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KARYER BORTLARINING TURG`UNLIGINI TA`MINLASH MAQSADIDA YORIQLARNI TARQALISH ZONASINING KENGLIGINI BURG'ILASH PORTLATISH ISHLARIGA BOG`LIQ TARZDA HISOBLASH

[1]To`xtashev Alisher Baxodirovich
Ilmiy rahbar: Navoiy davlat konchilik va texnalogiyalar universiteti, dotsent
[2]Normatova Muborak Jabborovna
Navoiy davlat konchilik va texnalogiyalar universiteti, dotsent
[3]Abruyev Samandar Shodmon o`g`li
[4]Davronova Gulchehra Jurabek qizi
[5]Xakimova Sabina Zaynitdin qizi
[6]Hamroyeva Muxlisa ... qizi
Navoiy davlat konchilik va texnalogiyalar universiteti, talabalaari
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ABSTRACT
Mazkur maqolada konchiliik sohasidagi burg'ilash portlatish ishlarining karyer bort turg'unligiga ta`siri.

Yoriqning kengayish zonasining kengligini quyidagi formula bo'yicha aniqlash tavsiya etiladi (1,2)

$$r_{\max} = r_c \frac{kP}{\sqrt{\sigma_p}}, \text{ м}, \qquad (1)$$

bu yerda r_{max} -bitta ochiq sirtli quduq atrofidagi yoriq zonaning radiusi, m;
r_c -quduq radiusi, m;
k-dinamiklik koeffitsienti, k \ u003d 2;
P-portlash paytida quduq devorlariga maksimal bosim, Pa;
σ_p -dinamik yuklanish paytida kuchlanish kuchi, Pa (1-jadval).

1-jadval

Muruntau va Qalmoqqir konlarining tog ' jinslari uchun dinamik yuklanish kuchi

№	Tog' jinsi turi	Dinamik yuklanishda tortish kuchi $\sigma_p \cdot 10^6$, Pa
1.	Slanetslar uglerod-slyuda, kvarts - slyuda slanetslari uglerodli slanets qatlamlari bilan	5,5-7,2
2.	Slanetslar metasomatik jihatdan o'zgartirilgan, alevrolitlar	6,8-7,8
3.	Slanets karbonli slanets metasomatik ravishda kvartsitlarga o'zgartirilgan, karbonli alevrolitlar	7,5-9,2

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4.	Kvartsitlar, shox pardalar, alevrolitlar, uglerod-slyud va slyud-kvarts slanetslari	8,4-10,6

[3; 181-bet] ga ko'ra, portlash quduqlarining diametri tog ' jinslarining fizik-mexanik xususiyatlariga va qirg'oq balandligiga bog'liq va quyidagi formula bo'yicha aniqlanadi:

$$d_c = K_r d_\partial, \text{ mm, (2)}$$

bu yerda Kr-toshlarning xususiyatlariga va burg'ulash texnologiyasiga bog'liq bo'lgan quduqlarni kengaytirish koeffitsienti (2-jadval) [3; 182 – bet]; $d_д$-chiselning diametri, mm.

2-jadval. Burg'ilashda quduqlarni kengaytirish koeffitsientlari

№	M. M. Protodyakonov shkalasi bo'yicha qattiqlik koeffitsienti, f	Kengayish koeffitsienti, K_r
1.	6	1,12
2.	7	1,12
3.	8	1,11
4.	9	1,10
5.	10	1,09
6.	11	1,09
7.	12	1,09
8.	13	1,09
9.	14	1,08
10.	15	1,08
11.	16	1,07

(2) formulani hisobga olgan holda, yoriqlar rivojlanish zonasining kengligi quyidagi formula bilan aniqlanadi:

$$r_{\max} = \frac{K_r d_\partial}{2} \frac{kP}{\sqrt{\sigma_p}}, \text{ м.} \quad (3)$$

Portlash paytida quduq devorlariga bosim miqdorini quyidagi formula bilan aniqlash mumkin [4; 287-288 betlar]:

$$P = \left(13\frac{Q}{r^3} + 3{,}9\frac{Q^{2/3}}{r^2} + 0{,}95\frac{Q^{1/3}}{r}\right)\cdot 10^3, \text{ Па,} \quad (4)$$

bu yerda Q-quduqdagi BB zaryadining massasi, kg; r-masofa, m.

