

## ARKALI VA KOMBINATSIYALANGAN TEMIRBETON KO`PRIKLARNING KONSTRUKSIYALARI VA HISOBIY SXEMASI

*Barotov Ashurali Ixtiyor o'g'li*

*Toshkent davlat transport universiteti*

**Annotatsiya:** Ushbu maqolada arkali va kombinatsiyalangan temirbeton konstruksiyalar haqida ma'lumotlar berilgan va tahlil natijalari keltirilgan.

**Annotation:** This article provides information about arched and combined reinforced concrete structures and presents the results of analysis.

**Kalit so'zlar:** temirbeton ko`prik, arkali ko`prik, rasporlar, sharnirlar

**Keywords:** reinforced concrete bridge, arched bridge, spacers, hinges

Arkali ko`priklarning asosiy ko`taruvchi konstruksiyalari egri chizikli elementlar – *arkalar yoki gumbazlardir*. Arkali oraliq qurilmalarning tayanch kesimlari mahkamlangan va ular gorizontal yo`nalishda siljiy olmaydilar (1-rasm). Shuning uchun vertikal yuklar ta'sirida arkaning tayanchga mahkamlangan joylarida *gorizontal reaksiyalar* – *raspor* paydo bo'ladi. Rasporning paydo bo'lishi arkali sistemalar ishining xarakterli hususiyatidir.

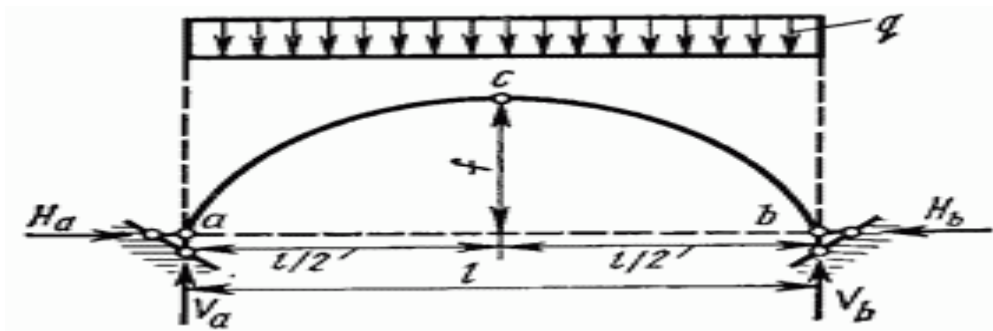


1-rasm Arkali ko`priklarning ko`rinishi.

Odatda arkaning o`qi doimiy yuklar bosimi egri chizig'iga mos tushadigan (bunda eguvchi momentlar nolga teng) qilib tanlanadi. Lekin, arkaning uzunligi bo'yicha ixtiyoriy vaziyatda bo'lishi mumkin bo'lgan vaqtinchalik yuklar ta'sir etganda,

a  
r  
k  
a  
n  
i

Arkali variantning tanlovi rasporsiz va rasporli sistemalar variantlarini iqtisodiy solishtirishga asoslangan bo'lishi lozim.

