

AJRALUVCHI BIRIKMALAR

Ajraluvchi birikmalar mavzusi mashinasozlik chizmachiligida talabani dastlabki yig'ish chizmalarini tuzishga o'rgatuvchi material hisoblanadi. Mashina mexanizmlari, turli moslamalarni tarkibida uchraydigan har xil birikmalarni sozlash, ta'mirlash, yangisiga almashtirishga to'g'ri keladi.

Agar birikma tarkibidagi detallarni bir-biridan ajratish jarayonida ularning sifati buzilmasa, yaroqsiz holatga kelib qolmasa, detallar hamda birikmadan yana qayta foydalanish mumkin bo'lsa, u holda bunday birikmalar *ajraluvchi birikma* deyiladi.

Ajraluvchi birikmalarni hosil qilishda asosiy o'rinni biriktirish detallari egallaydi. Biriktirish detallariga esa quyidagi detallar kiradi: *boltlar, shpilkalar, vintlar, shuruplar, shponkalar, shtiftlar, shplintlar*. Ushbu biriktirish detallari yordamida ajraluvchi birikmalar hosil qilinadi.

Ajraluvchi birikmalarning turlari ham biriktirish detallari nomi bilan ataladi. Ular quyidagilar:

1. Rezbali birikmalar.

- 1.1. Boltli birikmalar.*
- 1.2. Shpilkali birikmalar.*
- 1.3. Vintli birikmalar.*
- 1.4. Shurupli birikmalar.*
- 1.5. Fitingli (truba rezbali) birikmalar.*

2. Shtiftli birikmalar.

- 2.1. Konus shtiftli birikma.*
- 2.2. Silindrik shtiftli birikma.*

3. Shponkali birikmalar.

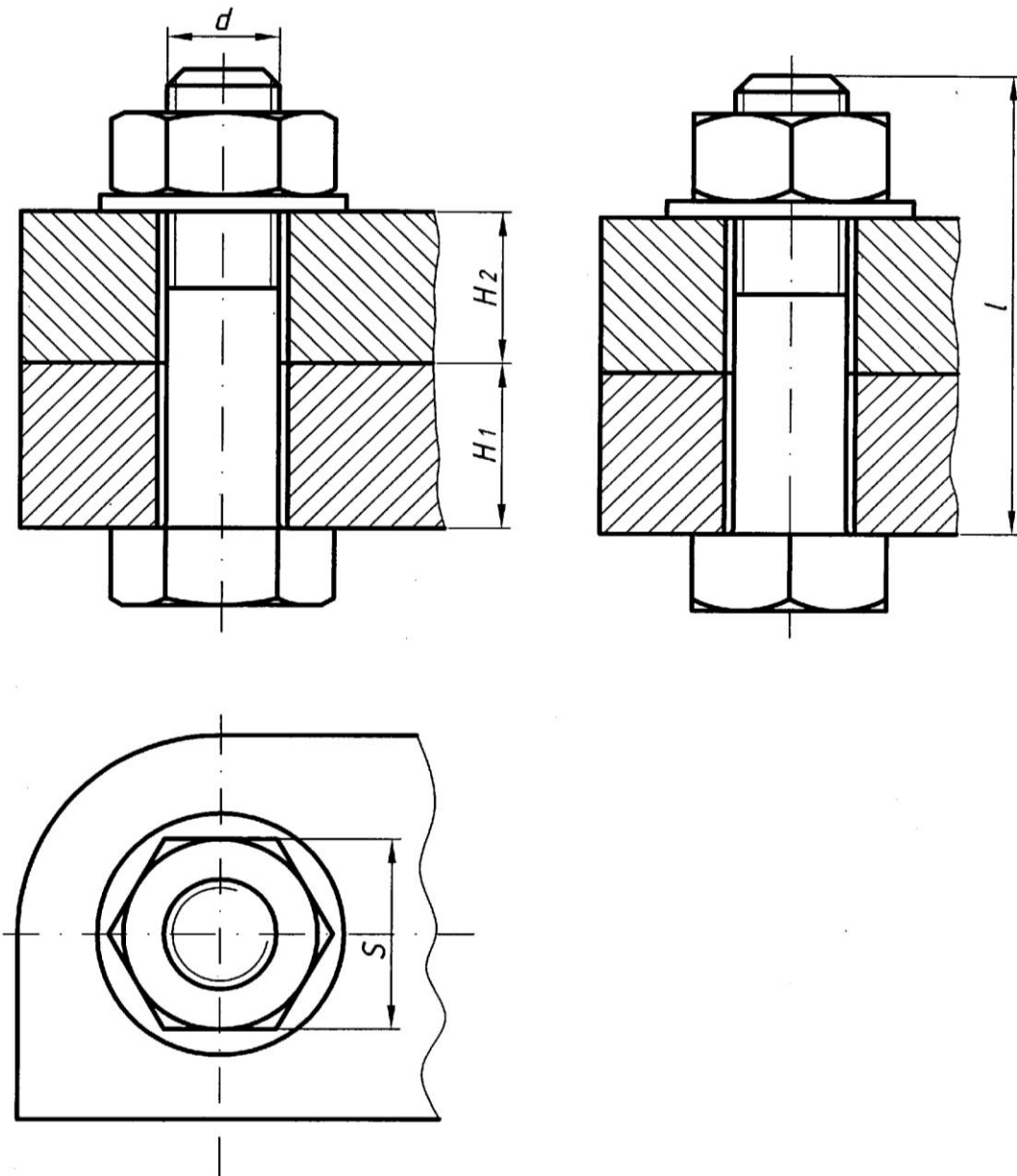
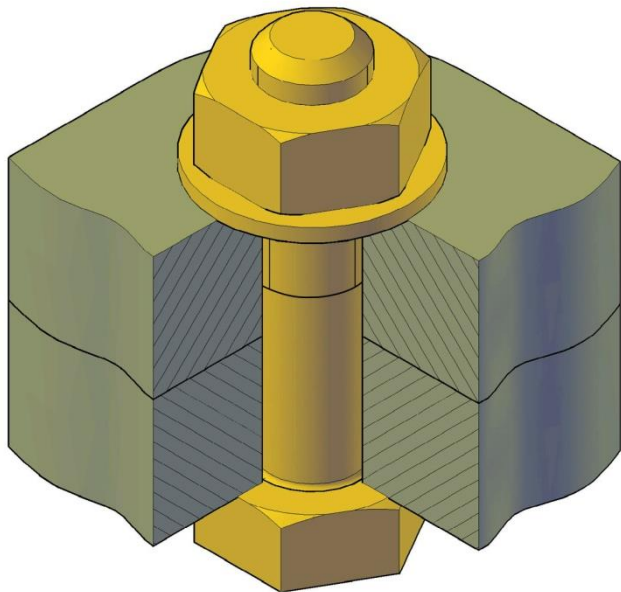
- 3.1. Prizmatik shponkali birikmalar.*
- 3.2. Segmentsimon shponkali birikmalar.*
- 3.3. Ponasimon shponkali birikmalar.*

4. Shlitsali birikmalar.

5. Shplintli birikmalar.

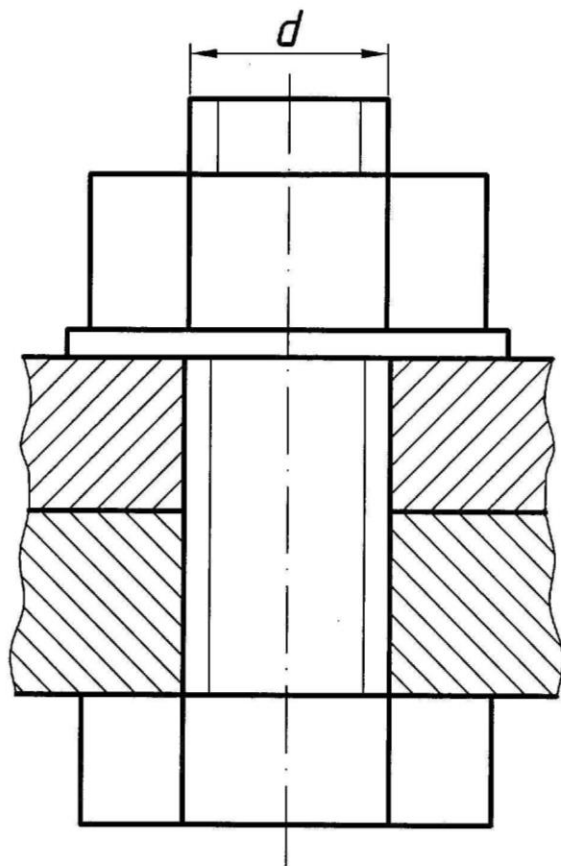
2. BOLTLI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

Boltli birikmada biriktiriluchi (ikki va undan ortiq) detallar bolt, gayka va shaybalar yordamida o'zaro biriktiriladi. Quyida boltli birikmaning yaqqol tasviri va ortogonal proyeksiyasi ko'rsatilgan. Boltli birikmalar o'zining mustahkamligi bilan ajralib turadi.

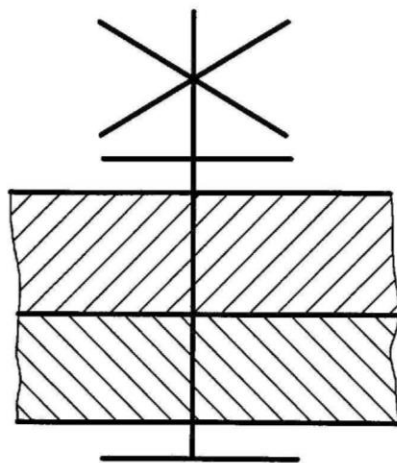


2. BOLTLI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

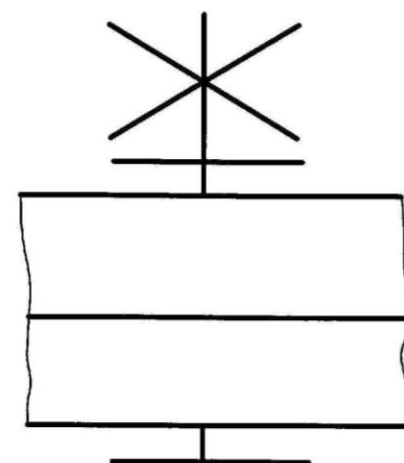
Bolti birikmani quyidagidek, soddalashtirib tasvirlash ham mumkin.



a)



b)



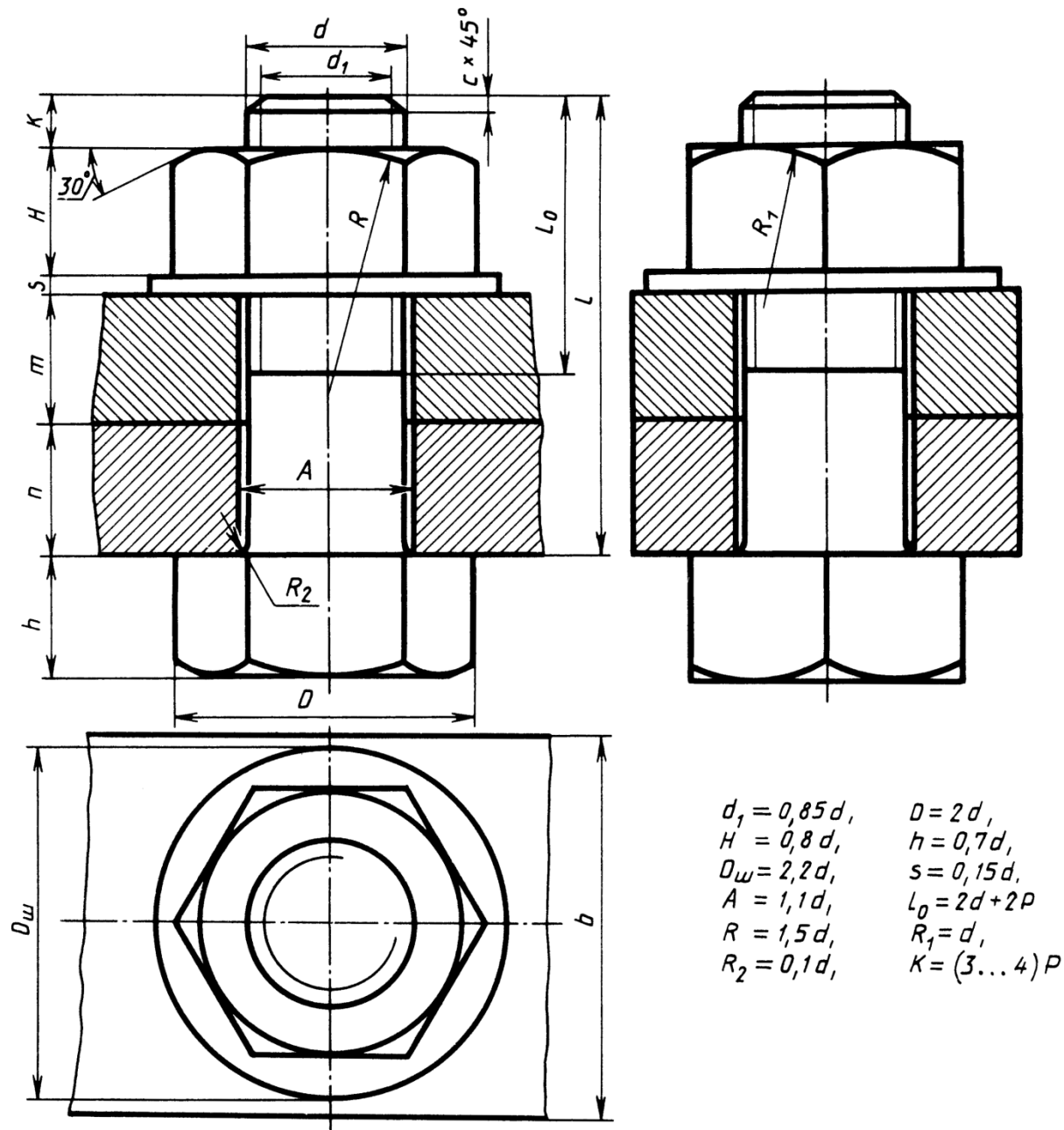
c)