(4) formulani hisobga olgan holda, yoriqlar rivojlanish zonasining kengligi quyidagi formula bilan aniqlanadi:

$$r_{\max} = \frac{K_r d_\partial}{2} \frac{k\left(13\frac{Q}{r^3} + 3{,}9\frac{Q^{2/3}}{r^2} + 0{,}95\frac{Q^{1/3}}{r}\right)\cdot 10^3}{\sqrt{\sigma_p}}, \text{ м.} \quad (5)$$

k-dinamiklik koeffitsienti, k = 2;

σ_p -dinamik yuklashda kuchlanish kuchi, 5,5 x 9,7 10^6 Pa (1-jadval);

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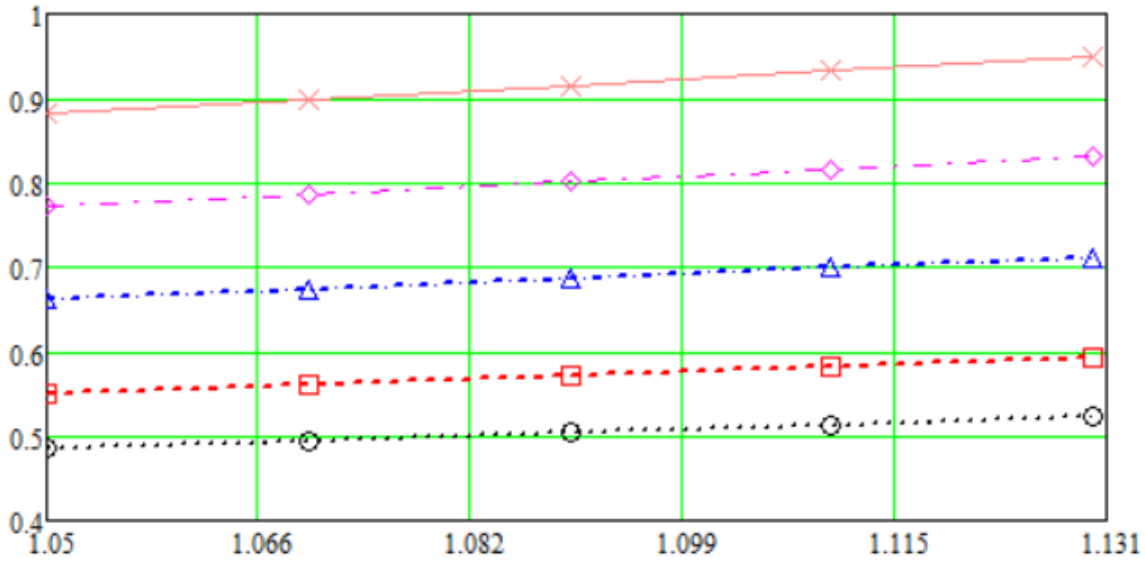
Kr-tog ' jinslari xususiyatlari va burg'ulash texnologiyasiga qarab quduqlarni kengaytirish koeffitsienti, 1,1 dan 1,5 gacha (2-jadval) [3; 182-bet];

$d_д$ -dolotaning diametri, 125 dan 250 mm gacha.

