The journal is published 4 times a year.

№1(13), 2016
(January-March)

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Journal is registered in Russian federal service for monitoring communications, information technology and mass communications

The certificate of registration: ПИ № ФС77-56639

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BIOSPHERE COMPATIBILITY: HUMAN, REGION, TECHNOLOGIES

The founders

- Federal state budget educational institution of higher education «Southwest State University»
- Federal state budget educational institution of higher education «Priokskiy State University»
- Federal state budget educational institution of higher education «Bryansk state engineering and technological university»
- Research institution of construction physics under the Russian academy of architecture and construction sciences
- Federal state budget educational institution of higher education «Moscow State University of Civil Engineering»
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S.Y. KALASHNIKOV, J.S. KALASHNIKOVA

FEATURES IDENTIFICATION OF THE CONCEPT OF «QUALITY OF LIFE» RESIDENTS OF URBAN LINEAR FORMATIONS

Discusses the concept of "quality of life" from the perspective of residents living in urban linear formations and using the elements of the urban transport infrastructure. Analyze the possibility of creating comfortable living conditions on the basis of comparative assessments of the urban population quality of life. The content of the concept of linear single-building entities. The urgency and at the same time the linear complexity of resettlement. The results of the study will be useful for solving applied problems in urban design.

Key words: quality of life, urban education, transport, comfort-ability, safety, the concept of the linear city.

A.V. MAYAKOVA

THE APPLICATION OF QUALITY IN ARCHITECTURAL AND CONSTRUCTION ECOLOGY

This scientific article considers interdisciplinary category of «quality» in applied social value of quality of life. Quality of life is presented in the form of a comprehensive assessment of the level of human life and society. The author focuses on the impact of architectural environment on quality of life. The author substantiates the thesis about the interaction of quality of life and architectural environment through structurization integrated indicator of an estimation of quality of life: social and environmental security. According to the author of the article the architectural-building ecology is an element of the indicator «ecological safety».

Key words: quality, quality of life, architectural ecology, quality, grade, biodegradable object, interdisciplinary.

O.V. PILIPENKO, E.A. SKOBELEVA

DETERMINATION OF THERMAL COMFORT CRITERIA PERSON AS INDICATORS OF ENVIRONMENTAL SAFETY OF OPEN URBAN SPACES

The paper analyzes the approaches to determining the extent of human thermal comfort in urban open spaces. It is shown that for the assessment of urban microclimate appropriate to apply adapted bioclimatic indices in conjunction with the criteria that restrict their ranges of acceptable values. One of the most revealing of bioclimatic indices is physiologically equivalent temperature (PET) ranges of levels of heat stress for which will be determined in accordance with the index projected average assessment of air quality PMV (Predicted Mean Vote). The PMV values determined by the votes in some geographic areas and require clarification in the case of their application to other regions. As a methodological basis of the calculation criteria of thermal comfort are encouraged to use the results of the bioclimatic assessment on-site climatic-physiological basis for air temperature, total cloud cover and wind speed [1]. This approach allowed us to determine the range of values of RET, corresponding to the complex of climatic parameters, comfortable to stay open urban spaces in terms of Central Russia.

Key words: thermal comfort, environmental safety, climate change, bioclimatic index, urban open space.

A.V. KHOLOPTSEV, M.P. NIKIFOROVA

VARIATIONS OF SOLAR ACTIVITY AND OZONOSPHERES STATE, AS A FACTORS OF GLOBAL DIMMING

The segments of the Earth's atmosphere's locations, in which important factors of interannual and seasonal variations of the optical density of clouds contained therein, as well as "dimming" of atmosphere in a month, are changes of total ozone and the Wolf numbers, is determined. The adequacy of the hypothesis, that changing of the ozone layer and solar activity is a significant factors of "global dimming", is confirmed.

Key words: global dimming, the optical density of the cloud, solar activity, the total ozone.

A.V. GORODKOV, N.A. SAMOKHOVA

THE TOWN-PLANNING ASPECTS OF ESTIMATING AND IMPROVING THE LEVEL OF ECOLOGICAL SAFETY IN RECREATIONAL AREAS OF LARGE CITIES

This article reads the problem of air pool pollution by harmful transport emissions in recreation areas of a large city. We conducted complex natural and experimental researches of spreading major pollutants in the air, such as nitrogen dioxide. There were several constructive options of green spaces zones offered in order to achieve the most effective degree of environmental protection.

Key words: recreation facilities, air, harmful vehicle exhaust, the concentration of pollutants, nitrogen dioxide, the method of bioindication, fluctuating asymmetry, environmental green spaces.

V.M. UDOD, H.G. ZHUKOVA

STUDY THE OF BIOTIC REGULATION OF AQUATIC ECOSYSTEM KALMIUS RIVER UNDER CONSTANT ANTHROPOGENIC LOAD ON THEM

The article presents evidence of qualitative depletion of aquatic ecosystems (GE) R. Kalmius. It is established that under the conditions of constant action of specialized modifying factors take place impaired biotic regulation of GE, which is determined by using the integrated environmental biocenotic method of control. The method allows the identification of trophic disorders, self-regulatory and other violations.

Key words: accordingly, specialized modified factors, technosphere, hydrobiocenose, biotic regulation, biocenotic methods.