BOLTLI BIRIKMALARGA OID GRAFIK VAZIFALAR

VA

UNING METODIK
TA'MINOTI

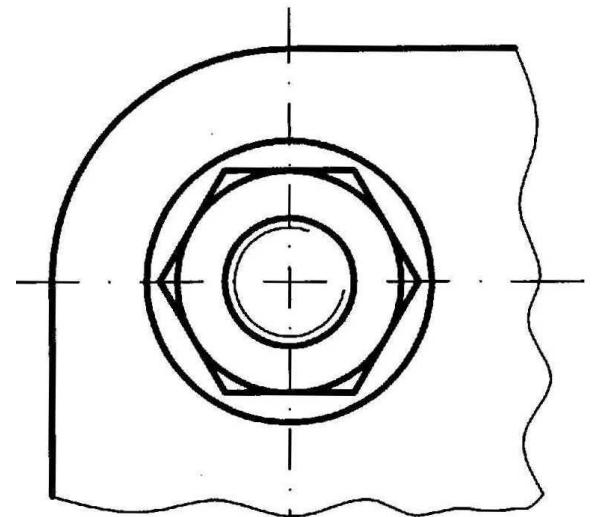
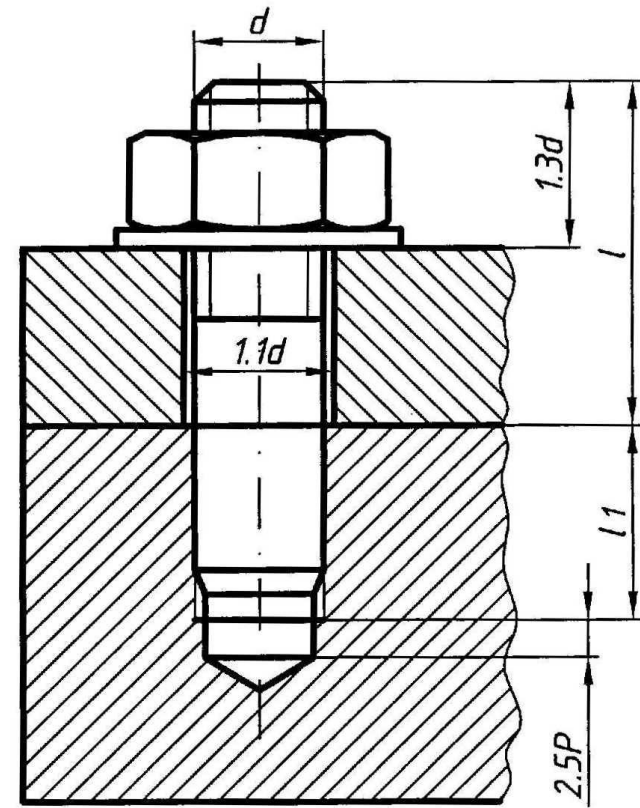
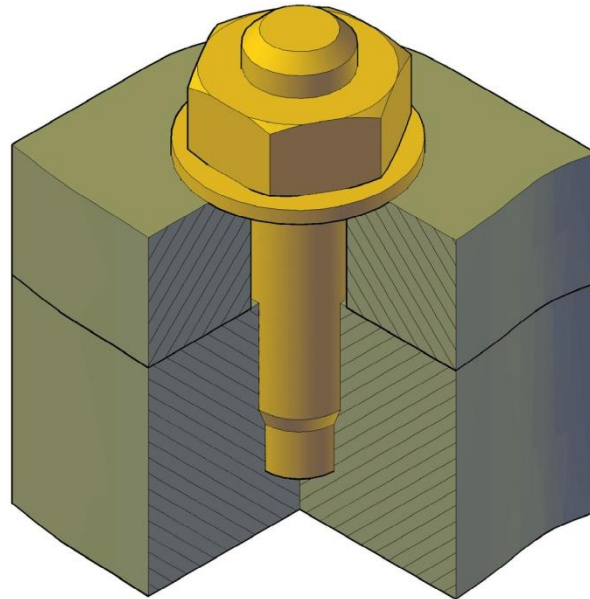
Boltli birikmani
bajarishda quyidagi
tasvirda keltirilgan
parametrik
formulalardan
foydalaniladi.
BMning
qo'lyozmasida
talabalar uchun
variantlar mavjud.



SHPIKALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

Bolt kallagi halaqit beradigan joylarda shpilkali birikmadan foydalaniladi.

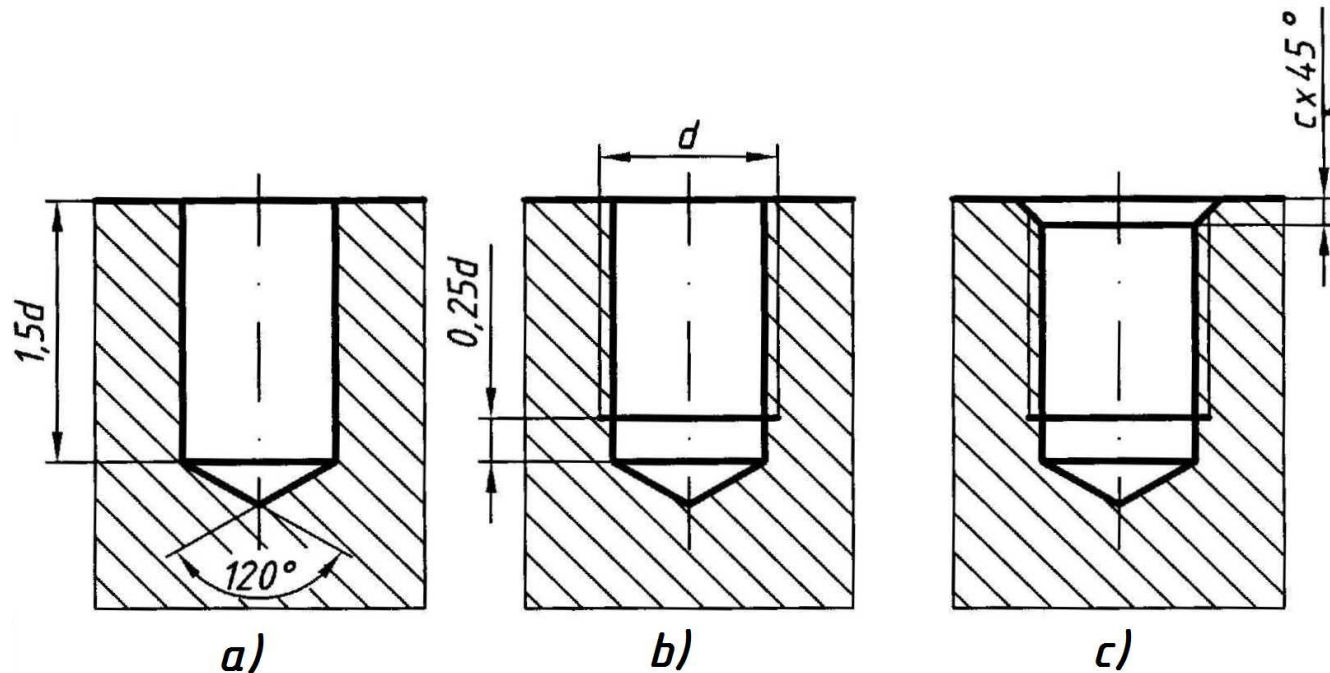
Shpilkali birikma biriktirish detallari shpilka, gayka va shaybalarning o'zaro birikuvidan hosil qilinadi.



SHPIKALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

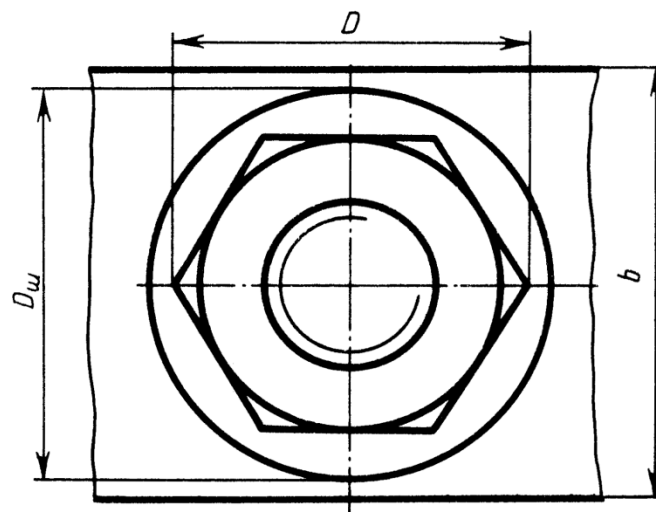
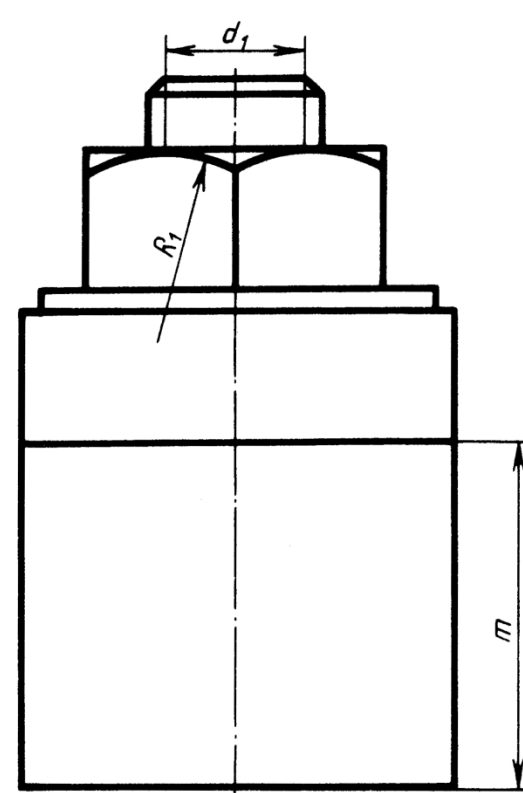
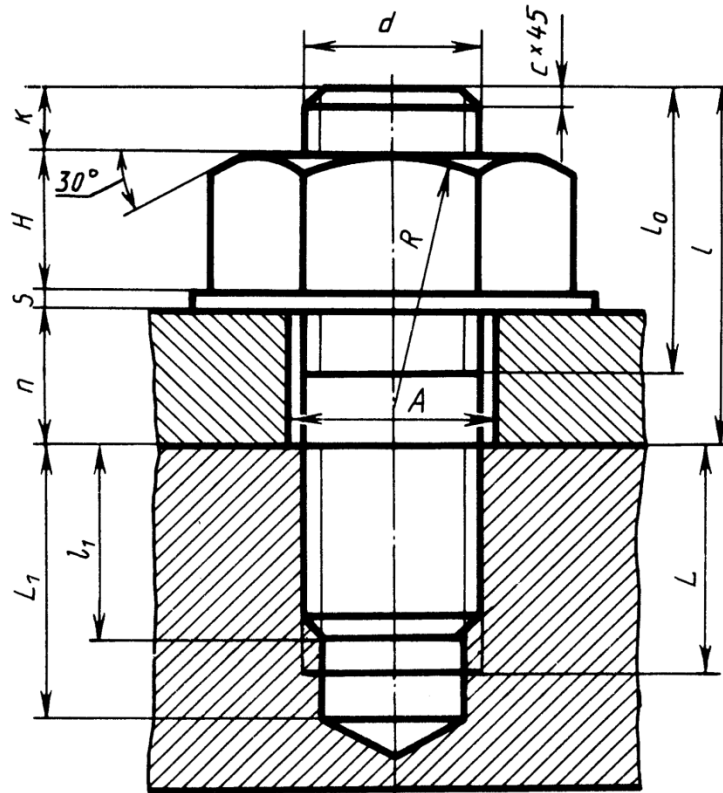
Shpilka ikki uchiga rezba ochilgan silindrik sterjen bo'lib, uning bir uchi biriktiriluvchi detal (shpilka uyasi)ga burab kргызiladi. Ikkinchi uchiga keyingi biriktiriluvchi detal kiygizilib, shayba va gayka bilan mos kalit (klyuch) orqali mahkamlanadi.

Shpilka uyasi deb birikuvchi detallardan biriga ochilgan uchi berk rezbali teshikka aytiladi. Uya avval parma bilan rezba diametrining ichki diametriga, ya'ni $d = 0,85 d$ ga teng qilib o'yiladi (a). Uyaning tubidagi konus parma uchidagi konus izi bo'lib, u 120° ga teng. Keyin bu uyaga metchik yordamida rezba o'yiladi (b). So'ngra shpilkani burab kргызish qulay bo'lishi uchun uya og'ziga faska ochiladi (c).



SHPIKALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

Shpilkali birikmani
bajarishda quyidagi
tasvirda keltirilgan
parametrik
formulalardan
foydalaniladi.
BMIning
qo'lyozmasida
talabalar uchun
variantlar mavjud.



$$\begin{aligned}
 d_1 &= 0,85 d, & D &= 2 d, \\
 H &= 0,8 d, & D_w &= 2,2 d, \\
 s &= 0,15 d, & A &\approx 1,1 d, \\
 l_0 &= 2 d + 2 P, & R &= 1,5 d, \\
 R_1 &= d, & K &= (3 \dots 4) P, \\
 L_1 &= d, & L_1 + 2 P &, \\
 L_1 &= L_1 + 0,5 d, & L &= L_1 + 2 P, \\
 & & b &= 3 d.
 \end{aligned}$$

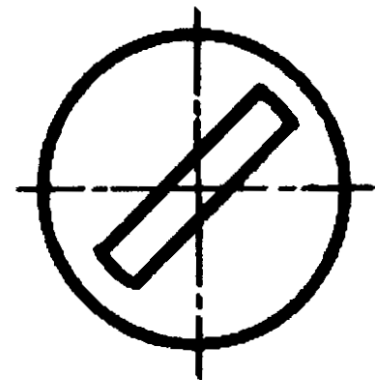
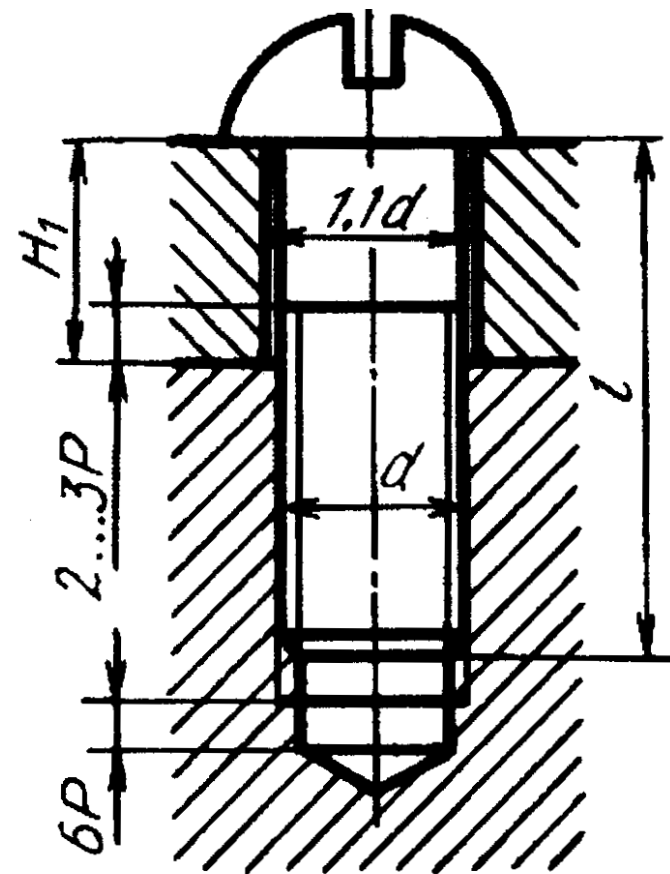
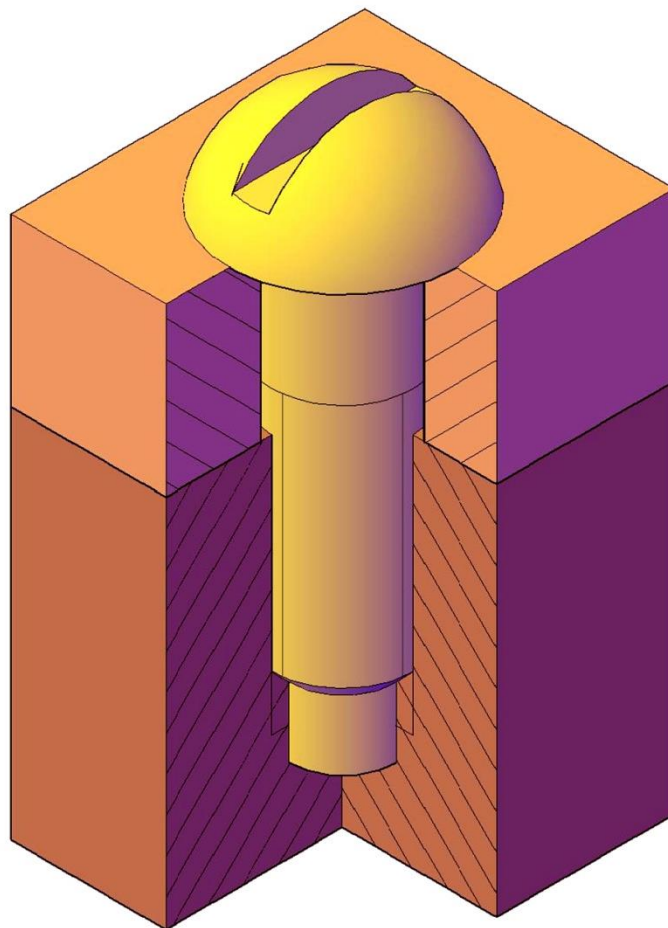
VINTLI VA SHURUPLI BIRIKMALARGA OID GRAFIK VAZIFALAR HAMDA UNING METODIK TA'MINOTI

Vintli birikmalar. Mashina va mexanizmlardagi yirik bo'lmagan detallarni vint yordamida biriktirishga amaliyotda ko'p duch kelamiz. Vintni birikmada biriktiriluvchi detallardan biriga silindrik ochiq teshik, ikkinchisiga rezba ochiladi. Vintli birikmalarda mustahkamlanadigan detallarda vintning kallagiga moslashtirilgan chuqurchalar ishlanadi.

Yarim yumaloq, silindrik, yashirin va yarim yashirin kallakli vintli birikmalarda biriktiriluvchi detalga vint erkin kirishi uchun **GOST 12876-96** ga muvofiq maxsus o'yoq va uning davomida $1,1 \times d$ o'lchamda silindrik teshik ochiladi. Biriktiriluvchi detallarning ochilgan silindrik teshik va rezbalari mos ravishda o'rnatiladi. So'ngra vint silindrik teshikdan o'tkazilib, rezba ochilgan detalga burab kiritiladi va vint kallagi rezbasiz detalni siqib vintli birikmani hosil bo'ladi.

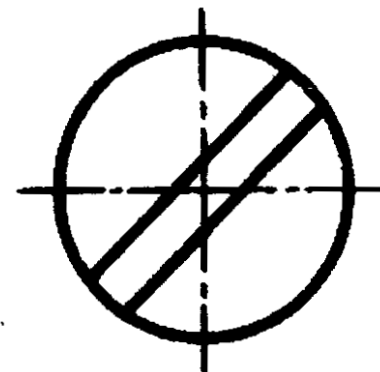
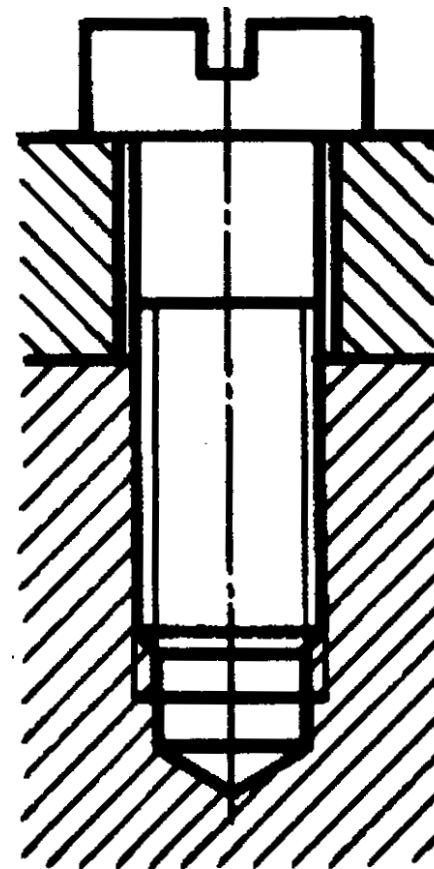
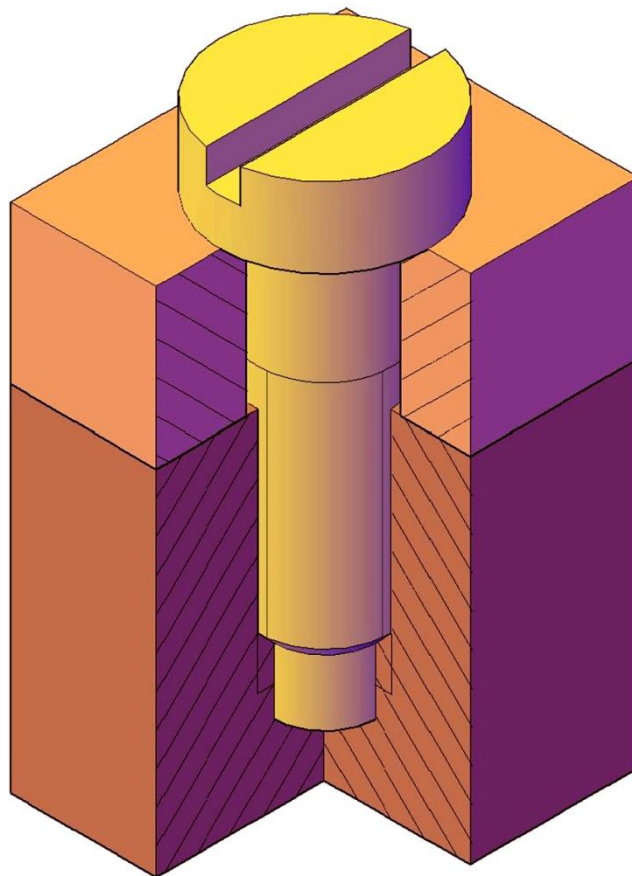
**VINTLI
BIRIKMALARGA OID
GRAFIK VAZIFALAR
HAMDA UNING
METODIK
TA'MINOTI**

**Yarim sferik
kallakli vintli
birikmaning
yaqqol tasviri va
ko'rinishlari.**



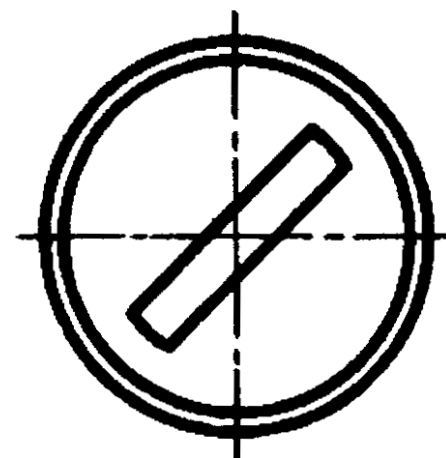
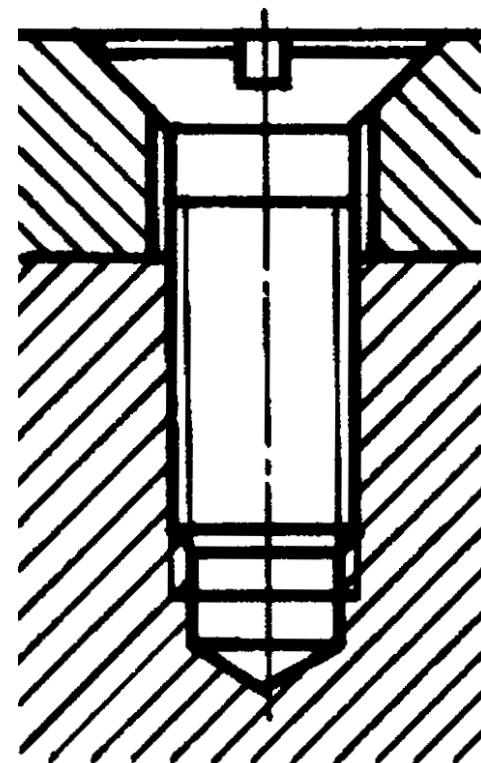
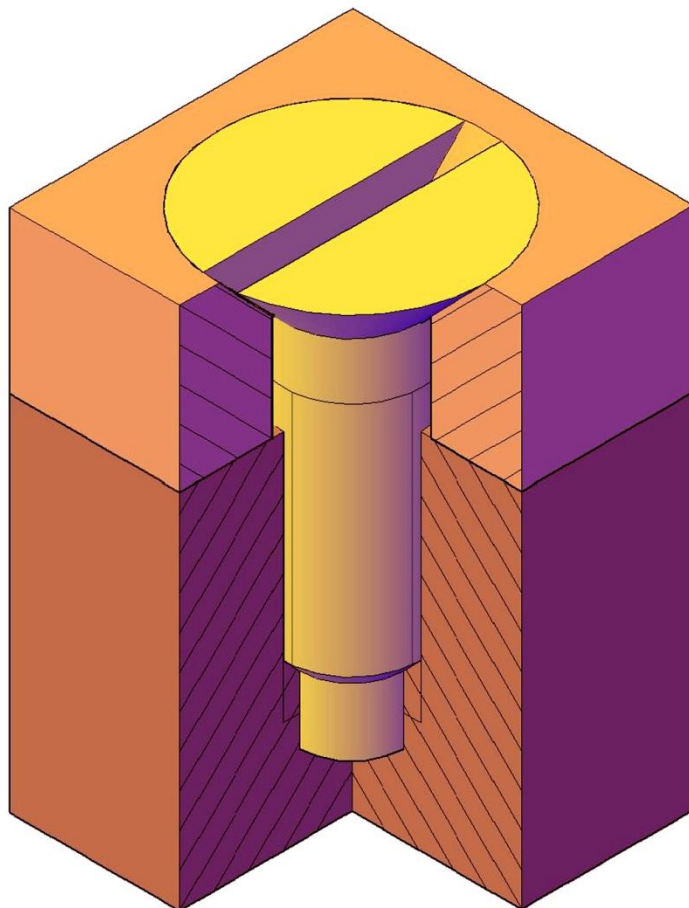
**VINTLI
BIRIKMALARGA OID
GRAFIK VAZIFALAR
HAMDA UNING
METODIK
TA'MINOTI**