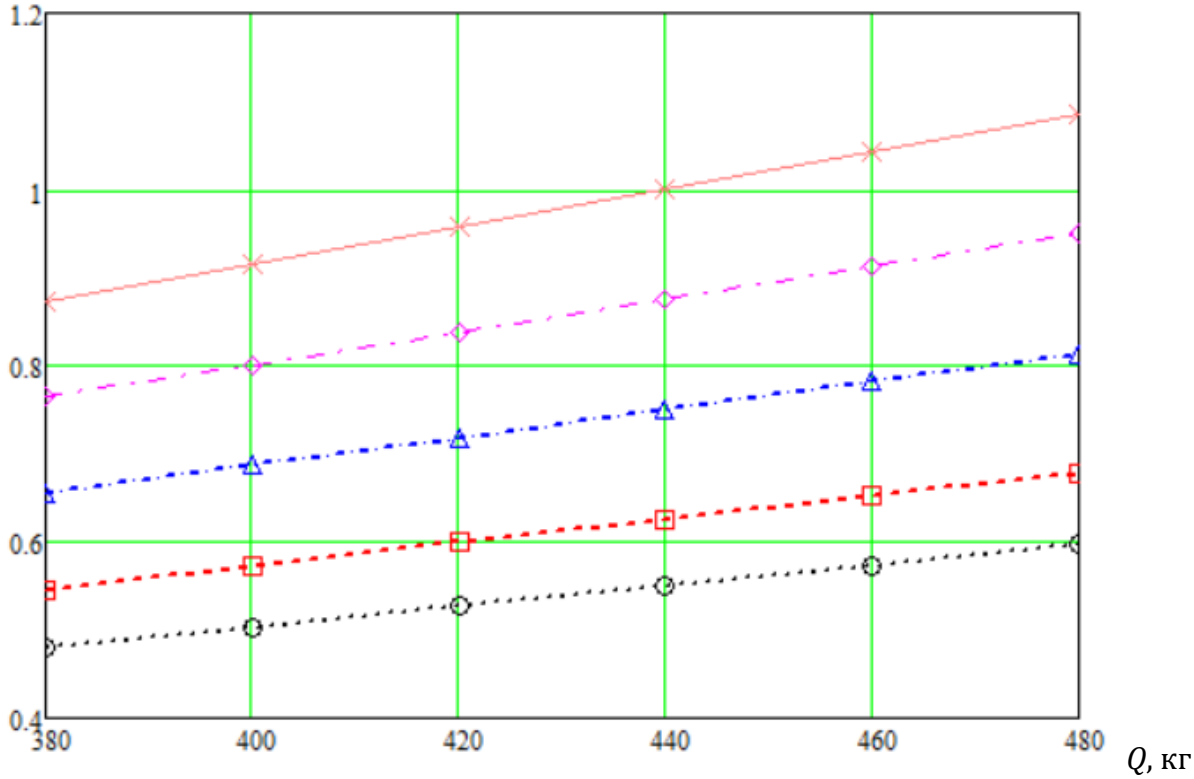
Q-quduqdagi BB zaryadining massasi, 380 ÷480 kg;

r-masofa, 6 dan 12 m gacha;

r_{max}, m



Quduqning turli diametrlarida ○ – dд=110 мм; □ – dд=125 мм; Δ – dд=150 мм; ◊ – dд=175 мм; x – dд=200 мм;



Quduqning turli diametrlarida ○ – dд=110 мм; □ – dд=125 мм; Δ – dд=150 мм; ◊ – dд=175 мм; x – dд=200 мм;

