XONALAR MIKROIQLIMIGA TASHQI HAVO HARORATINING TA'SIRI

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Annotatsiya: *Maqolada turar joy va jamoat binolari energiyasamaradorlik va energiyatejamkorlik xususiyatlari, miqroiqlimiga ta'sir qiluvchi tashqi omillar ko'rib chiqildi. Energiyasamaradorlik va energiyatejamkorlik tushunchasi va binolarni energiyasamaradorlik va energiyatejamkorlik xususiyatlarini yaxshilash usullari va uning natijalari bayon qilingan.*

Kalit so'zlar: *Energiyasamaradorlik, energiyatejamkorlik, harorat, quyosh, radiatsiya, rang, energiya, havo harakati, mikroiqlim, iqlim.*

Аннотация: *В статье рассмотрены особенности энергоэффективности и энергосбережения жилых и общественных зданий, внешние факторы, влияющие на микроклимат. Энергоэффективность и энергосотрудничество концепция и методы*

улучшения характеристик энергоэффективности и энергосотрудничества в зданиях и его результаты изложены

Ключевые слова: *Энергия, энергозатраты, энергия, температура, солнце, излучение, цвет, энергия, движение воздуха, микроклимат, климат.*

Annotation: *The article considers the features of energy efficiency and energy saving of residential and public buildings, external factors affecting the microclimate. Energy efficiency and energy cooperation the concept and methods of improving the characteristics of energy efficiency and energy cooperation in buildings and its results are outlined.*

Keywords: *energy, energy, energy, temperature, sun, radiation, color, energy, air movement, microclimate, climate.*

So‘nggi yillarda mamlakatimizda qurilish va bunyodkorlik ishlari amalga oshirilmoqda, qurilish ishlarining hajmi yildan-yilga oshmoqda. Respublikamizdagi iqlimning xilma-xilligini va iqlim omillarining inshootlarning xizmat qilish muddatiga va binolar ichki mikroiqlimiga sezilarli ta’sirini hisobga olgan holda, har bir geografik hududning iqlim sharoitini hisobga olish bugungi kunda ham dolzarbligicha qolmoqda. O‘zbekistonda 1880 yildan to hozirgacha bo‘lgan davrda o‘rtacha yillik harorat +1.6°C daraja (13.2 dan 14.8 °Cgacha) oshdi. Bu global miqyosda kuzatilayotgan o‘rtacha sur’atlardan yuqoridir. Mutaxassislarning prognozlariga ko‘ra 2030-2050 yillarda mintaqada havo harorati yana 1.5-3°Cga ko‘tarilishi mumkin. Havo haroratining ayniqsa Orol bo‘yida ko‘tarilishi kutilmoqda. Bu o‘z navbatida mahalliy iqlim o‘zgarishlari bilan yanada og‘irlashadi. Ilmiy-texnika taraqqiyoti, mamlakatimiz aholisi salomatligini muhofaza qilish, gigenik va turmush sharoitini yanada yaxshilash vazifalari qurilish me’yorlari va qoidalarini doimiy ravishda yangilab borish va takomillashtirishni taqazo etadi [1,2].

Har yili iqlimshunoslikka yangi va murakkab talablar qo‘yila boshlandi. Ular, shuningdek, iqlimiy jihatdan yangi o‘rganilmagan hududlarni (tog‘li, cho‘l) o‘zlashtirish, yangi ob’ektlarni qurish bilan bog‘liq.

QMQga kiritilgan ma’lumotlar yildan-yilga sezilarli darajada boyitilgan bo‘lsa-da, ularning yordami bilan dizaynning barcha holatlarida iqlimning qurilishi kutilayotgan ob’ektga ta’siri yetarlicha hisoblanmaydi. Qurilish me’yoriy qoidalari yozgi davrda binolarning ichki havosining haroratini, to‘siq tuzilmalarning ichki yuzalari haroratini tartibga solmaydi. Faqat ichki yuzasi haroratining o‘zgarishini cheklaydi. Shu bois, tabiiyki, qurilish iqlimshunosligi bo‘yicha turli tadqiqotlar ishlab chiqilmoqda, mavjud standartlar aniqlanmoqda va amaliyotga joriy etish uchun yangilari tayyorlanmoqda.

Iqlimni hisobga olish uchun shaharsozlikda atmosferadagi makro jarayonlarni tavsiflovchi iqlim ko‘rsatkichlari bilan uning umumiy ta’sirlari, shu bilan birga mahalliy fizik-geografik sharoitlarning iqlimiy ko‘rsatkichlarga ta’siri (rel’efning chuqurligi, suv havzalari va tog‘larga yaqinligi) o‘rganiladi. Ushbu tadqiqotlar natijasida mikroiqlim uchun kerakli ma’lumotlar tavsiyalar, shahar iqlimining meleortiv holati bo‘yicha tavsiyalar va boshqalar tuziladi.