**Silindrik kallakli
vintli
birikmaning
yaqqol tasviri va
ko'inishlari.**



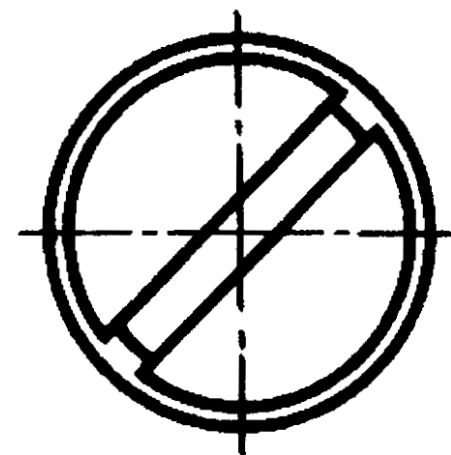
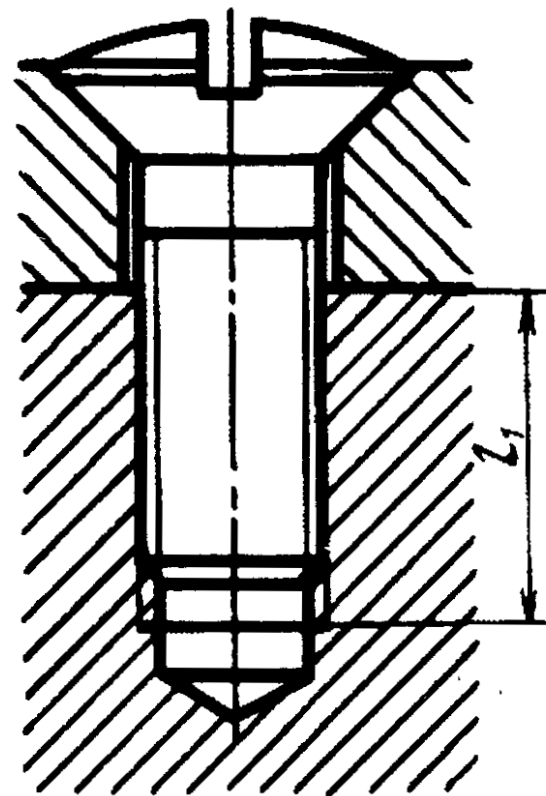
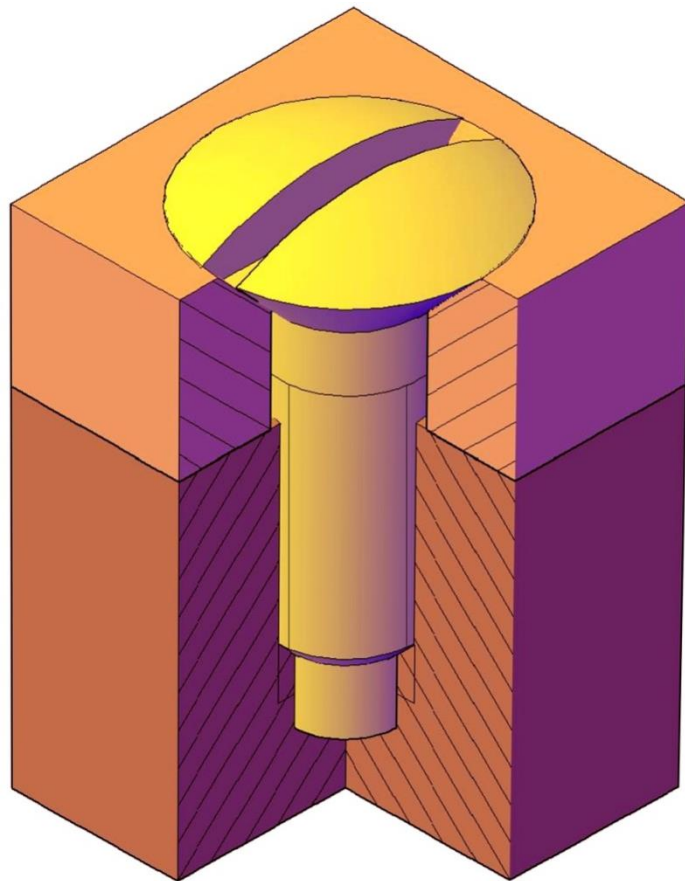
**VINTLI
BIRIKMALARGA OID
GRAFIK VAZIFALAR
HAMDA UNING
METODIK
TA'MINOTI**

**Yashirin kallakli
vintli
birikmaning
yaqqol tasviri va
ko'rinishlari.**



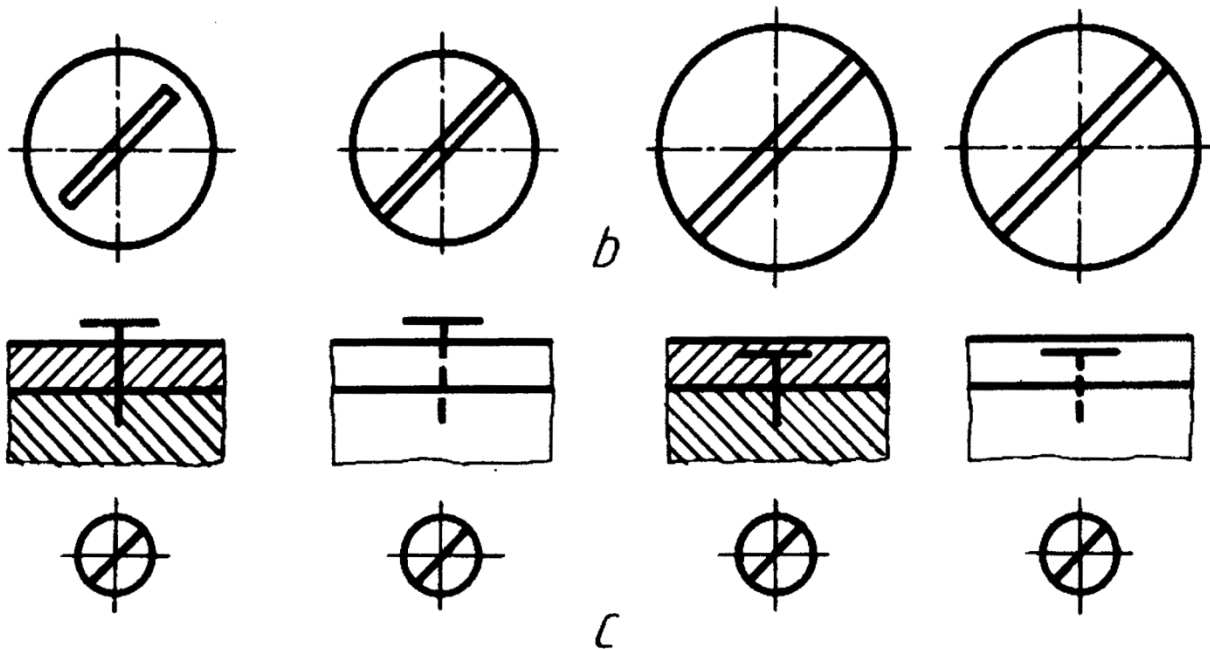
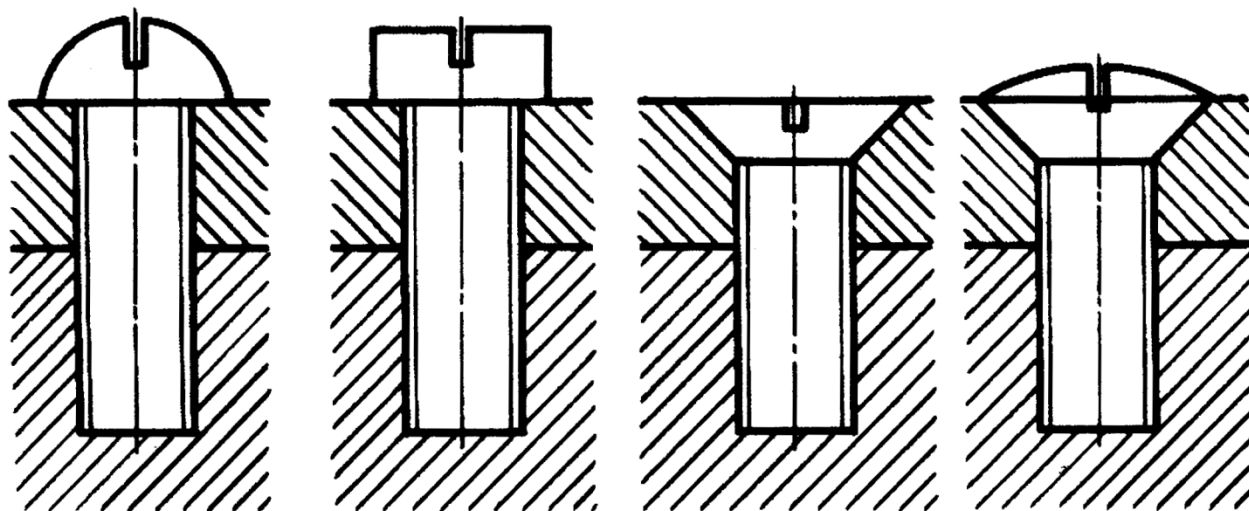
**VINTLI
BIRIKMALARGA OID
GRAFIK VAZIFALAR
HAMDA UNING
METODIK
TA'MINOTI**

**Yarim yashirin
kallakli vintli
birikmaning
yaqqol tasviri va
ko'rinishlari.**



**VINTLI
BIRIKMALARGA OID
GRAFIK VAZIFALAR
HAMDA UNING
METODIK
TA'MINOTI**

**Vintlarning
ko'rinishlari
yig'ish chizmada
soddalashtirilib
ko'rsatilishi
mumkin.**



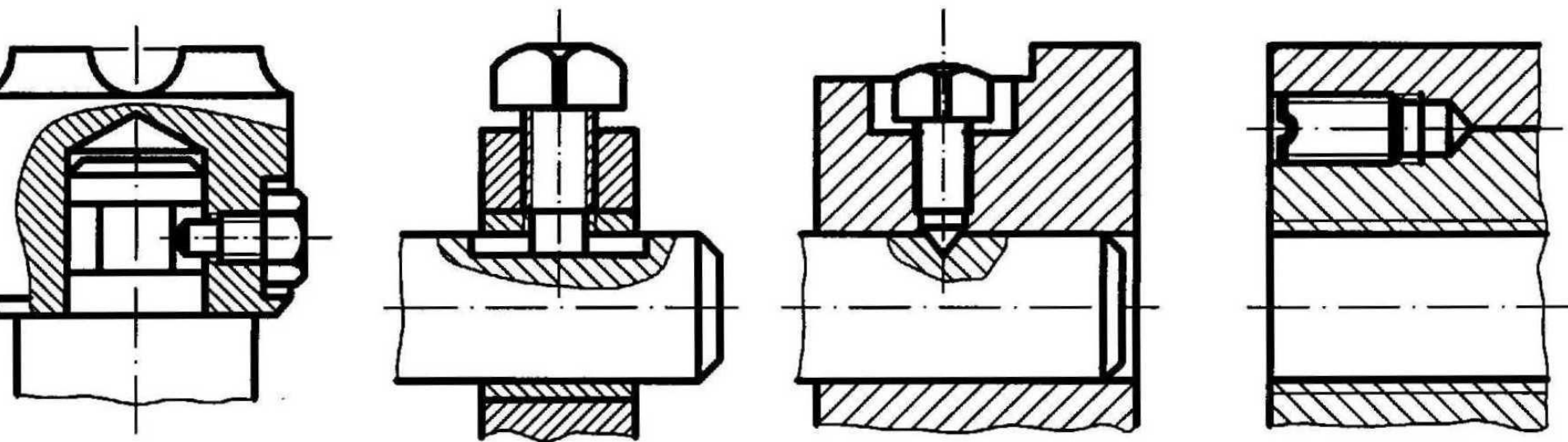
VINTLI BIRIKMALARGA OID GRAFIK VAZIFALAR HAMDA UNING METODIK TA'MINOTI

Vintlar mustahkamlovchi va o'rnatish vintlariga bo'linadi. Yuqorida mustahkamlovchi vintli birikmalar ko'rsatildi.

O'rnatish vintlari mashina va asboblarning ma'lum bir detallarini birini ikkinchisiga moslash (o'rnatish) va mustahkamlash uchun ishlatiladi.

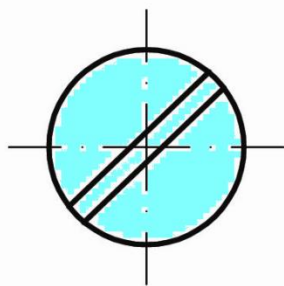
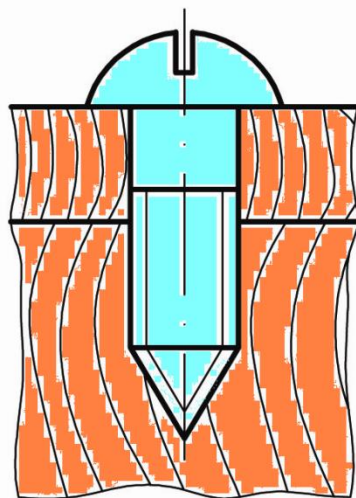
O'rnatish vintlarining yig'ish chizmalaridagi konstruksiyasi to'liq ko'rsatilgan tasviri quyidagi shaklda berilgan.

O'rnatish vintlarining kallagi va uchi turli shaklda qilib ishlanadi.