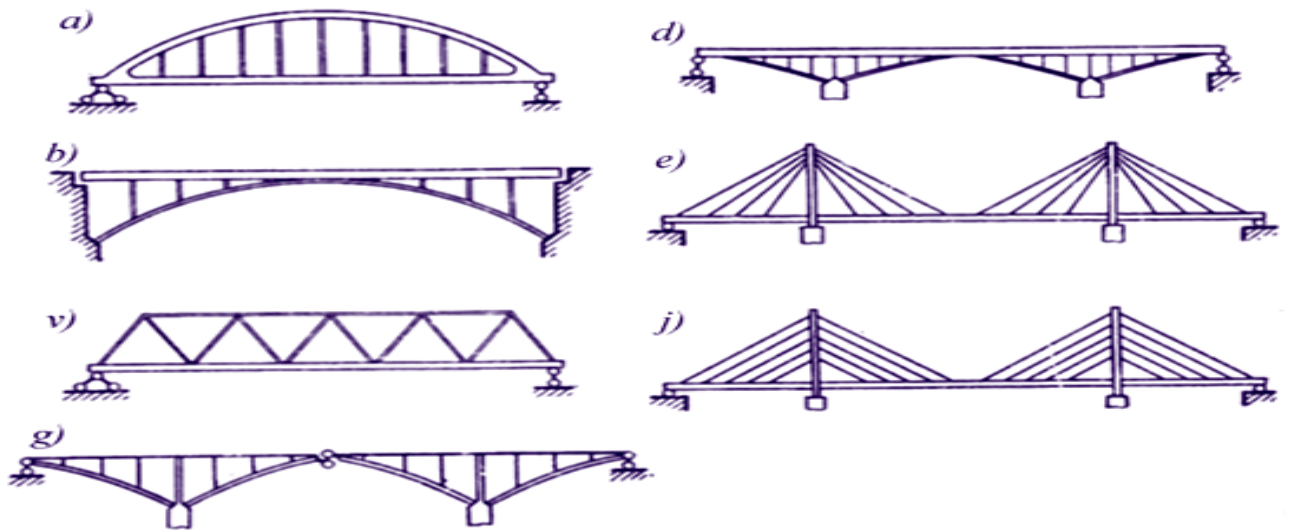


2-rasm. Arkali ko`priklarda eguvchi momentlarning hosil bo`lishi.

A

r  
k  
a  
l  
i  
  
o  
r  
a  
l  
i  
q  
  
q  
u  
r  
i  
l  
m  
a  
l  
a  
r  
  
s  
h  
a  
r

i  
r



3-rasm. Kombinatsiyalangan oraliq qurilmalarning sxemalari

Tortqichli arkalar temirbeton to‘sinlarni qo‘llash maqsadga muvofiq bo‘lmaganda ( $l > 33m$ ), shuningdek geologik shartlarga ko‘ra rasporli sistemalarni qo‘llash murakkab bo‘lganda qo‘llaniladi. Kombinatsiyalangan sistemaning boshqa bir turi – bikr to‘sin va egiluvchan rasporli arkaning birlashmasidir ( 3-b rasm). Bunday konstruksiyada balandligi kichik bo‘lgan arkalar nisbatan kichik egilish bikrligiga ega va ular, asosan, siquvchi zo‘riqishlarni qabul qiladi. Bu yerda yaxlit gumbazlarni qo‘llash qulaydir, chunki ularning balandligi kichik bo‘lganiga qaramasdan ko‘ndalang kesimlari yuzasi kattadir. Egiluvchan arkali kombinatsiyalangan sistemalarning kamchiligi – vaqtinchalik yuk bilan nosimmetrik (bir tomonlama) yuklanganda

u  
l  
a  
r  
n  
i  
n  
g  
  
d  
e  
f  
o  
r  
m  
a  
t  
i

**Foydalanilgan adabiyotlar ro‘yxati**

1. Karimova A.B., Barotov A. (2023). Impact of Earthquakes on Artificial Structures. *Miasto Przyszłości*, 33, 48-52
2. Karimova A.B., Barotov A. (2022). Gruntlarning fizik - mexanik xossalarini aniqlash. *Procedia of Theoretical and Applied Sciences (Portugal) “International Symposium of Life Safety and Security”*, 1-5.
3. Shermukhamedov, U., Karimova, A. (2022). MODERN APPROACHES TO THE DESIGN AND CONSTRUCTION OF BRIDGES AND OVERPASSES IN THE REPUBLIC OF UZBEKISTAN. *Science and innovation*, 1(A8), 647-656
4. Odilbekovich, S. K., & Islomovna, M. F. (2023). Technology of Work on the Replacement of Contaminated Ballast below the Sole of Sleepers. *New Scientific Trends and Challenges*, 1, 21-24.
5. Islomovna, M. F. ., & Ixtiyor ugli, B. A. . (2023). Methods of Fastening the Elements of the Node. *EUROPEAN JOURNAL OF INNOVATION IN NONFORMAL EDUCATION*, 3(3), 40–44. Retrieved from <http://inovatus.es/index.php/ejine/article/view/1527>
6. Abdullaevich, K. I. ., Farhodovna, T. D. ., Bakhodir, A. ., & Ashurali, B. . (2023). Some Aspects of the Technology of Continuous Formulation of Reinforced Oncrete Products. *Pioneer : Journal of Advanced Research and Scientific Progress*, 2(3), 121–123. Retrieved from <https://innosci.org/jarsp/article/view/1033>