Shaharlar va boshqa aholi punktlarini rejalashtirish, arxitektura va rejalashtirish qarorlari bilan bog‘liq bo‘lgan iqlimshunoslik tadqiqotlari ba’zan me’moriy yoki me’moriy-qurilish iqlimshunosligi bilan birlashtiriladi.

220-sonli “ Energiya tejovchi texnologiyalarni joriy qilish va kichik quvvatli qayta tiklanuvchi energiya manbalarini rivojlantirish bo‘yicha qo‘shimcha chora-tadbirlar to‘g‘risida” Prezident farmonining 6-bandida 2023-yil 1-yanvardan boshlab: yangi quriladigan va rekonstruksiya qilinadigan barcha (shu jumladan, davlat va xususiy) ta’lim muassasalari, sog‘liqni saqlash, madaniyat va turizm, umumiy ovqatlanish, xizmat ko‘rsatish ob’ektlari, sport komplekslari, lokal isitish issiqlik tizimiga ulanadigan ko‘p xonadonli uy-joylar, shu jumladan “Yangi O‘zbekiston” massivlari, shuningdek, umumiy maydoni 1 ming kvadrat metrdan katta bo‘lgan barcha savdo-ko‘ngilochar markazlarining bino-inshootlarini loyihalashtirish va ishga tushirishda issiq suv iste’moli hajmining kamida 25 foizi ushbu ob’ektlarda o‘rnatiladigan quyosh suv isitish qurilmalari orqali qoplanishini ta’minlash talab etilishi ta’kidlangan.

Farmonning “Energiya samaradorlik” qismida qayta tiklanuvchi energiya manbalari qurilmalarini o‘rnatish ko‘zda tutilmagan loyiha hujjatlari bo‘yicha

qurilish ishlarini boshlash hamda issiq suvdan foydalanish rejalashtirilgan yangi bino-inshootlarda (yakka tartibdagi uy-joylar bundan mustasno) quyosh suv isitish qurilmalarini o‘rnatish ko‘zda tutilmagan taqdirda bunday bino-inshootlarni foydalanishga qabul qilish taqiqlanadi [1].

Binoni isitish va sovutish texnikasi talablarini hisobga olgan holda, iqlim parametrlarini eng oqilona tanlash amalga oshiriladi, bunda dizayn iqlimning binoga ta’siri hisobga olindi. Buning uchun turli hisob-kitob ishlari olib boriladi. Hisoblashlarning turli bosqichlarida binolarni loyihalashda asosiy meteorologik elementlarning qiymatlari - harorat, namlik, shamol, yog‘ingarchilik va boshqalar bilan belgilanadigan individual iqlim omillarining ta’siri hisobga olinadi. Qurilish uchun iqlimiy rayonlashtirish shunday amalga oshiriladi. Bu issiqlik rejimining xususiyatlariga asoslanadi. Hududlar o‘rtacha shamol tezligi va havo namligining ortishi yoki kamayishi bilan ajralib turadi. Kerakli issiqlik qarshiligini, isitgichning turini va sonini aniqlash uchun binolarni o‘rab turgan inshootlarning termotexnik hisob-kitoblarida asosiy iqlim parametrlari ham havo harorati (qishning hisoblangan harorati) hisoblanadi. Biroq, binolarning issiqlik yo‘qolishi nafaqat tashqi haroratga, balki shamol tezligiga ham bog‘liq. Shamol tezligi qanchalik katta bo‘lsa, almashinuv va atrof-muhit shunchalik katta bo‘ladi. Binolar orasidagi havo teshiklari orqali eshik va derazalar yoriqlarining bu almashinuvi to‘siqlar orqali amalga oshiriladi [3.4].

Geografik muhitning yashash joylari mikroiqlimiga ta’siri ko‘p darajada yashash manzillarining iqlimiy xususiyati orqali namoyon bo‘ladi.

Imoratlar vazifasi mazkur joydagi tashqi muhitning mavjud tabiiy iqlimiga nisbatan sun’iy yo‘l bilan yoqimli ichki iqlimni yaratish uchun xizmat

mni o‘zaro bog‘liqliligi doimo muhim, chunki jamiyatning rivojining ijtimoiy sharoiti o‘zgarib boradi, imoratlar o‘zgaradi, texnika rivojlanadi. Rivojlanishning har bir etapida imoratga bo‘lgan yangi talablar namoyon bo‘ladi, yangi texnik imkoniyatlar nuqtai nazari bilan iqlimiy muhitni qayta

baholash yuzaga keladi va shu bilan birga yashash binolari rasmlanishida iqlimni hisobga olishni asrlar davomida amal qilib kelingan prinsiplari va an’anaviy

‘lgan talabini ortishi bilan bog‘liq va shahar va qishloqlardagi zamonaviy arxitekturani o‘sishi, “iqlim-imorat” masalasida alohida tus olmoqda. Uylarning tiplashgan, yirik iqlimiy mintaqalarda qo‘llash uchun mo‘ljallangan loyihalari,

Inson organizmining issiqga moslanishi amalda imorat mikroiqlimining uchta elementiga bog‘liq bo‘ladi: havo haroratiga, namlikga va havo harakatiga. uchun, tashqi iqlimning uchta omili ma’lumotlariga va imorat mikroiqlimiga, birinchi tomondan, inson organizmining issiliqga moslanishiga, ikkinchi tomondan, o‘z e’tiborimizni imoratlarning mikroiqlimini geografik muhit bilan bog‘lash masalalariga va imorat mikroiqlimi masalasini inson hayot faoliyati masalalari bilan bog‘lashimiz kerak.