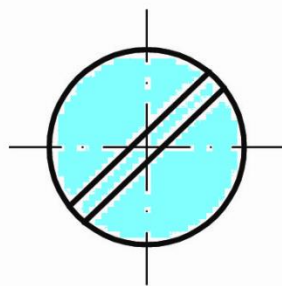
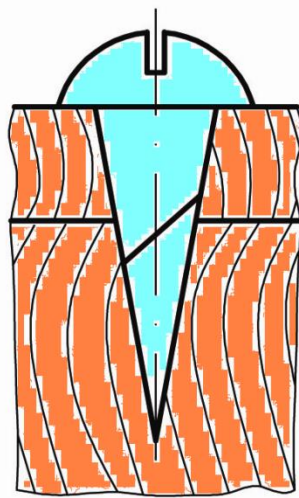


SHURUPLI BIRIKMALARGA OID GRAFIK VAZIFALAR HAMDA UNING METODIK TA'MINOTI

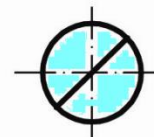
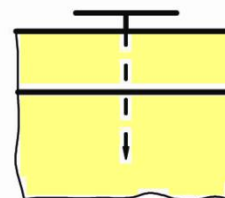
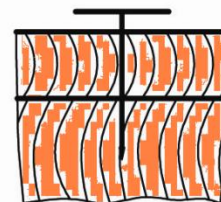
Shurupli birikmalar. Yog'ochni metalga yoki yog'ochni yog'ochga biriktirishda shuruplardan foydalaniladi. Bunday birikmalar *shurupli birikmalar* deyiladi. Shuruplarning ham kallagi vintlarniki kabi turli shaklda bo'ladi. Shuruplarning uchi 40° dagi burchak bilan yakunlanadi. Shuning uchun u otvyortka bilan buralganda o'ziga uya ochib ketadi, yani shurupga alohida rezbali uya ochish shart emas.



a



b

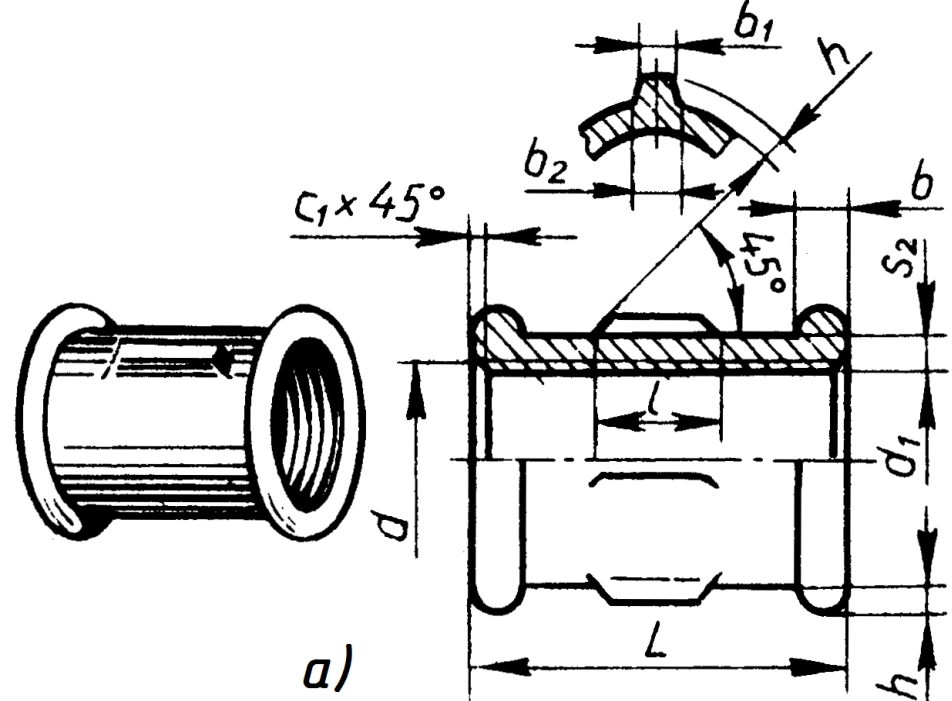


c

TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

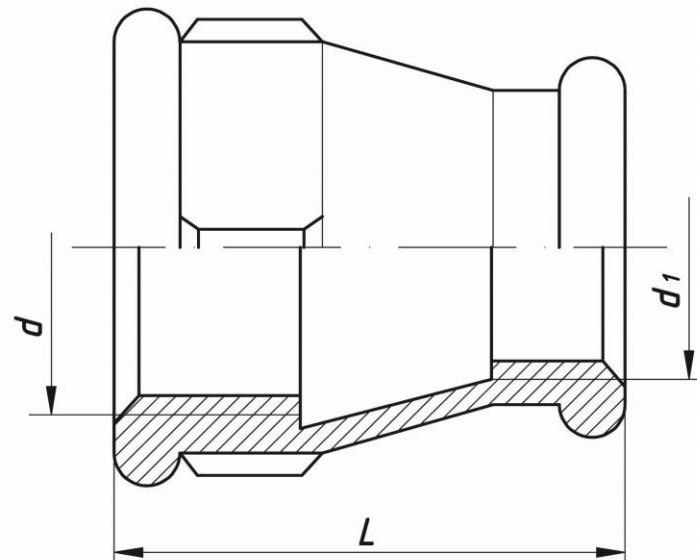
1. To'g'ri muftalar.

To'g'ri muftalar kalta (GOST 8954-75), uzun (GOST 8955-75) va kompensatsiya qiluvchi (GOST 8956-75) muftalar ko'rinishida ishlanadi.



2. O'tish muftalari (GOST 8957-75).

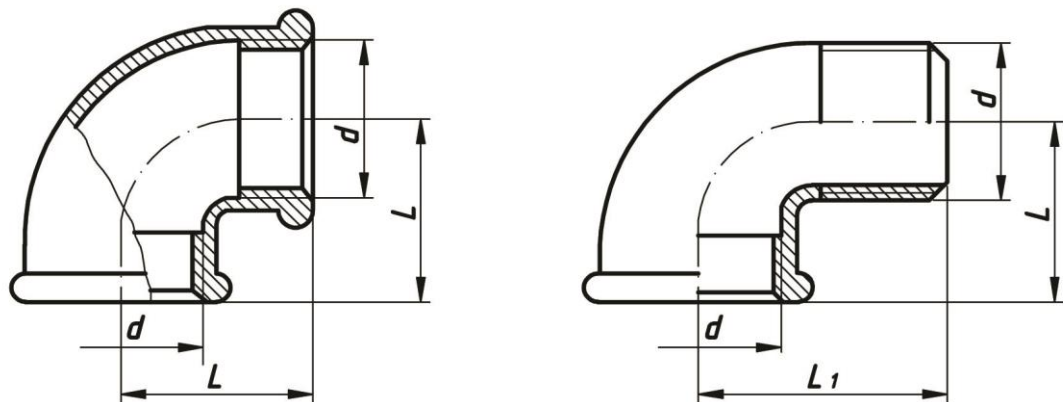
Turli diametrdagi trubalarni bir-biriga ulashda o'tish muftalaridan foydalaniladi. Shuning uchun uning bir tomoni ikkinchi tomoniga nisbatan katta (yoki kichik) diametrdagi tayyorlanadi.



TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

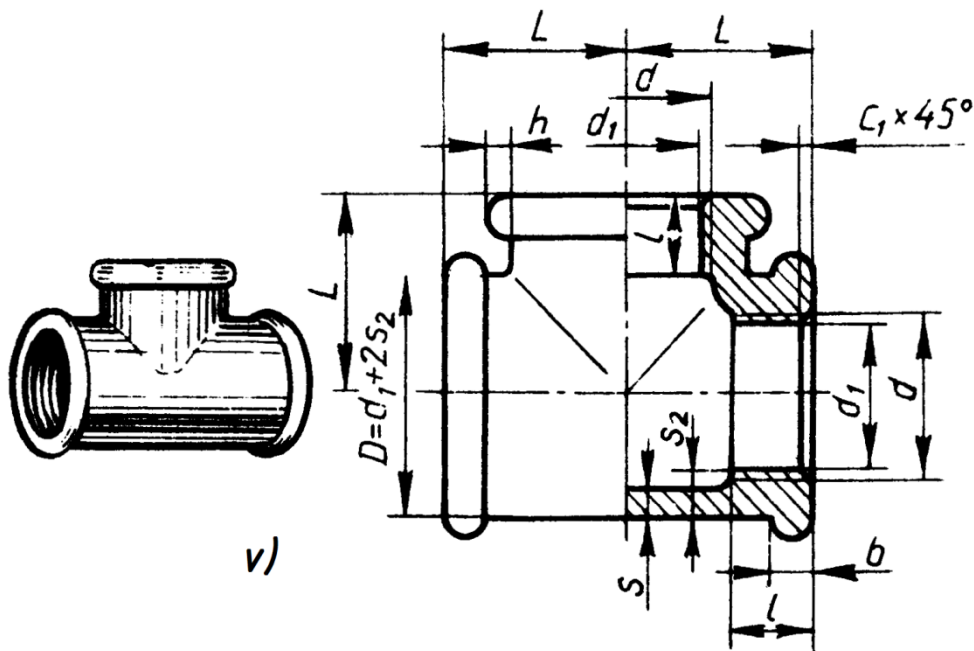
3. Tirsakli muftalar (ugolnik) (GOST 8947-75).

Bunday muftalar ikki xil ko'rinishda ishlanadi. 1- bajarilishida tirsakning ikkala uchiga truba burab, 2- bajarilishining bir tomoniga truba, ikkinchi uchiga fitting burab kiritiladi. To'g'ri tirsaklardan tashqari o'tkir hamda o'tmas burchakli tirsaklar ishlab chiqariladi.



4. Troyniklar.

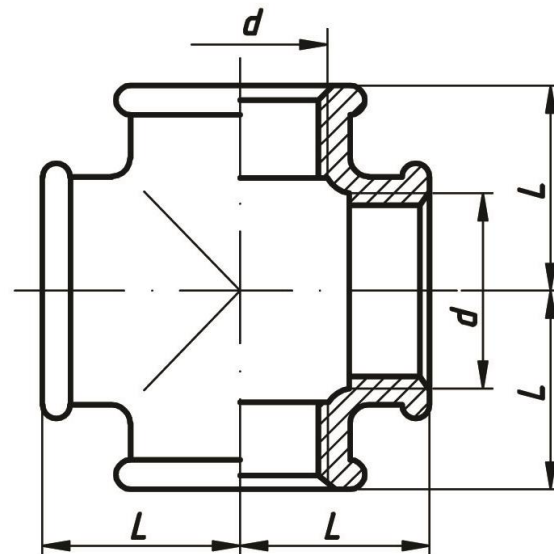
Troyniklar to'g'ri (GOST 8948-75) va o'tish troyniklari (GOST 8950-75) ko'rinishida tayyorlanadi. Bir xil diametrli 3ta trubani o'zaro biriktirishda to'g'ri troyniklardan, uchala rezbalı teshiklarining o'lchamlari har xil bo'lsa o'tish troyniklaridan foydalaniladi.



TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

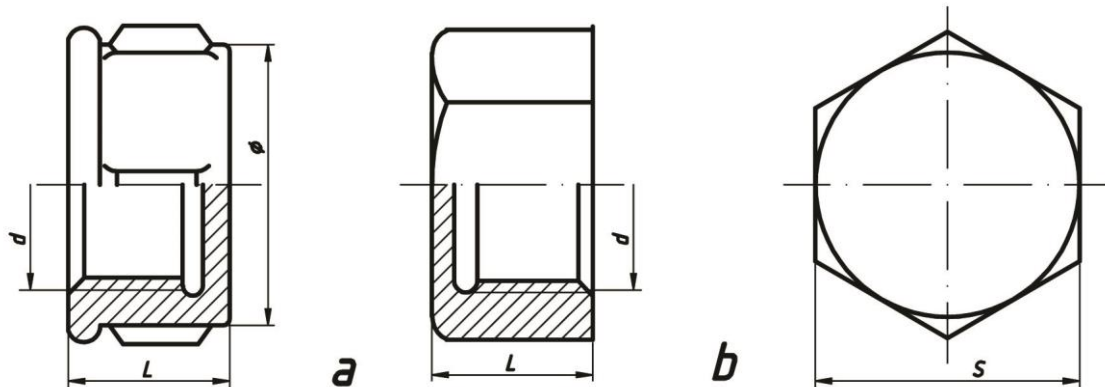
5. Krestlar.

To'g'ri (GOST 8951-75), o'tish (GOST 8952-75) krestlari ishlab chiqariladi. To'g'ri krestlarda to'rttala rezbali teshik o'lchamlari bir xil bo'lsa, o'tish krestlarida har xil bo'ladi.



6. Qopqoqlar.

Trubalarning uchlarini berkitish uchun qopqoqlar (GOST 8962-75) ishlanadi, ular ikki xil ko'rinishda bajariladi. 1-bajarilishida yumaloq yopiq gayka, 2-bajarilishida olti qirrali yopiq gayka kabi ishlab chiqariladi.