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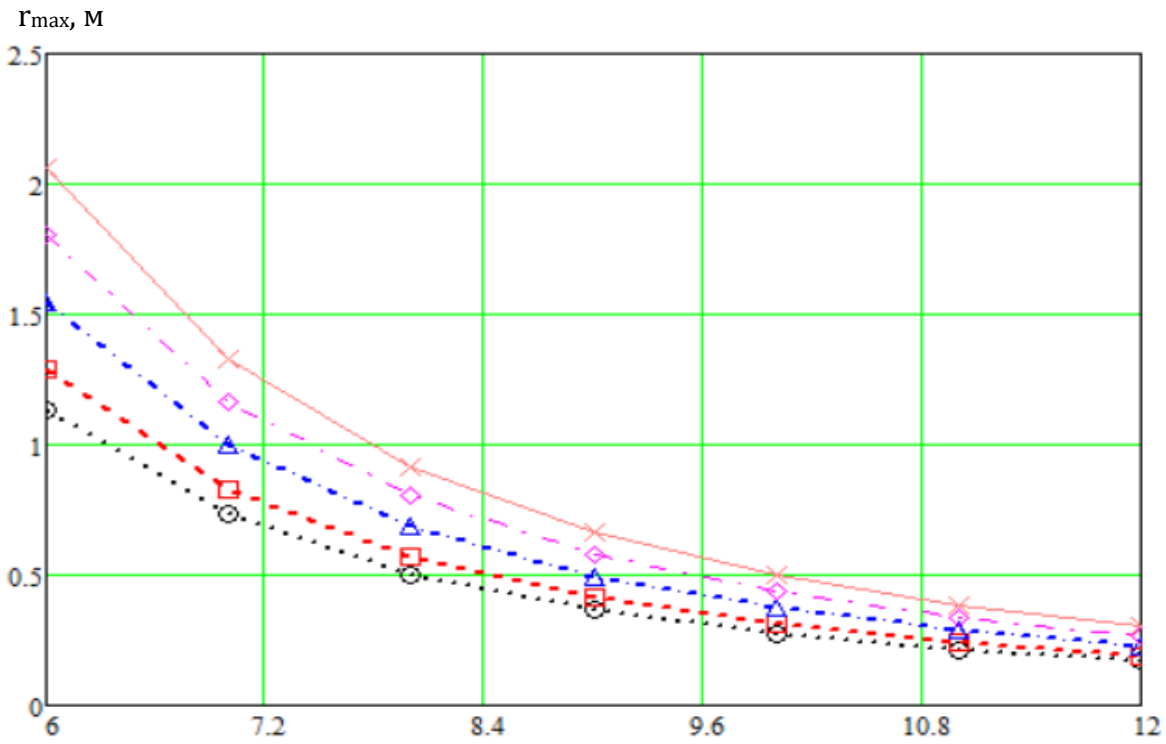
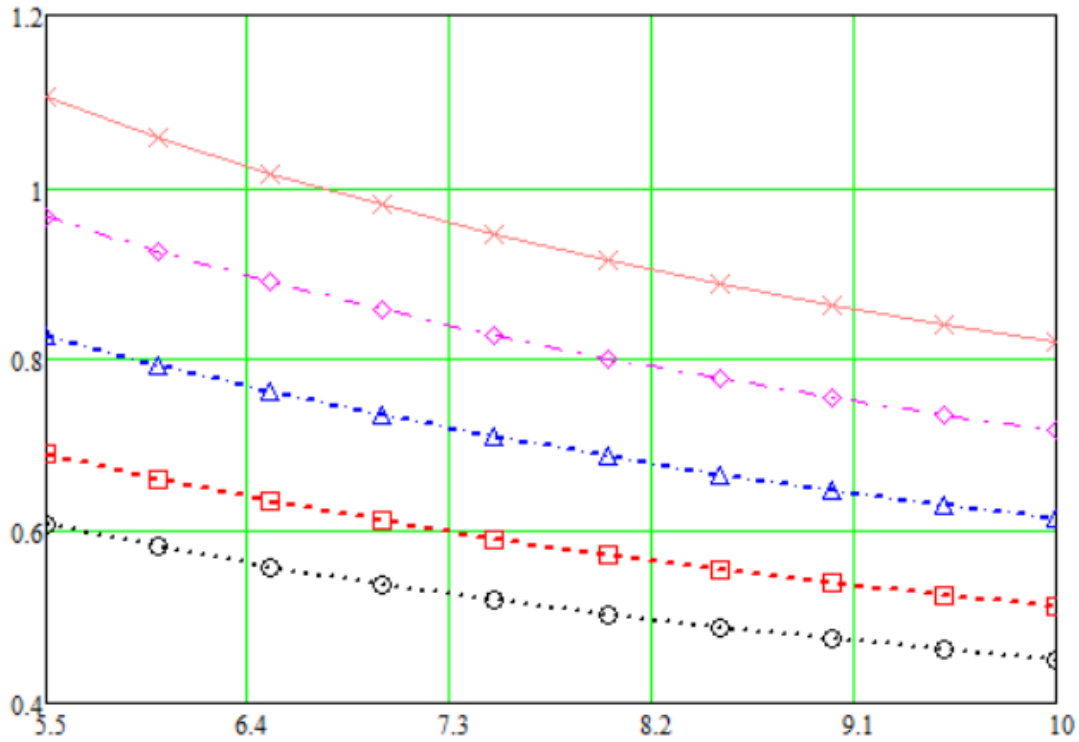


