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A.V. GORODKOV, N.A. SAMOKHOVA

TO THE RESEARCH OF METROPOLITAN AREA GATEWAY EFFICIENCY OF GREEN SPACE STRIPS IN A FIELD EXPERIMENT

There are the results of natural-experimental studies of green space in strips structures, which are located outside of the urban environment in order to obtain the data about their metropolitan area gateway efficiency. Also there are the main biometrics research facilities. We took carbon monoxide (CO), which is the most highly toxic combustion products, as the main component of motor adopted emission. We revealed regression dependence of metropolitan area gateway efficiency of green space on the density ratio of phytomass and the distance from the source of emissions in a low wind speeds. There is the estimation of the depth in the zones of green spaces influence.

Key words: *green spaces, metropolitan area gateway efficiency,harmful vehicle exhaust, carbon monoxide, the density ratio of phytomass, relative efficiency criterion.*

T.S. BOLSHANINA, S.N. OVCHINNIKOV

EFFECT OF THE CROSSROADS IN DETERMINING THE NOISE AT MUDDIED PRIMAGISTRALNOY TERRITORY

This article examines the impact of the intersection's urban-street (junction) to the acoustic-mode primagi stralnyh areas, while the intersection is regarded as a spatial noise source. The main purpose of investi--tion is to determine the noise characteristics of the intersection, the noise levels in the area of building and analysis.

Key words: *noise, line and space-venous noise sources intersection.*

UJMA ADAM, LIS ANNA

CHANGES IN ENVIRONMENTAL PERFORMANCE OF BUILDINGS AS A RESULT OF ENERGY REDUCTION

In the past, more and more attention is paid to the problem of environmental pollution fuel combustion products in the production of energy to ensure the operational needs of the building. The paper presents the effects of emissions of harmful substances into the atmosphere by increasing the energy efficiency of school buildings. Particular attention is paid to the reduction of the greenhouse effect was a result of thermo-building.

Key words: *total emissions, the greenhouse effect, the energy efficiency of buildings, the equivalent emissions.*

M. I. AFONINA, E. V. SCHERBINA

SPATIAL AND TERRITORIAL ORGANIZATION ORGANIZATION OF FACILITIES FOR WINTER SPORTS (RUSSIAN EXPERIENCE)

The article deals with the spatial and territorial organization of facilities for both traditional and developing winter sports in the context of sustainable urban development. Based on field survey data is shown the relevance of the objects, what substantiates the actual state of the research. There are results of a comprehensive analysis of winter sports facilities as elements of urban space. It is shown that the disturbed areas may be used to accommodate the recreational and sports facilities for winter sports. Also, there presents the energy data of the sport buildings.

Key words: *urban recreational and sports complexes, sustainable development, innovative facilities, winter sports, sports facilities, recreants, snow parks.*

R.SH. BUTAEV

METHODS OF REDUCING ENERGY CONSUMPTION IN THE CONSTRUCTION OF THE BUILDING COMPLEX

This article describes and analyzes the efficiency of energy consumption within the building site, consisting of twelve residential buildings. Denotes one of the essential factors affecting energy efficiency, namely climatic conditions. We consider the climatic conditions in the Russian Federation in Moscow, under which the cost of fuel and energy resources are reduced by 27 % by changing the timing of the construction.

Key words: *organization of construction production, the consumption of fuel and energy resources, common standards and pricing, energy efficiency, performance mechanisms.*

V. M. PILIPENKO, L. N. DANILEVSKY, S. V. TEREKHOV, A. J. GREBENKOV, R. B., KATZENELL, V. N. TOUROV

ENERGY-EFFICIENT RESIDENTIAL BUILDINGS OF THE SECOND GENERATION IN THE PROJECTUNDP-GEF IN THE REPUBLIC OF BELARUS

The article presents information on the status of the issue on construction of energy efficient buildings in the Republic of Belarus. In the first generation of energy efficient buildings, constructed using the forced supply-exhaust ventilation with heat recovery ventilation emissions, improved thermal envelope and window designs of new generation solved the problem of decrease of heat energy consumption for heating of buildings. In the new generation of energy efficient buildings is also solved the problem of reducing the cost of energy in the preparation of hot water and the use of renewable sources in power supply systems of multi-storey residential buildings. Given a description of three pilot energy efficient buildings, under construction in the Republic of Belarus with the financial support of the UNDP project,

Key words: *energy efficiency, residential buildings,thermal energy, heating, hot vodosnabzhenie forced ventilation.*

A.S. CHEKH, A.M. MAKAROV

JUSTIFICATION OF THE CHOICE OF SCIENTIFIC RESEARCH IN THE FIELD OF ENERGY EFFICIENCY OF OPERATION OF BUILDINGS AND CONSTRUCTIONS

Questions of energy saving in buildings and constructions in the context of interrelation between thermomodernization of the protecting designs of buildings and the corresponding modernization of systems of heating and ventilation are considered.

It is shown that by drawing up the feasibility study on energy saving actions it is accepted to consider the studied object as set of separate elements. The expected economy of thermal energy at the same time, turns out by simple addition of sizes of economy of thermal energy from each action for thermomodernization of elements of the protecting designs. Such approach leads to a high error in the size of actually received economy of thermal energy and a payback period of the offered energy saving actions.

The concrete examples showing that the expected effect of energy saving actions for thermomodernization of the protecting designs and modernizations of system of otopleniye considerably differs from actually received economy of thermal energy in that, or other party are given.

