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Modern condition and development prospects of train operation management on the “Angren–Pop–Angren” railway corridor of JSC “Uzbekistan Railways”

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Abstract: This article analyzes one of the pressing issues in railway transport is the efficient use of train throughput and carrying capacity on complex mountainous railway sections by optimizing the weight and speed of freight trains. To this end, the application of resource-saving technologies in the organization of train operations on railway sections, as well as the implementation of scientifically grounded practical recommendations for optimizing their mass and speed, ensures the rational utilization of train throughput capacity. The main qualitative and quantitative indicators of railway sections include the existing and required throughput capacity, sectional and technical speeds, as well as the volume of transported freight.

Keywords: railway section, capacity, carrying capacity, gross weight, net weight

“O‘TY” AJning “Angren–Pop–Angren” temir yo‘l yo‘nalishida poyezdlar harakatini tashkil etishning zamonaviy holati va istiqbollari

Masharipov M.N.¹^a, Bozorov R.Sh.¹^b, Xusenov O‘.O‘.¹^c, Asatov E.A.¹^d

¹Toshkent davlat transport universiteti, Toshkent, O‘zbekiston

Annotatsiya: Ushbu maqolada temir yo‘l transportining dolzarb muammolaridan biri yuk poyezdlarining og‘irligi va tezligini optimallashtirish orqali murakkab tog‘li temir yo‘l uchastkalarida poyezd o‘tkazuvchanligi va tashuvchanlik qobiliyatidan samarali foydalanish masalasi tahlil qilinadi. Shu maqsadda temir yo‘l uchastkalarida poyezdlar harakatini tashkil etishda resurstejamkor texnologiyalarni joriy etish, shuningdek, poyezd massasi va tezligini optimallashtirish bo‘yicha ilmiy asoslangan amaliy tavsiyalarni amalga oshirish, ularning o‘tkazuvchanlik qobiliyatidan ratsional foydalanishni ta‘minlaydi. Temir yo‘l uchastkalarining asosiy sifat va son ko‘rsatkichlariga mavjud va zaruriy o‘tkazuvchanlik qobiliyati, uchastka va texnik tezliklari hamda tashilgan yuk hajmi kiradi.

Kalit so‘zlar: temir yo‘l uchastkasi, o‘tkazuvchanlik qobiliyati, tashuvchanlik qobiliyati, brutto og‘irlik, netto og‘irlik

1. Kirish

Transport tizimi har qanday davlatning iqtisodiy taraqqiyotida muhim o‘rin egallaydi. Ayniqsa, temir yo‘l transporti yuk tashishning xavfsiz, iqtisodiy va ekologik samarali shakli sifatida dolzarb ahamiyat kasb etmoqda. Bugungi kunda O‘zbekiston temir yo‘llarida yillik yuk tashish hajmi 100 million tonnadan oshib bormoqda, bu esa mavjud infratuzilmadan maksimal darajada samarali foydalanishni talab qiladi. Ayniqsa, tog‘li va murakkab relyefga ega bo‘lgan hududlarda temir yo‘l transportini boshqarish ko‘plab muammolarni keltirib chiqaradi.

Tog‘li uchastkalarda yuk poyezdlarining harakatini tashkil etishda asosiy muammo harakat xavfsizligini ta‘minlagan holda maksimal yuk hajmini tashishdir. Bunday hududlar uchun xos bo‘lgan keskin burilishlar, tik ko‘tarilishlar va tushishlar, barqaror bo‘lmagan iqlimiy sharoitlar, tormoz va tortish tizimlariga yuklamaning oshishi kabi omillar hisobga olinmasa, og‘ir poyezdlar relsdan chiqib ketish, to‘xtay olmaslik yoki lokomotivlarning

haddan tashqari yuklanishi kabi favqulodda holatlarga olib kelishi mumkin. Shu bois, har bir murakkab uchastka uchun poyezd og‘irligini optimal aniqlash nafaqat texnik, balki iqtisodiy va xavfsizlik nuqtayi nazaridan ham muhim hisoblanadi. Bu orqali temir yo‘l harakati samaradorligi oshib, energiya resurslari tejalladi va qatnov grafigining barqarorligi ta‘minlanadi.

