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REGULARITY OF HARMFUL VEHICLE EXHAUST DISTRIBUTION IN THE AIR OF CITY RECREATIONAL AREAS

This article considers the problem of pollution of atmospheric air in urban green areas, which is linked with harmful emissions of motor transport. Below you can see a brief description of the objects under study. We measured the concentration of the following harmful substances on different distances from highway with the help of gas analyzer: nitrogen dioxide, carbon dioxide, lead, carbon black, sulfur dioxide, dust. We defined regularity of their distribution in the atmosphere. We found out the territories which suffer from pollution most of all. There was a solution of environment protection in urban recreation facilities offered.

Keywords: *green zones, recreation facilities, atmospheric air, harmful vehicle exhaust, the concentration of pollutants.*

V.N. AZAROV, T.V. DONCOVA, D.S. KHEGAY

BASIS OF BALANCE METHOD ASSESSMENT OF HARMFUL SUBSTANCES IN METROPOLITAN AREAS CONCEPT BY BIOSPHERE COMPATIBILITY

Research is devoted to the study of basics of the balance method of receipt of harmful substances in the district of the city as the approach to the assessment of air pollution in urban areas. They were identified following criteria of ecological safety: specific load on the area to assess the pollution of the atmosphere by ne-transference impurities and average-balance integral criterion of atmospheric pollution district. It implemented the practical application of the theory of the balance method of receipt of harmful substances in the area of the city by an example of Volgograd.

Keywords: *balance method, interdistrict transfer, conception of pollutants, wind conditions, the concentration of average-balance*

N.V. BAKAEVA, A.V. KALAYDO

EXPERIMENTAL STUDY OF THE BACKGROUND RADIATION FACTORS IN BUILDINGS

A large part of the annual dose from all ionizing radiation sources people gets indoors, and the main dose-forming factor are the progeny of radon, which form from50 to 90% of the annual individual dose. Radon safety problem observed widely, but this works often contain contradictory statements about the laws of radon levels formation at indoor air. This paper attempts to analyze the modern concepts of radiation safety buildings and apartments in the basic of radiation survey results at the Lugansk State University named by Taras Shevchenko.

Keywords: *radon, progeny, equivalent equilibrium radon concentration (EERC), variations, dose, soil*

T.I. LEVKOVICH, Z.A. MEVLIDINOV, F.N. LEVKOVICH, K.V. MAKEENKO

INVESTIGATION OF CAUSES OF CRACKS IN MONOLITHIC CONCRETE COATINGS

When you planning and designing the construction and reconstruction of road surfaces, along with consideration of transport pollution, you need to identify their impact on the natural and socio-economic system more detail and to make technical decisions that will prevent or reduce the negative impacts of such impacts. In the construction of cement concrete pavement construction company were arranged in a transverse control joints and expansion joints, shrinkage, warpage and longitudinal joints. On some boards near a seam formed transverse cracks, mainly parallel to the seam, with opening widths up to 5 mm, at a distance of 30 cm from the seam. Some cracks go from one side seam to the other and have arbitrary shape.

The article presents the results of field surveys of concrete pavement for the purpose of identifying the causes of cracking near deformition joints. Also were checked: the rate of compaction of sandy grounds, the strength of concrete in the coating, project materials and technology of production of works on installation of expansion joints.

***Key words**: cement concrete pavement, durability, sand base, the coefficient of consolidation, expansion joints, cracks, rebar.*

V.V. PLOTNIKOV, M.V. BOTAGOVSKIY

INNOVATIVE PROTECTING DESIGNS AND MATERIALS FOR REALIZATION OF RESOURCES AND ENERGY-EFFICIENT CONSTRUCTION

The paper presents innovative solutions of protecting designs and materials using in the construction of passive and active biosphere-compatible buildings, and also the results of studies of the properties of thermal insulation paints of the new generation are present in the paper. It is shown that insulating paint not possess the thermophysical properties stated by manufacturers and suppliers and have a coefficient of thermal conductivity λ in the range 0,051- 0,064 W / m • K, the same as conventional acrylic paint.

***Keywords:** biosphere compatibility, multi-layer protecting designs thermal protection of buildings, energy-efficient buildings, insulating paint.*

S.V. PLOTNIKOVA, D.A.VIKTOROV,

INFLUENCE OF FENCING STRUCTURES ON ENSURE OF ENVIRONMENTAL SAFETY OF BUILDINGS

The article contains results of energy and ecological expertise of brick and large panel residential multistory houses in Bryansk city, built in the period 1973 - 1991 years. It is established that houses in view of modern regulatory requirements related to low (class D) or very low (Class E) energy efficiency class. The thermophysical properties of fencing structures of buildings were studied and identified the reasons for the decline of their energy efficiency and environmental safety.

***Keywords:** biosphere compatibility, fencing structures, energy efficiency, thermal conductivity, humidity, environmental safety.*

A.A. ULIANOV, B.I. SHILIN

DEVELOPMENT OF OIL DEHYDRATION MODEL BY FILTRATION IN POROUS MEDIA

The problem of division of two liquids insoluble in each other, for example oil product – water by filtering in porous media is considered in this article. The decision of a problem provides creation of mathematical model of filtering process.