The conclusion is drawn that studying of influence of design features and methods (means) of autoregulation of systems of heating and ventilation at a size of economy of thermal energy at thermomodernization of the protecting designs of buildings is a task actual today.

Key words: *energy saving actions, thermomodernization of the protecting designs, modernization of systems of heating and ventilation.*

A.D. ZHUKOV, D.B. ZELENCHIKOV, A.O. KARPOVA, K.K. IVANOV,
K.V. MAT'KOV, E.R. PYATAEV

EFFICIENCY CRITERIA FOR HEAT TREATMENT OF MINERAL WOOL PRODUCTS

Properties of mineral wool products and especially products, obla-giving special properties, and are designed for particular operating conditions depend on the proper organization of the process of their heat treatment. This applies as well to roofing and insulating lightweight plates, one of the areas of application of which is pitched, including metal seam roof.

Roofing insulation work in fairly harsh conditions due to diurnal and seasonal temperature fluctuations, overheating of the roof on Sunny days; the ingress in the insulation and condensing atmospheric moisture. This leads to deterioration in performance of the insulating layer and its possible destruction.

To minimize negative manifestations developed reinforced lightweight mineral wool slabs, the initial properties which are close to the classical counterparts, but superior counterparts on operational stability. These products differ from the analogue of the hydrodynamic characteristics, which places special demands on their heat treatment.

Key words: *mineral wool products, the durability of a methodology-Gia, construction system, fiberglass, composite.*

N.P. UMNYAKOVA, K.S. ANDREYTSEVA, V.A. SMIRNOV

INFLUENCE OF STRUCTURAL COMPONENTS FOR DISTRIBUTION HEAT TRANSFER COEFFICIENT ON THE SURFACE OF REINFORCED CONCRETE BALCONY SLABS

Increase heat engineering uniformity of external walling is possible due to the development and application of new design solutions for interface elements exterior fence. modern design for a butt joint with a bearing insulation element Shekk were used to reduce heat loss in the interface area of the balcony slab to the wall. Analysis of the thermal design of experimental studies allowed to obtain a picture of the temperature distribution and heat flows from the surface of the balcony slab. Conducted heat engineering studies formed the basis for the heat transfer coefficient values on the surface of the balcony slab. As a result of the work carried out for the first time prepared according to the changes of heat transfer coefficients for balcony slab width, depending on the distance from the outer surface of the wall at different values of the outside temperature.

Key words: *heat transfer coefficient, temperature, heat flow, heat insulating carrier element.*

O.A. ZHOGOLEVA, I.V. MATVEEVA, O.A. FEDOROVA

ACOUSTIC IMPROVEMENT PROBLEMS APARTMENTS IN BUILDINGS OPERATED AVAILABLE HOUSING

The problems of acoustic improvement in residential buildings if the premises apartments internal sources of noise. We offer architectural planning and construction activities to reduce acoustic noise from domestic sources. When calculating the acoustic efficiency measures apartments should be considered as a system of acoustically coupled spaces.

Key words: *acoustic improvement apartments, noise exposure, the source of noise in apartments, residential buildings.*

N.V. BAKAEVA, O.V. BUNINA, A.Y. IGIN

BASIC PROBLEMS OF MODERN HOUSE-BUILDING AND OPTIMAL INNOVATIVE WAYS TO SOLVE THEM

This article is devoted to the problems of house-building according to its social and economic goals, formed with the state functioning itself. Today the development of house-building bases on the innovations recreated recently in this sphere. The problem rased in the article can be solved with the help of so called biosphere - compatible technologies. According to the main principle of biospherecompatibility the question of dividing building technologies into progressive and regressive can be answered in a way of their influence on the biosphere semiotic existing and on the life of future generations of people. Moreover, there are a lot of examples of using biosphere-compatible technologies and innovative solutions in modern house-building in the article.

***Key words**: the housing stock, biosphere compatible technologies,ecological compatibility, energy efficiency, landscaping, affordable housing.*

S.G. SHEINA, A.A. KHAMAVOVA, D.V. SHISHKUNOVA

MAIN OBJECTIVES OF TERRITORIAL PLANNING OF THE SUBJECT OF THE RUSSIAN FEDERATION

Importance and its relevance is caused by the fact that for the first time during the Post-Soviet period at the legislative level the general scheme of moving which has complex, interindustry character and is a basis for planning by development of the territory of territorial subjects of the Russian Federation has been developed. Authors of this article have offered the integrated approach to an assessment and planning of development of the territory of the territorial subject of the Russian Federation applied to the analysis of the territory of the Rostov region taking into account the main objectives of territorial planning.

***Key words:** territorial planning, integrated management, sustainable development, territory assessment, scheme of territorial planning.*

S.YU. KALASHNIKOV, YU.S. KALASHNIKOVA

ANALYSIS OF THE STRUCTURE OF THE URBAN TRANSPORT SYSTEM AND IDENTIFICATION OF NEGATIVE IMPACTS ON THE URBAN ENVIRONMENT

The analysis of the structure of the city transport system and its components are significant for evaluation from the standpoint of use by consumers. For analysis using a systematic approach. The purpose of the functioning of the transport system of the city transformirovalsya in ensuring environmental safety and comfort of living of the population.

***Key words:** city transport system, the comfortable use of the transport system, human development, environmental safety.*