O‘zbekiston temir yo‘llari tarmog‘i Respublikamizning yagona transport tarmog‘ini yaratishda muhim transport turlaridan biri sanaladi. Hozirgi kunda Respublikamizda transport tizimlarini rivojlantirish, qo‘shimcha tranzit yo‘laklarini izlab topish orqali yuk oqimlari miqdorini oshirish bo‘yicha ko‘plab amaliy say harakatlar olib borilmoqda. Shu maqsadda kelgusida yuk va yo‘lovchilar miqdorining oshishi transport tizimlariga ilg‘or texnologiyalarni jalb qilish orqali mavjud infratuzilma salohiyatidan oqilona foydalanish usullarini belgilashni taqozo etadi. Jumladan, “O‘TY” AJ tomonidan yuk oqimlarini ortish sharoitlarini hisobga olib mavjud infratuzilmaning o‘tkazuvchanlik va tashuvchanlik

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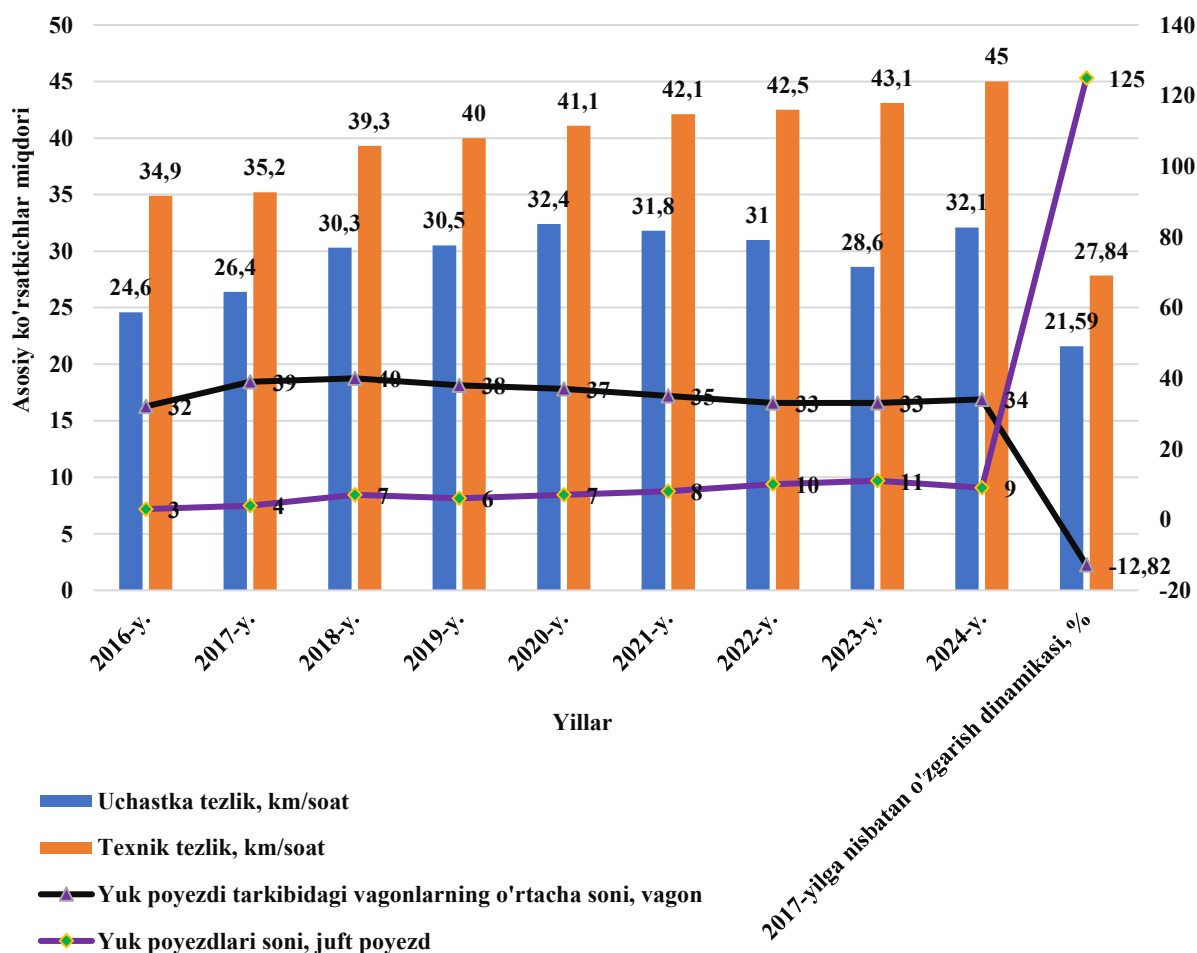
qobiliyatidan samarali foydalanish bo'yicha ilmiy asoslangan ilg'or texnologiyalarni ishlab chiqishga katta e'tibor qaratishni talab etadi.