***Keywords**: oil products, water, mathematical model, coagulation.*

M.V. USTINOV, M.M. USTINOV

COMMONNESS AND SPECIFICITY OF FACTORS DURING BRYANSK REGION FORESTS' ZONING

This paper revealed significant of influences of factors used in forestry grouping into typical resource-ecological forest areas.

Key words: *forestry; zoning; typical nature; factor; commonness; specificity.*

S.A. AKHREMENKO, S.V. POLEKHINA, E.A. SHERSTYUK

MODERN METHODS OF ANTIRADON PROTECTION OF BUILDINGS

The article is devoted to the problem of the content air radon , which has a negative impact on humans and environment. Consider general characteristics of radon, the process of accumulation and characteristics of the building materials that interact with radionuclide. The basic requirements to the content of radon in buildings and structures were established. Offers basic methods of antiradon protection of buildings.

Key words: *radon-222, exhalation, the concentration of radon, radon collects system, radon danger zone.*

S.S. KULESHOV, V.P. KOSAREV, O.A. MERENKOV, A.V. ALEKSEYTSEV

PREVENTION OF THE TECHNOLOGICAL ACCIDENTS AND CATASTROPHES WITH EXPERTISE OF RESIDUAL RESOURCE OF TECHNICAL DEVICES ON DANGEROUS INDUSTRIAL OBJECTS

This paper view the methods of the determination of the term of service and the conditions of further exploitation of the technical devices used at the dangerous industrial objects while proving an examination of industrial safety. Using the proposed approaches will allow to reduce the risks occurrence of emergencies, leading to a possible deterioration of the ecological state of areas with potentially dangerous objects.

Keyword: *examination of industrial safety, metal fatigue, residual resource.*

YU.V. NANZATOOL, N.V. ROMAN'KOVA, M.V.TROSHINA, E.G. TSYBLOVA

BIOLOGICAL CORROSION OF OBJECTS OF INDUSTRIAL ENTERPRISES AND METHODS PROTECTION AGAINST IT

The paper discusses the main causes of corrosion of metal structures and methods of chemical protection from it. Emphasis is placed on the activities of sulfate-reducing bacteria as the main factor of biodegradation of metals in an anaerobic environment. The factors of the process of destruction of metals caused by the activity of sulfate-reducing bacteria was distinguished. The information about traditional and promising substances with bactericidal and bacteriostatic effect was given. We show advantage of the nitrogen-containing organic compounds in terms of the destruction of sulfate-reducing bacteria or suspension of the growth of their colonies.

Keywords: *biological corrosion of metal, sulfate-reducing bacteria, biocides.*

V.V. TSYGANKOV, V.V. KUMEKINA

METHOD OF CALCULATION OF ACOUSTIC EFFICIENCY OF THE PROJECTED INTRADISTRICT NOISE-PROTECTIVE GREEN PLANTINGS

The method of calculation of acoustic effect of gardening of intra domestic spaces on the residential quarter territories is given in article on the basis of the researches conducted by BGITU. This technique allows designers to define necessary percent of the appendix of noise-protective gardening in intra domestic spaces for achievement of rated noise level.

Keywords: *noise, the method of calculation, noise protection, acoustic efficiency, inner space, green spaces.*

I.V. SHISHKINA, D.V. MATYUSHIN

RECOMMENDATIONS ABOUT ECOLOGICAL RECONSTRUCTION OF THE TERRITORY WHICH IS IN THE ZONE OF INFLUENCE OF OBJECTS OF CITY TRANSPORT CONSTRUCTION

A new approach to the quantitative assessment of environmental safety the urban environment which is caused ingredient and acoustic impacts of objects urban transport construction is considered. Recommendations about ecological reconstruction of the territory are given, depending on a calculated value of evaluation criterion– indicator of biosphere compatibility of the urbanized territory and a level of urban environment comfort condition of an urban environment recommendations about ecological reconstruction of the territory are given, in particular on regulation of width of a roadside strip and sanitary gap.

Keywords: *environmental safety of urban environment, ecological reconstruction, biosphere compatibility, criterion of evaluation environmental safety, roadside strip.*

R.B. KOVALEV, B.I. KOVALEV

ACCOMODATION OF THE COUNTRY HOUSE IN THE FOREST ECOSYSTEM, TAKING INTO ACCOUNT THE DYNAMICS OF ITS DEVELOPMET

The article presents a diagram of the placement of a country house located in the forest ecosystems. The dynamics of development of trees stand for fifty years is shown and on the basis of it the decision according to the final planning of the building location is made.

Keywords: *layout, Field-Map technology, forest ecosystems.*

O.V. PILIPENKO, I.S. MYSISHIN

THE DIRECTION OF RESOURCE SAVING AND IMPROVEMENT OF CONSUMER QUALITIES OF CIVILIAN BUILDINGS

In accordance with the model of the resource cycle use phase of the civil buildings is the most costly in the consumption of resources. The article describes the current state of housing, the necessity of reconstruction and modernization of engineering networks. Reconstruction and modernization of civil should be carried out taking into account modern requirements of energy and resource saving. The economic effect of the reconstruction is to reduce the cost of the technical operation and to reduce the consumption of all types of resources (electricity, fuel, water, etc.). Activities for resource and energy conservation lead to improved consumer characteristics of the building, the living comfort, increase the market value.

Keywords: *residential buildings, resource-saving, reconstruction, maintenance.*