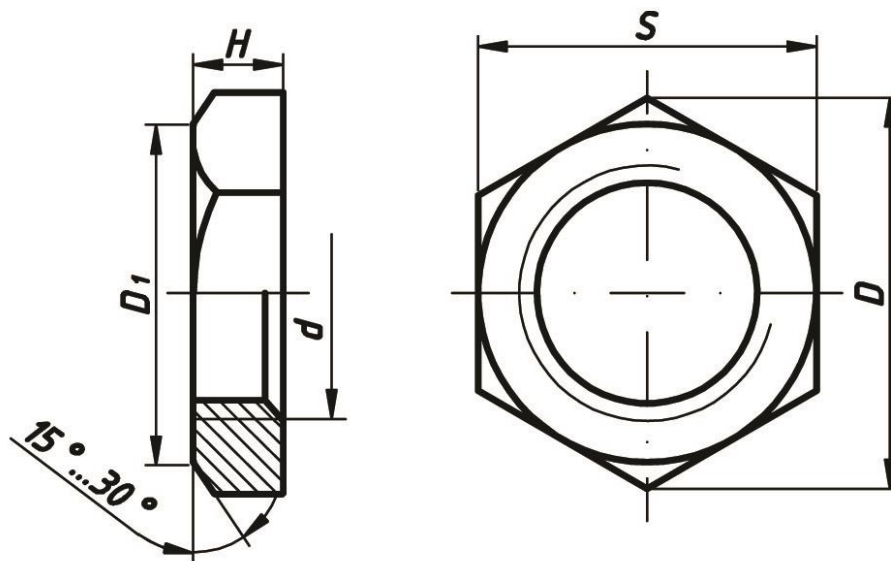
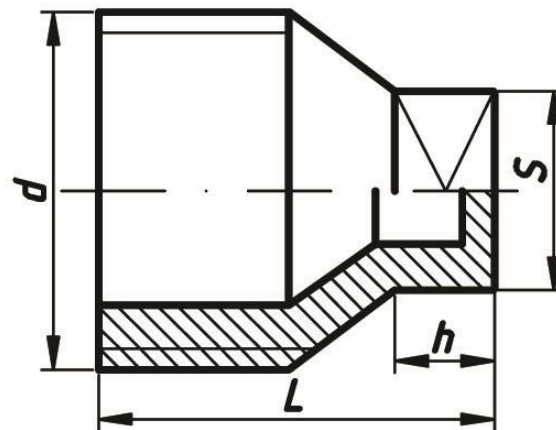
5. TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

7. Tiqinlar.

Fitinglarning teshiklarini berkitish
uchun tiqinlardan (GOST 8963-75)
ham foydalaniladi.

8. Kontrgaykalar.

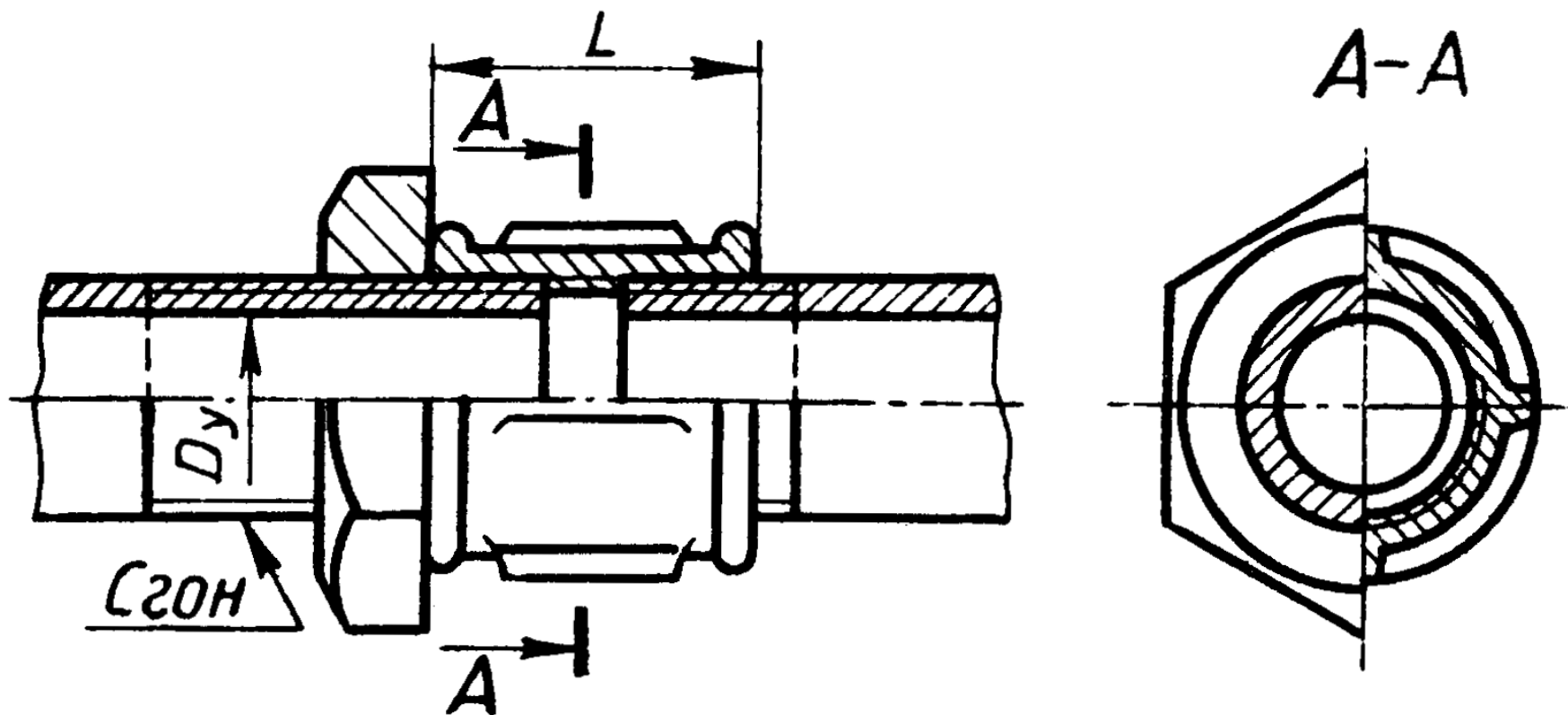
Trubali birikmalarda gaz yoki
suyuqlik sizib chiqishining oldini
olish maqsadida kanop tolasidan
o'ralgan moyli zichlagichlarni
zichlash uchun kontrgaykalar
(GOST 8961-75) ishlatiladi.
Kontrgaykaning o'lchamlari
fitinglar kabi standartlashtirilgan.



TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

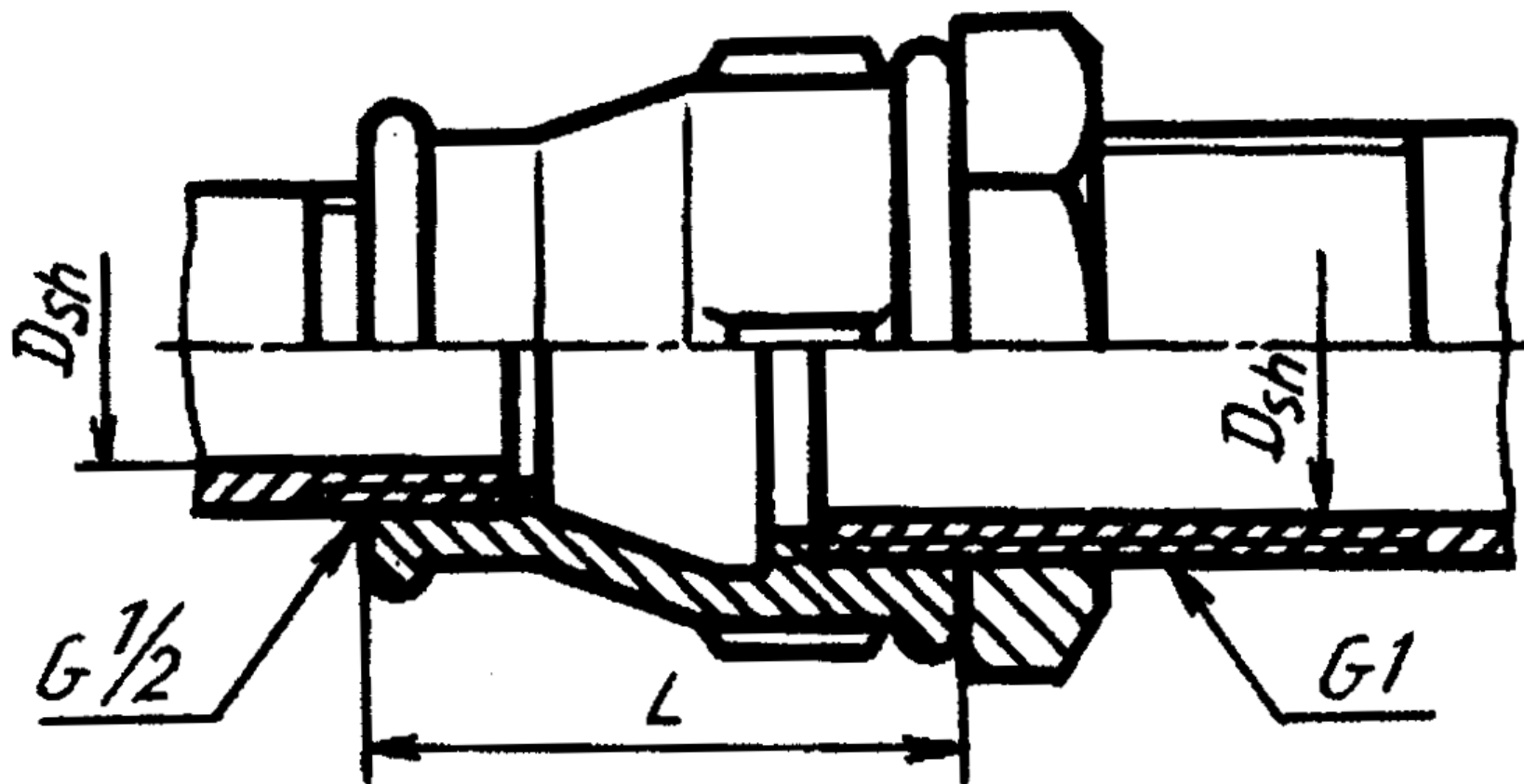
To'g'ri muftali birikma ishchi chizmasi.

b) *Trubani mufta bilan birlashtirish GOST 8954-75*



TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

O'tish muftali birikma ishchi chizmasi.



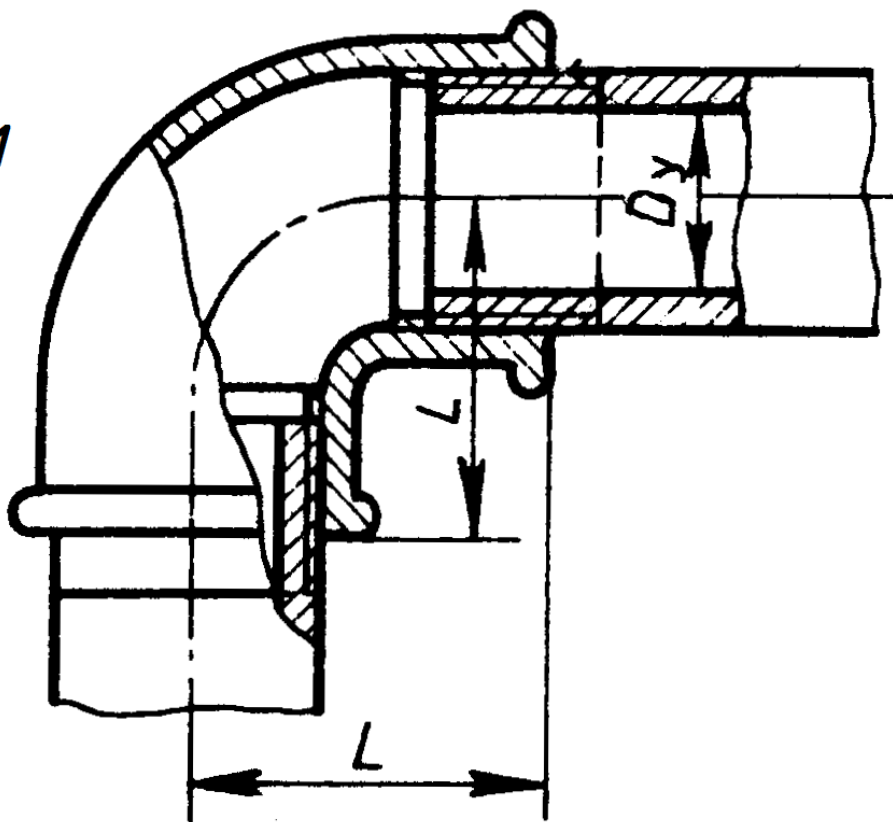
TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

Burchakli (ugolnik) birikma ishchi chizmasi.