Bosh iqlimiy omillardan biri, ichki va tashqi muhitni rasmlanishiga aytarli ta’sir ko‘rsatuvchi, bu shamoldir.

a’sir ko‘rsatadi. Shu bilan bir qatorda shamol qurilish faollashgan yuzasidan issiqlik yulib olinishiga imkon yaratadi /devor yuzasi, tom, o‘tish joylari/, bu bilan qurilish va imoratlar mikroiqlimiga ta’sir etadi.

biri shahar qurilishini tashqi tabiiy muhit bilan bog‘lashdir. Aniq holatlarni, tabiiy muhitni, iqlimni hisobga olish bilan shaharni rejalashtirish va qurish bu masalaning xal qiluvchilaridan biri hisoblanadi. Binolarni loyihalashda iqlimni to‘g‘ri hisobga olish insonning sog‘lom xayotiy muhitini yaratishga, sog‘lom muhit, o‘z navbatida, insonning mexnat qilish qobiliyatini ko‘tarilishiga, dam

Imoratlarni tashkillanishi vazifasi bo‘yicha, ijtimoiy va funksional talablarga javob bergan holda, rejalashtirilishi va konstruksiyasiga nisbatan ham o‘zining joylashishiga ko‘ra geografik va iqlimiy talablarga mos kelishi kerak.

Oxirgi talablar issiq iqlim sharoitida xal qiluvchi ma’no kashf etadi,

ta’minlashda birinchi o‘rinda turadi.

Bir qavatli imoratlardan zamonaviy ko‘p qavatlilarga o‘tilishi bilan xonalardagi issiqlik rejimini rasmlanishi sharoitida keskin o‘zgarishlar bo‘ldi – ko‘p xonadonlari (75-80% atrofida) yerdan uzilishi, tuproq salqini, ko‘kalamzorlar, suv chiqarish va obodonlashtirishni yoqimli ta’sirini yo‘qotadi; umuman fasadlarni nurlanish sharoiti va uylarni joylashtirilishi bilan bog‘liq qaraganda, o‘rta qavatdagi xonalarning harorati 1-3 ˚S ga yuqori. Tashqi to‘siq konstruksiyalarini yig‘ma turlariga o‘tilishi katta rol o‘ynaydi, qaysiki kichik iqlimi orasida faol vositachi bo‘ladi. Bu konstruksiyalar xonalarda yozgi qizish bilan kurashishni ancha qiyinlashtirdi. Bizning kuzatuvlarimiz shuni ko‘rsatdiki, qalinligi 30 sm li keramzitobetondan devorli binolarda, ichki barcha to‘siqlar haroratlari yig‘indisining o‘rtachasiga mos keladi va 2,5-3,5˚S ga tashqi havo haroratining o‘rtachasidan yuqori bo‘ladi.

atlarni keskin o‘sishi va qurilishning zichligidir. Bunda hudud, xonalar va fasad nurlanishining yangi sharoiti kelib chiqadi, qaysiki issiqlik rejimini sozlashni an’anaviy usullarini samarasi kam bo‘lib qoladi.

obod va Buxorodagi ko‘p qavatli g‘ishtli turar-joy binolarida bajarilgan ishlar ko‘rsatdiki, tashqi havo harorati 42˚S bo‘lganda sharqiy va g‘arbiy xonalardagi

hqi muhitni imoratlarga noxush ta’siri tashqi eng katta harorat 38˚S dan ortganda bilina boshlaydi. Bu davrda xonalarda barqaror noshinamlik sharoitini xukm suradi. Yashash xonalarini konstruktiv vositalar yo‘li bilan aytarli himoya

Tashqi muhitni o‘zgarishidan imoratdagi muhitni issiqlik holatini tahlil

Hozirgi vaqtda mavjud bo‘lgan me’yorlar, tavsiyanomalar, qo‘llanmalar,

ko‘rsatmalar va ilmiy ishlarda bino va to‘siq konstruksiyalarga sokin ob-havo sharoitida issiqlik ta’sirining omillari amalda yoritilmagan, chunonchi oxirgisi kurashish vositalari samarasiz yoki kam samaralidir. Bundan kelib chiqadiki perimetr bo‘ylab qalin qurilishlar uylaroro bo‘shliqda umumiy havo aylanishini

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