2. Tadqiqot metodologiyasi

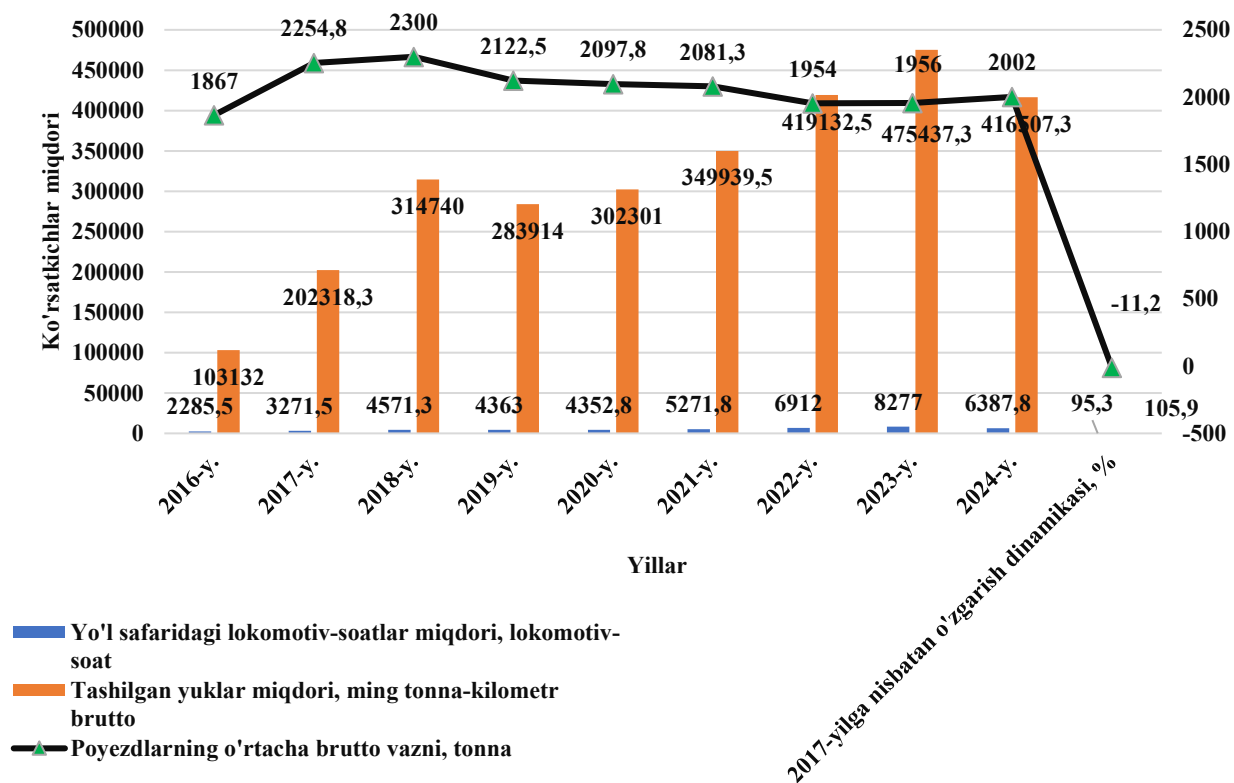
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qobiliyatidan samarali foydalanish bo'yicha ilmiy asoslangan ilg'or texnologiyalarni ishlab chiqishga katta e'tibor qaratishni talab etadi.