v) *Trubani ugolnik bilan birlashtirish*

GOST 8946-75

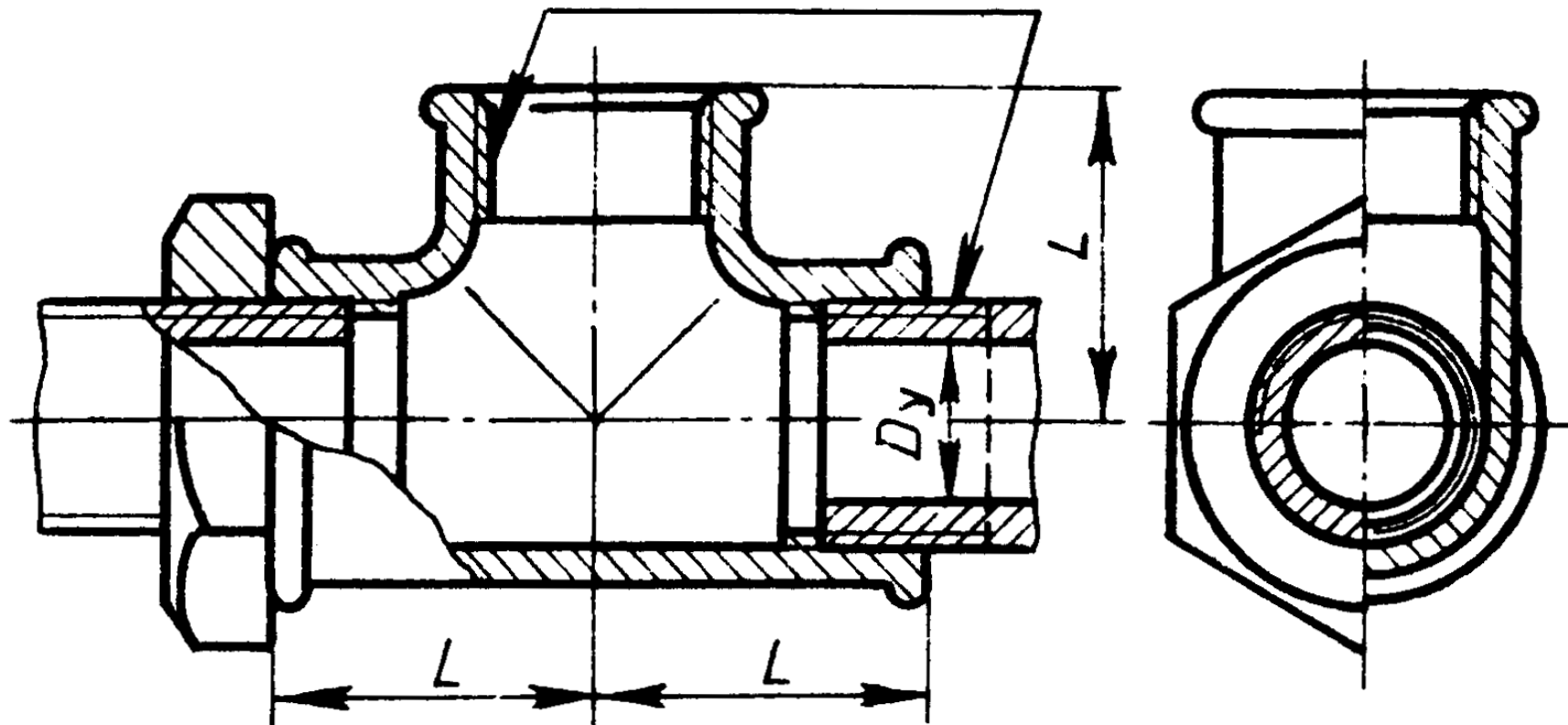
ST SEV 3298-81



TRUBA REZBALI BIRIKMALARGA OID GRAFIK VAZIFALAR VA UNING METODIK TA'MINOTI

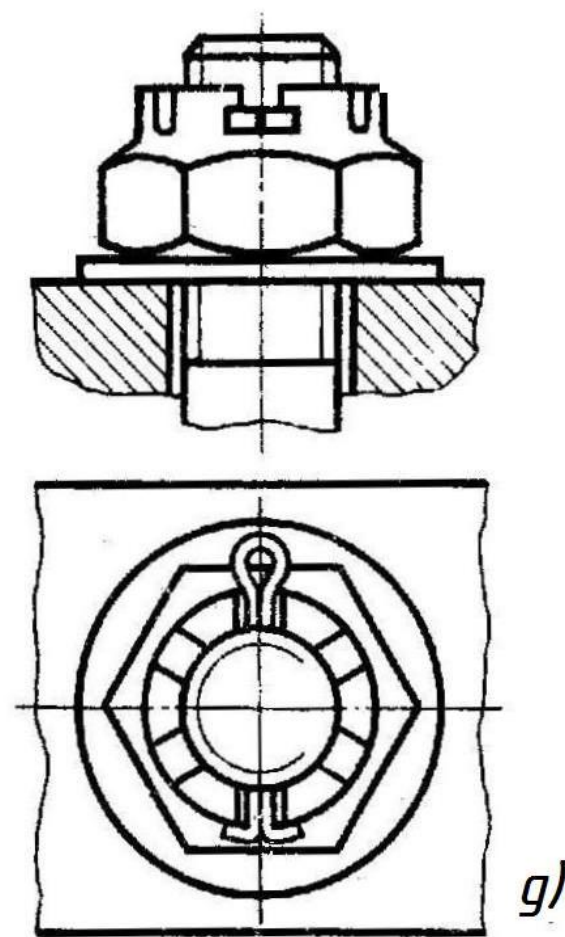
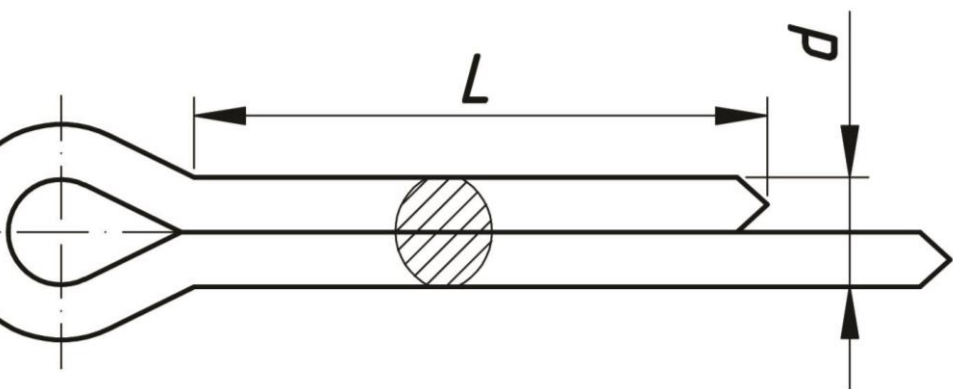
Troynikli (uchtalik) birikma ishchi chizmasi.

a) *Trubani troynik bilan birlashtirish GOST 8948-75
(СТ СЭВ 3300-81) Truba rezba*



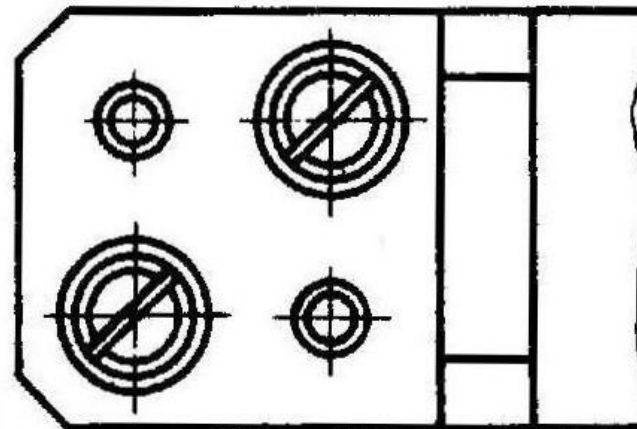
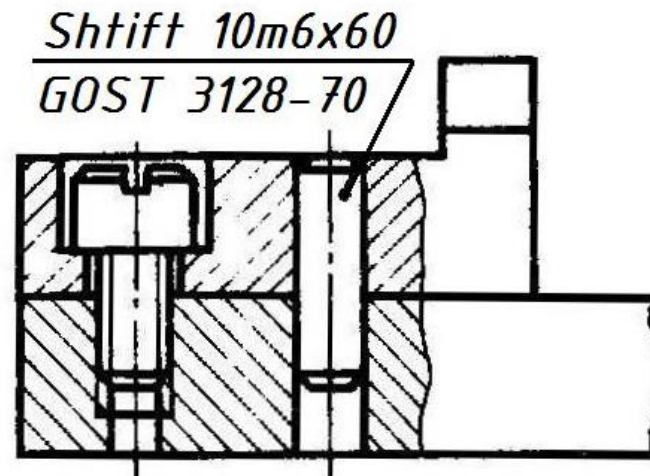
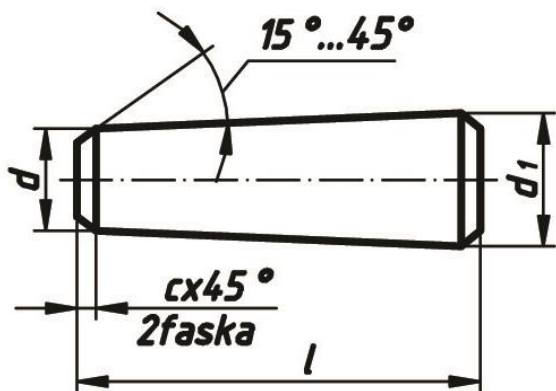
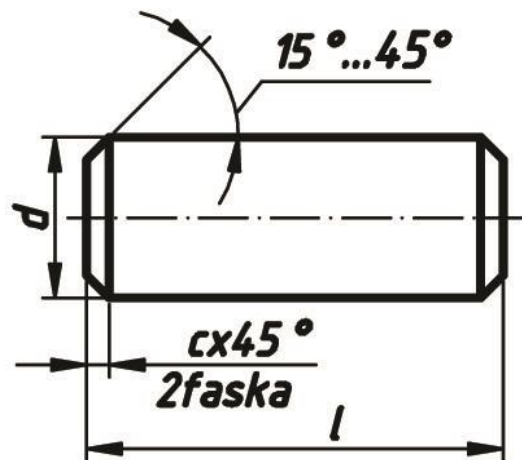
SHPLINTLI VA SHPLINTLI BIRIKMALAR

Shplintlar (GOST 397-79). Shplintlar po'lat sim bo'laklaridan ikkiga bukib tayyorlanadi. Ular gaykalarining o'z-o'zidan buralib ketishini oldini olish uchun ishlatiladi. Shplintlar tojsimon yoki o'yiqli gaykalarining o'yig'i va bolt yoki shpilka teshiklari orqali o'tkazilib, uchlari ikki tomonga qayirib qo'yiladi. Shplintning asosiy o'lchamlari – shartli diametri d va uzunligi l .



SHTIFTLI VA SHPLINTLI BIRIKMALAR

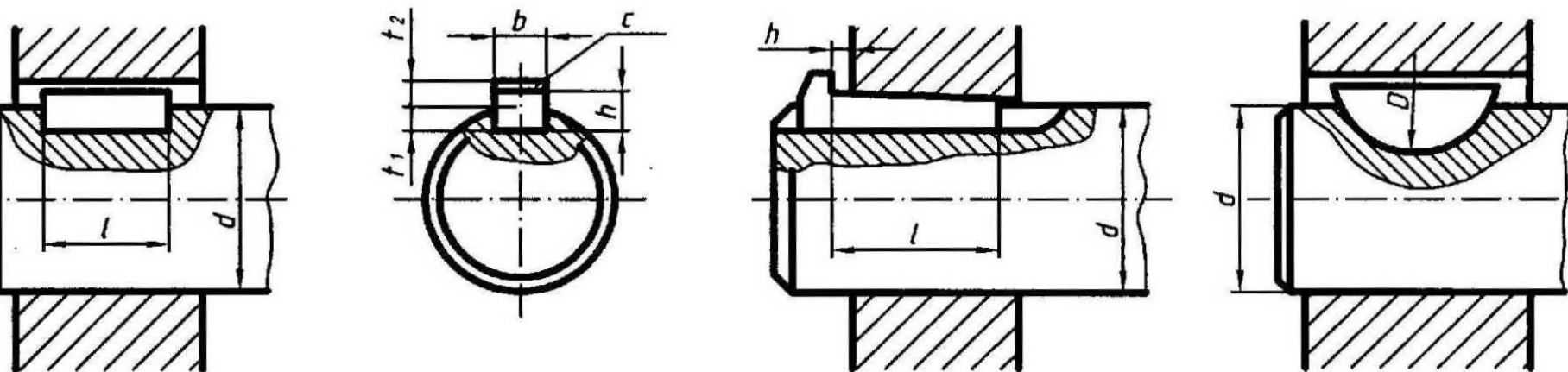
Shtiftlar . Shtiftlardan ajralmas birikma detallarini biriktirishda foydalaniladi. Amaliyotda shtiftlarning silindrik (GOST 3128-70), konussimon(GOST 3129-70) va konusli (GOST 10773-80) turlari bo'lib, diametri $0,6\text{ mm}$ dan 50 mm gacha 45 markali o'latdan, qoplamasiz tayyorlanadi. Shtiftlar ham saqlovchi vazifasini bajaradi. Ularning konstruksiyasi va o'lchamlari standartlashtirilgan.



SHPONKALI VA SHLITSALI BIRIKMALAR

Shponkali birikmalar. Val bilan unga kiydirilgan detallar (tishli g'ildirak, shkif, mufta)ning shponka vositasida hosil qilingan qo'zgalmas, ba'zan suriladigan birikmasi *shponkali birikma* deyiladi.

Shponkali birikmalar prizmatik (*a*), ponasimon (*b*) va segment (*c*) shponkalar vositasida bajariladi. Shponka (pona)larning o'lchamlari valning diametriga qarab tanlanadi.