A.M. GREBENKIN, E.V. GREBENKINA, I.L. SHUBIN

THE MORPHOLOGY OF NOISE BARRIERS AND ITS INFLUENCE ON THE INTEGRATION INTO THE URBAN ENVIRONMENT

The article points the questions of forming stages of the noise barriers and its morphology. The classification of the barriers forming and structuring is given in the article. The classification is based on the analysis of the present experience of the designing. The forming elements of the barriers and its role in the process of the integration with the environment were discovered. The foundation of the dependence of the scale of integration of the noise barriers on the morphology is determined, that essentially enable to optimize the process of its integration into the urban environment.

Key words: noise barriers morphology, noise isolation, urban environment, natural landscape, barrier, integration.

N.S. ZHUKOVA, M. OSTAALI, D.S. KHEGAI

ABOUT FRACTIONAL BREAKTHROUGH DUST FOR EMISSIONS TO ATMOSPHERE AFTER A CYCLONE

The article investigates the fractional coefficient breakthrough. This article describes the approaches to assess the fractional efficiency dust collection equipment. The paper presents the formula to calculate the fractional coefficient breakthrough, ways of constructing a function of fractional breakthrough way geometric differentiation, secondary integrated characteristics and the method of smoothing integral functions with the requirement of no more than one point of inflection. The article shows the dependence of the fractional slip particle diameter of the cyclone and CCN-40 findings dust particulate composition before and after the cyclone CCN-40.

Key words: fractional coefficient breakthrough, dust, dust emissions, a cyclone dust collection system, the integral function.

Y.V. STARTSEVA, A.I. EVTUSHENKO, V.F. LOBOJKO

ABOUT DUST POLLUTION IN CONCRETE MIXING CONCRETE PLANT

The authors consider the movement dusty masses in concrete-mixing plant. Presented by the equation of dust balance for multi-tier technology platforms in concrete-mixing plant, particulate analysis and dependencies of dust settling speed of its diameter. Proposed the measures to reduce the concentration of dust in working area of concrete-mixing plant.

Key words: dust, air exchange, particulate analysis, multi-tier technology platforms, dust settling, concentration of dust, working area.

A.A. KUZMICHEV, V.N. AZAROV

THE STUDY OF IMPACT OF AIR POLLUTION ON EXTERNAL APPEARANCE AND PERCEPTION OF BUILDING CONSTRUCTIONS AND ARCHITECTURAL MONUMENTS

Nowadays due to the rapid development of new scientific and technological areas, buildings, structures and monuments of architecture are experiencing a negative impact, in particular from dust deposition, which is caused by polluted air. Since the physical and psycho-emotional health of people who live in cities depends on the degree of compliance with aspects of the visual ecology, it's possible to reduce the level of the aggressive environment by maintaining the external appearance of building constructions, thereby creating a comfortable environment for human.

Key words: atmospheric air, dust, particulate analysis, building constructions, architectural monuments, cultural heritage, visual ecology, physical aspect, visual aspect.

A.N. BOGOMOLOV, M.V. KATASONOV, A.I. LESKIN

IMPACT OF VIBRATION RESULTING FROM ARTIFICIAL ROUGHNESS (SPEED BUMPS) UPON THE ADJACENT TERRITORY CAUSED BY PASSING VEHICLES

The paper shows techniques and results of experimental research, aiming at determining the impact of vibration from vehicles with various speeds. The results: the proposed methods to determine the values of vibrational accelerations occurring within cars when passing the bump give the opportunity to objectively assess the degree of vehicles impact upon the roadside area.

Key words: vibrational impact, vertical accelerations, artificial roughness (speed bumps).

D.A. KHOMYAKOV

UNDERLYING SENSES OF DISPERSED GROWTH: FROM THE GARDEN-CITY TOWARDS THE LANDSCAPE-CITY

The article is devoted to the study of the phenomenon of dispersed growth as the prevailing model of territorial urbanization today. Analytical deconstruction in this article is the method of studying of the multiple and interrelated aspects of this urban growth model. The author proves that any urban planning practice is nothing more than an incarnation of some invisible and broader processes that are behind it. Therefore, this study of aspects of dispersed growth is divided into seven "blocks of meaning" - the ideological-perceptual, economic, political, technological, cultural, socio-demographic and functional-morphological block – with the set of more specific items ("layers") within each of these blocks. The objective was to understand if the dispersed growth really exhausted its positive capacity, whether such growth is in need of reorganization and whether it is possible to overcome the internal contradictions of low-density residential suburbs by the instrumentality of advanced technologies and integrated planning.

Key words: dispersed growth, suburbanization, city, transport, agglomeration, territory, decentralization, infrastructure, housing, mobility.

N.V. TARASOVA

THE "HEALTHY" DWELLING AS THE PRIORITY IN STEADY RAZVITIYA OF THE CITY

In the modern city the idea of a sustainable development is on the advanced positions international, then national and, at last, local policy. The sustainable development is important for environment, preservation of an ecosystem, the person, regarding his health and wellbeing of the real and future generations.

The "healthy" dwelling has to become that Wednesday where the urban population will feel protected from infectious diseases; injuries, poisonings and chronic diseases; psychological and social tension.

Key words: *health, dwelling, sustainable development, "healthy" dwelling.*