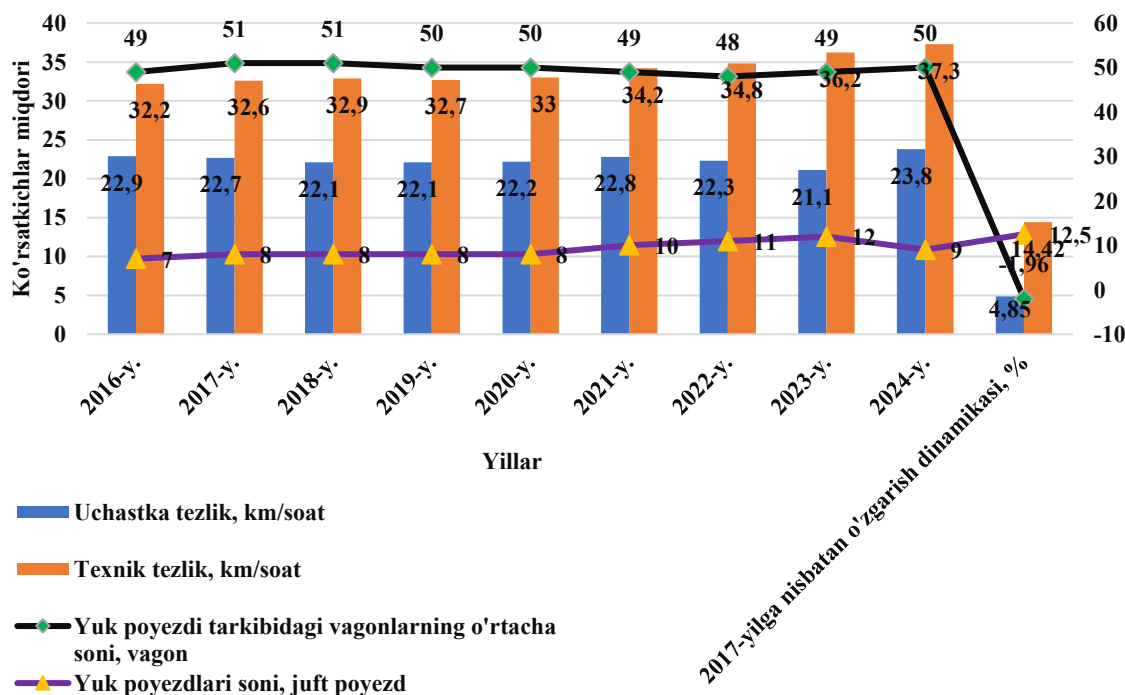
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1-rasm. "O'TY" AJ "Angren-Pop" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi

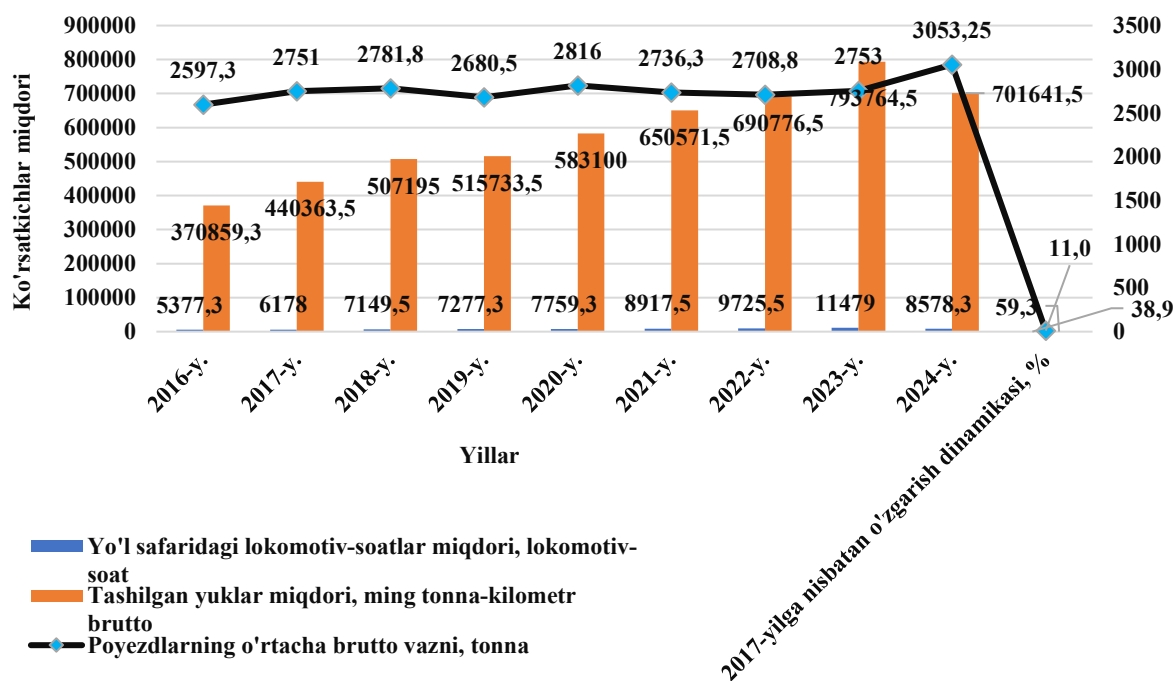


2-rasm. "O'TY" AJ "Angren-Pop" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi

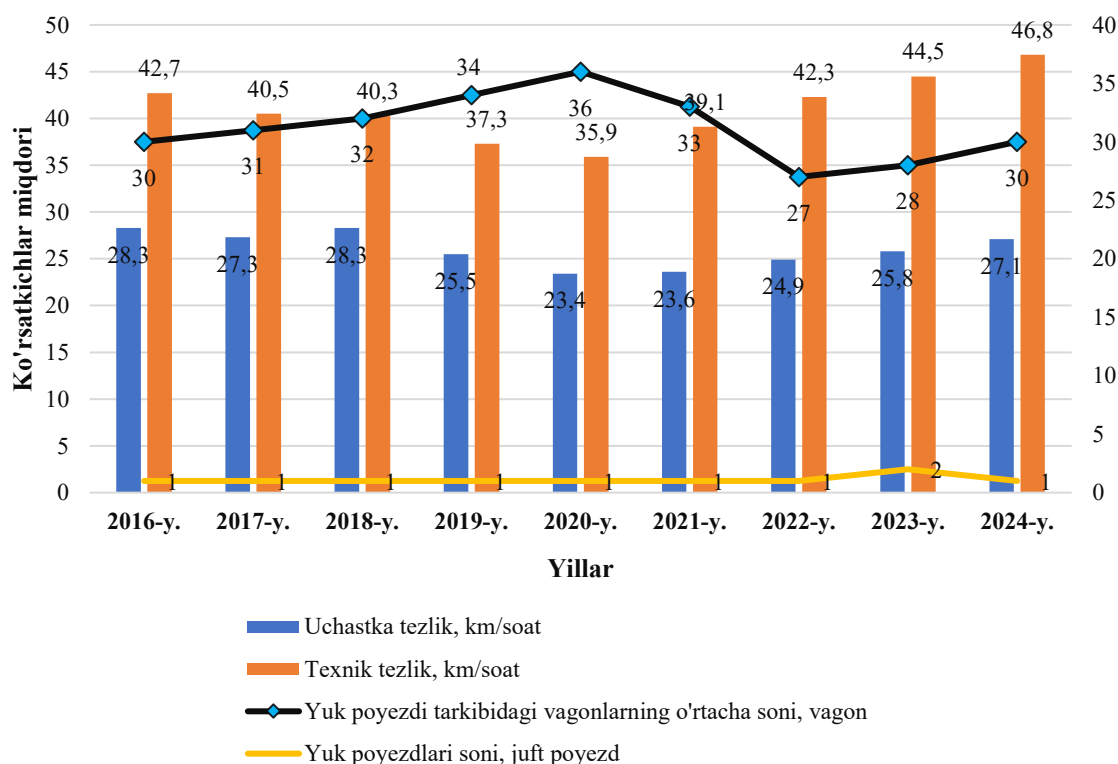


3-rasm. "O'TY" AJ "Chuqursoy-Angren" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi

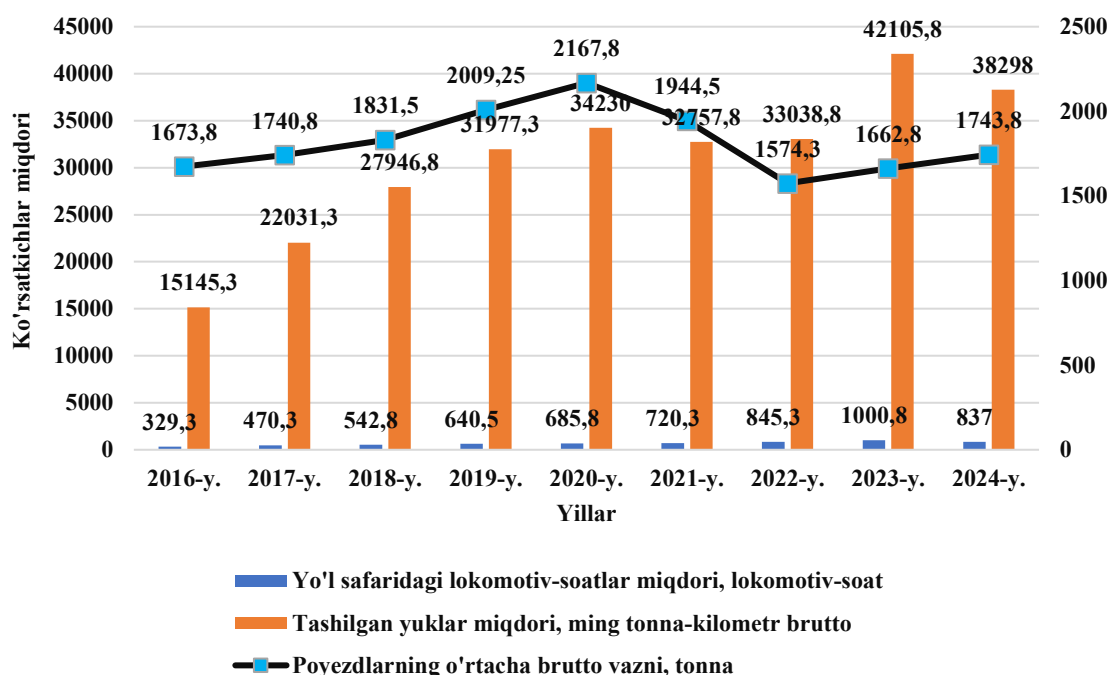




4-rasm. "O' TY" AJ "Chuqursoy-Angren" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi



5-rasm. "O' TY" AJ "Pop-Andijon" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi



6-rasm. "O'TY" AJ "Pop-Andijon" temir yo'l uchastkasining asosiy ko'rsatkichlarini o'zgarish dinamikasi

3. Natija va muhokamalar

"O'TY" AJ murakkab tog'li temir yo'l uchastkasi "Angren-Pop-Angren" qolaversa "Chuqursoy-Angren", "Pop-Andijon" temir yo'l uchastkalarining o'tkazuvchanlik qobiliyatlari va asosiy sifat ko'rsatkichlari tahlili 1-6-rasmda keltirilgan. Tahlillar shuni ko'rsatdiki, bir yo'llik Angren-Pop uchastkasining yuk oqimlarini ortib borish sharoitida yuk poyezdlarining o'rtacha brutto vazni 2017-yilga nisbatan 2024-yilda 11,2 %ga kamayib 2002 tonnani tashkil etgan va holanki ushbu uchastkadan 2017 yilda 2254,8 tonna og'irlikdagi poyezdlar harakati tashkil etilgan. Yuk poyezdlari soni esa 3 barobarga oshgan shuningdek, yuk poyezdlari tarkibidagi vagonlar sonini 12,82 %ga kamayib 34 tani tashkil etgan. Chuqursoy-Angren uchastkasida esa yuk poyezdlarining o'rtacha vazni 2017 yilga nisbatan 2024-yilda 11 %ga ortgan shuningdek tashilgan yuklar miqdorini 59,3 %ga ortganini ko'rishimiz mumkin (1-4-rasmlar). Bu esa kelgusida ushbu uchastkalarda yuk va poyezd miqdorini yanada ortib borishi yuzaga kelishini anglatadi.

4. Xulosa

"O'TY" AJning murakkab tog'li temir yo'l uchastkasi orqali o'tuvchi Pop-Andijon uchastkasida esa 2020-yilga nisbatan 2024-yilda yuk poyezdlari og'irligining 19,56 %ga kamayganini ko'rishimiz mumkin. Bu esa o'z navbatida yuk poyezdi tarkibidagi vagonlarning 16,7 % gacha kamayib ketishiga olib kelgan (5-6-rasmlar). Buni inobatga olgan holda shuningdek, O'zbekiston-Qirg'iziston-Xitoy temir yo'li rivojlanishida tranzit yuk oqimini hajmi hisobiy yillikda 15 million tonnagacha yetishi kutilmoqda, shu nuqtai nazardan O'zbekiston-Qirg'iziston-Xitoy temir yo'li rivojlanishida Angren – Pop uchastkasida joylashgan temir yo'l tunnelini yuk tashish qobiliyatidan shuningdek, yuk poyezdlarini og'irligi va tezligini optimallashtirish dolzarb

ahamiyat kasb etadi. Shu sababli, poyezd o'tkazish holatini barqarorlashtirish uchun texnik-tashkiliy tadbirlarni tatbiq qilish orqali ortiqcha sarf-xarajatsiz vaziyatga ijobiy yechim topish kerakligini amalda ko'rsatish zarur. Shunday ekan, ushbu sohada ham boshqa sohalaridagi kabi innovatsion texnologiyalarni joriy etish orqali poyezd o'tkazuvchanlik qobiliyatidan ratsional foydalanish muammolariga ijobiy yechim topish maqsadga muvofiqdir.

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