



Lighting systems: energy efficiency and visual comfort

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A significant proportion of the energy consumption of modern cities is the cost of energy for lighting. This includes lighting of premises, lighting of city streets, and architectural illumination of city facilities. Reduce the cost of lighting can be through the use of new energy-saving lighting devices. But there are other possibilities. For example, a competent architectural illumination does not outweigh the object, but emphasizes its merits, without wasting energy.

Time for new opportunities

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On the state of the market of engineering systems of buildings, green technologies, foreign and Russian experience, the edition of the resource «Sustainable Building Technologies» talked with Alexander Viktorovich Sverdlov, General Director of FlaktGroup Russia, a member of the Association «ABOK» category «Premium»

City with a «silver» stadium and a «golden» population

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The smallest and most mysterious city that hosts matches of the 2018 FIFA World Cup, Saransk can be proud of not only his stadium, which received a silver certificate in the evaluation according to the «RUSO standard. Football stadiums », but also their «Golden» population, carefully related to nature

Innovative technologies and equipment for creating a museum climate

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New standards of NP «ABOK» were developed: the standard of STO NP ABOK 7.7-2018 «Museums. Heating, ventilation, air conditioning », taking into account the specificity of museum buildings and the need to preserve museum collections and museum funds by creating and maintaining the necessary parameters for this purpose microclimate and an annex to the standard STO NP ABOK 7.7-2018» Practical recommendations. Innovative technologies and equipment for creating a museum climate », where the recommended technical solutions for the maintenance and maintenance of the museum's microclimate are presented.



Optimization of the heating system in the production manufactory

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Correctly chosen climatic systems in industrial buildings allow not only to maximize the use of the production area, but also to improve the microclimate of the premises, which affects the well-being of the personnel. This is confirmed by the experience of the Russian company «Flaig + Hommel», which replaced the combined heating system (water with radiators and air with air-heating units) on a system of radiant ceiling heating from aluminum alloy.

New Standards of ABOK Association

As an appendix to the ABOK standard 5.5.1-2018 «Calculation of parameters of smoke protection systems of residential and public buildings» developed «Practical recommendations. Innovative technologies and equipment for smoke protection of residential and public buildings». The appendix contains recommended technical solutions for reliable provision of the required smoke protection parameters with the help of highly effective technologies.

Engineering systems of the Chinese traditional complex of Syheyuan

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Syheyuan researchers consider in two aspects: as a type of traditional Chinese housing and as a design principle. We propose to understand how the old Chinese masters created in the imperial period (before the beginning of the twentieth century) the necessary level of life support for the buildings of siheyuan with the use of a complex of space-planning, constructive and engineering methods.

Rain water as a perspective resource of public spaces

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To date, the issue of arranging the landscape environment of cities, the special place in the organization of which is occupied by the resource of rainwater, becomes urgent. Let us analyze the European experience of managing this resource and the prospects of its use in the design of public urban spaces.



Polar station «Comandante Ferraz». Second birth

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The Brazilian Antarctic station «Comandante Ferraz» was destroyed by a fire in 2012. The fire broke out in the room with the generators and spread to the entire station. The Brazilian naval forces arranged a tender for the best design of the new building. The Brazilian firm won the tender. The work should be completed in 2018. Let's consider some architectural and engineering solutions implemented in this project.

IV Forum and exhibition «Energy efficient Moscow region»

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In the House of Government of the Moscow Region, on June 6-7, 2018, the traditional forum «Energy Efficient Moscow Region» was held, where modern opportunities for reducing energy consumption of various facilities were discussed and the achievements of the municipal entities of the region in the sphere of energy saving were demonstrated.

ABOK Conference in Kazakhstan «Modern engineering systems of high-tech building»

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September 5-6, 2018, for the first time, part of the business program of the international exhibition Aquatherm Almaty, ABOK Conference in Kazakhstan «MODERN ENGINEERING SYSTEMS OF HIGH-TECH BUILDING» was held. The conference brought together 150 specialists from Kazakhstan, Kyrgyzstan, Uzbekistan, Russia...

Renovation of apartment buildings of the first mass series to increase energy efficiency

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This paper demonstrates the results of the investigations based on the thermophysical field testing and calculations of the thermal performance indicators of the standard residential building made of many box units. According to calculations, after thermal modernization of buildings the level of specific heat consumption for heating and ventilation will decrease twice. In this case, the building will approach to the low-energy building standard. This study provides calculations of required R values of building elements for residential buildings at the renovation in cold climate of Russia. The optimal insulation thicknesses must be calculated for each region to make the energy efficient building. Implementation of highly insulated building envelope allows use of renewable to partly cover heat consumption. The results indicate that it is economically feasible to renovate high-energy houses in cold Russian climatic conditions. Such low-energy buildings have added good indoor environment, long lifetime, higher market value as well as they are environmentally friendly.