Quduqning turli diametrlarida ○ – dд=110 мм; □ – dд=125 мм; Δ – dд=150 мм; ◊ – dд=175 мм; x – dд=200 мм;



Quduqning turli diametrlarida ○ – dд=110 мм; □ – dд=125 мм; Δ – dд=150 мм; ◊ – dд=175 мм; x – dд=200 мм;

Agar quduqlarda portlovchi moddalarning zaryad zichligi past bo'lsa, u holda portlash mahsulotlarining quduq devorlariga bosimini [5, 6]formulasi bilan hisoblash mumkin.:

$$P = Q\omega(\gamma - 1)(\vartheta_c - \alpha_k)^{-1}, \text{ Па} \quad (6)$$

bu yerda ω – BB ning o'ziga xos energiyasi, J/kg; γ – izentrop ko'rsatkichi ; ϑ_c – quduq hajmi, m3; α_k -kovolum (quduqdagi bosim 200 MPa dan oshmaganligi sababli, α_k qiymatini e'tiborsiz qoldirish mumkin).

Nisbatni hisobga olgan holda

$$Q/\vartheta_c = 4q/(\pi d_c^2), \quad (7)$$

portlash mahsulotlarining quduq devorlariga bosimi quyidagicha bo'ladi:

$$P = 4q\omega(\gamma - 1)\eta(\pi d_c^2)^{-1}, \quad (8)$$

bu yerda q-zaryadning chiziqli massasi, kg / m; 4ω(γ – 1)η – energiya yo'qotilishini hisobga oladigan koeffitsient.

(8) formulani hisobga olgan holda, (3) nisbati shaklni oladi:

$$r_{\max} = \frac{K_r d_\partial}{2} \frac{k\left(4q\omega(\gamma - 1)\eta(\pi d_c^2)^{-1}\right)}{\sqrt{\sigma_p}}, \text{ м.} \quad (9)$$

k-dinamiklik koeffitsienti, k = 2;

σ_p -dinamik yuklashda kuchlanish kuchi, 5,5 x 9,7 106 Pa (1-jadval).

Kr-tog' jinslari xususiyatlari va burg'ulash texnologiyasiga qarab quduqlarni kengaytirish koeffitsienti, 1,1 dan 1,5 gacha (2-jadval) [3; 182-bet];

$d_д$ -chiselning diametri, 125 dan 250 mm gacha.

4ω(γ – 1)η – energiya yo'qotilishini hisobga oladigan koeffitsient,

η –

ω-BB ning o'ziga xos energiyasi, 3 ÷6 * 10^6j / kg;

γ-izoentrop ko'rsatkichi, 1,2 dan 1,7 gacha;

q-chiziqli zaryad massasi, kg / m;

$d_c = K_r d_\partial$, mm, portlash quduqlarining diametrik.

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