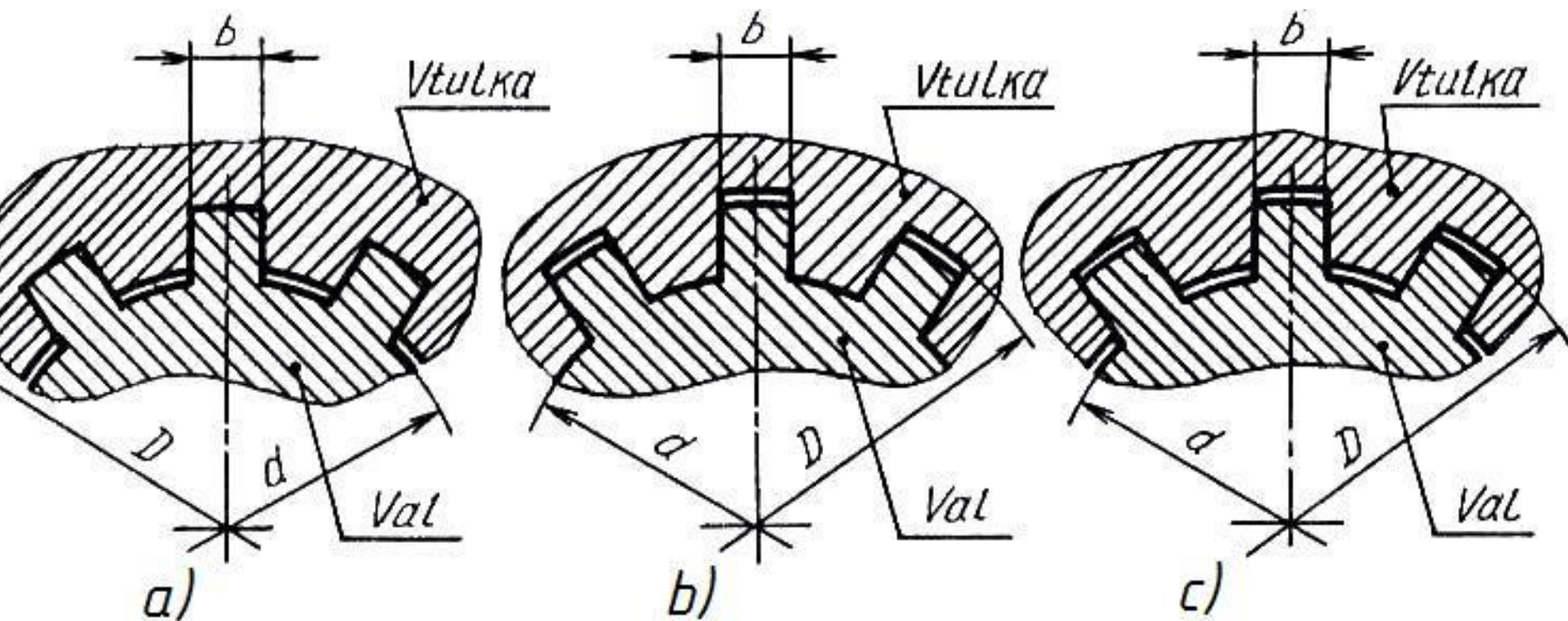


SHPONKALI VA SHLITSALI BIRIKMALAR

2. Shlitsali birikmalar. Mashinasozlikda tishli birikmalar keng ishlatiladi. Tishli birikmalarda tishlar soni ko'p bo'lganligi uchun, shponkali birikmalarga nisbatan katta kuchga ega bo'lgan aylanma harakatlarni uzatish mumkin.

Shlitsali birikmalar mustahkam bo'lib, yaxshi markazlanadi va o'q bo'yicha osongina ajratiladi. Tishlar soni, asosan, birikmaga tushadigan kuchlanish va ularning ish sharoitiga qarab aniqlanadi.

Mashinasozlikda to'g'ri yonli (GOST 1139-80), evolventasimon (GOST 6033-80), uchburchak (standartlashtirilmagan) profilli tishli birikmalar eng ko'p tarqalgan.



AJRALMAS BIRIKMALAR

Mashina mexanizmlari, turli moslamalarni tarkibida uchraydigan har xil birikmalarni sozlash, ta'mirlash, yangisiga almashtirishga to'g'ri keladi.

*Agar birikma tarkibidagi detallarni bir-biridan ajratish jarayonida ularning sifati buzilsa, ular yaroqsiz holatga kelib qolsa, detallar hamda birikmadan yana qayta foydalanish mumkin bo'lmasa, u holda bunday birikmalar **ajralmas birikma** deyiladi.*

Ajralmas birikmalar o'zining mustahkamligi, chidamliligi bilan ajralib turadi. Biroq detallarni ajratish natijasida undan qayta foydalanish imkoniyati yo'qoladi yoki qaytadan birikma holatiga keltirish uchun qo'shimcha mehnat, sarf-harajat qilishga to'g'ri keladi. Amaliyotda ajralmas birikmalarning **payvand chokli, parchin chokli, yelimli, kavsharli, metall changakli, tikilgan chokli birikma** turlaridan keng foydalaniladi.

AJRALMAS BIRIKMALAR

Ajralmas birikmalar o'zining mustahkamligi, chidamliligi bilan ajralib turadi. Uning quyidagi turlari mavjud.

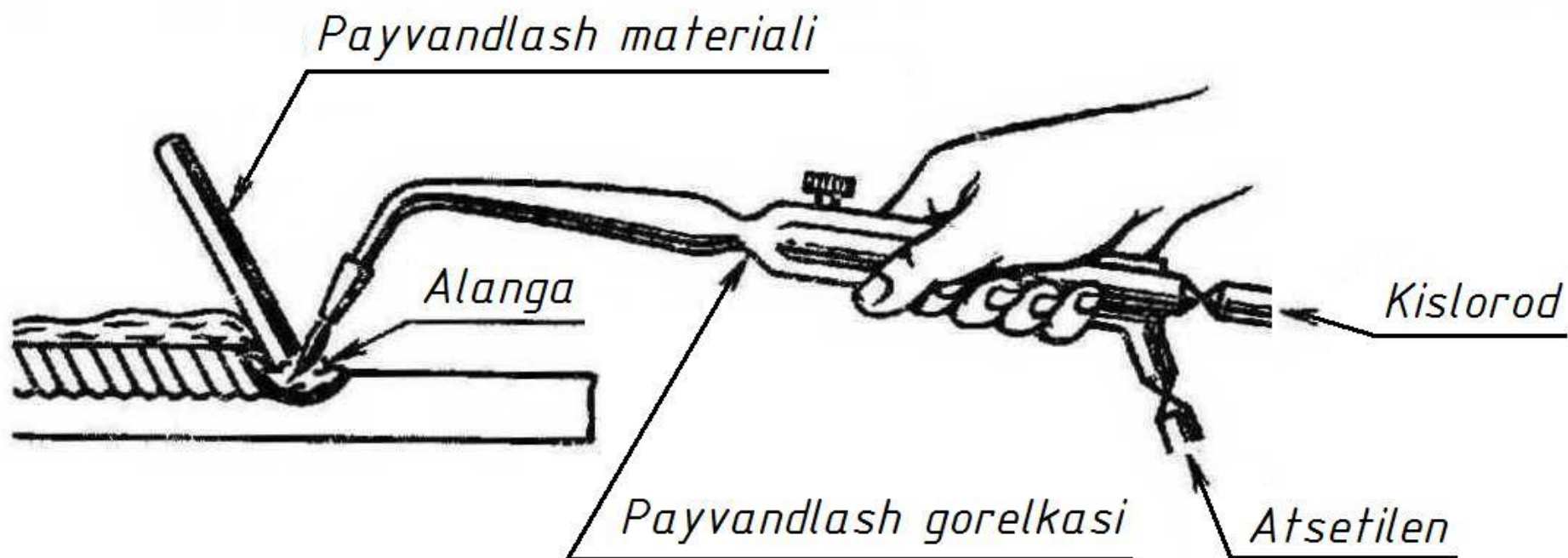
1. Payvand chokli birikmalar.
2. Parchin chokli birikmalar.
3. Yelimli birikmalar.
4. Kavsharli birikmalar.
5. Metall changakli birikmalar.
6. Tikilgan birikmalar.

PAYVAND CHOKLI BIRIKMALAR

Payvand chokli birikma chizmalari O'zDSt 2.312:97 ga muvofiq bajariladi. Ikki va undan ortiq detalni bir-biriga payvandlash yo'li bilan hosil qilingan ajralmas birikmaga *payvand birikma* deyiladi. Birikuvchi detallarning payvand birikmalari quyidagi *suyuqlantirib payvandlash* yoki *bosim ostida payvandlash* usullarida bajarilishi mumkin.

PAYVAND CHOKLI BIRIKMALAR

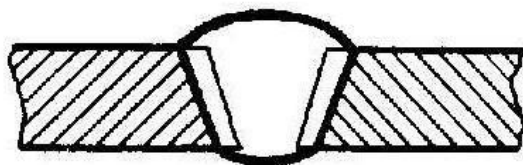
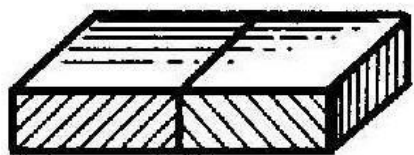
Suyuqlantirib payvandlashning **gazli payvandlash** turida gaz (masalan, atsetilen) atmosferadagi kislorod yordamida yonib olov hosil qiladi va metallni eritadi. Ergan joyga biriktiruvchi material (metall xivich) qo'yiladi va u soviganidan keyin payvand chok hosil bo'ladi. Bunday payvand birikmadan apparaturalardagi rangli metallardan, chugundan va plastmassadan tayyorlangan ingichka va trubasimon elementlarni biriktirishda foydalaniladi.



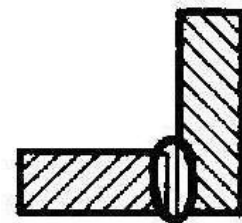
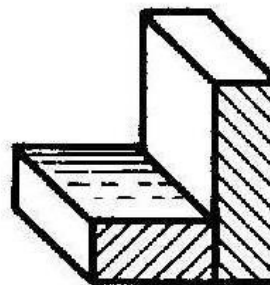
PAYVAND CHOKLI BIRIKMALAR

Payvandlanuvchi detallarning o'zaro vaziyatiga qarab payvand birikmalar quyidagi turlarga bo'linadi.

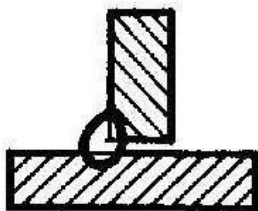
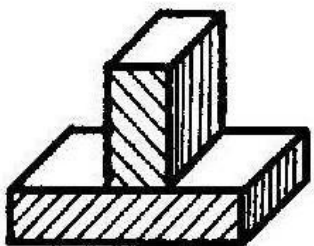
1. *Uchma-uch payvand birikma (C, a).*
2. *Burchakli payvand birikma (Y, b).*
3. *Tavrli payvand birikma (T, v).*
4. *Ustma-ust payvand birikma (H, g).*



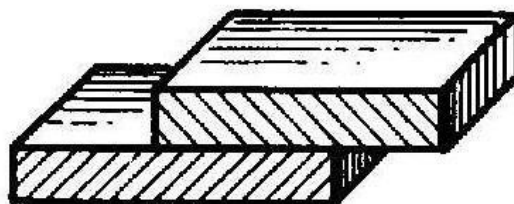
a)



b)



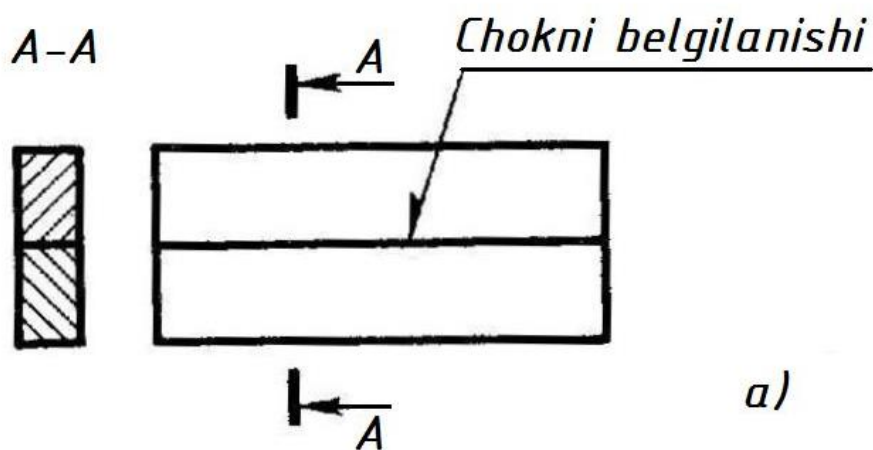
v)



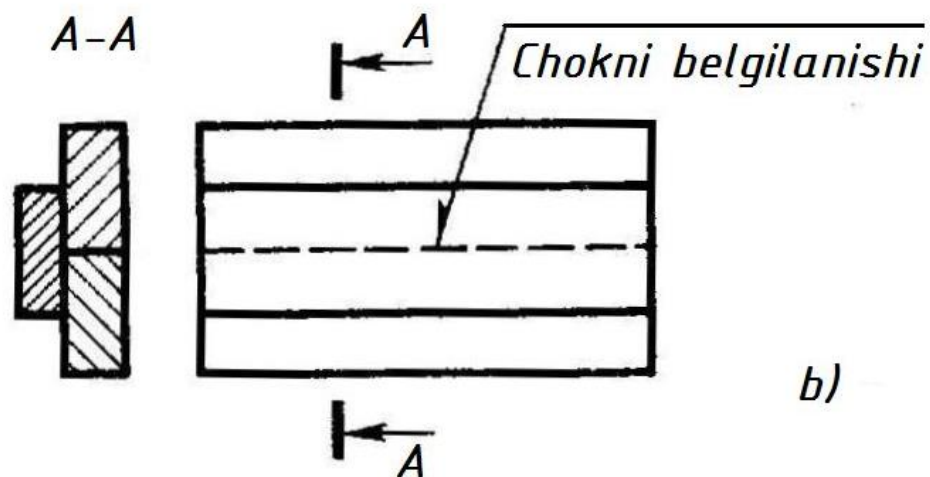
g)

PAYVAND CHOKLI BIRIKMALAR

Payvand chokli birikma chizmada chetga chiqarish chizig'i yo'nalishining vaziyatiga qarab shartli belgilar quyidagicha qo'yiladi: tokchanning ustiga qo'yilsa, chetga chiqarish chizig'i chokning old (o'ng) tomonidan chiqarilgan bo'ladi (a). Chetga chiqarish chizig'i chokning orqa tomonidan chiqarilgan bo'lsa, tokchanning ostiga qo'yiladi (b).



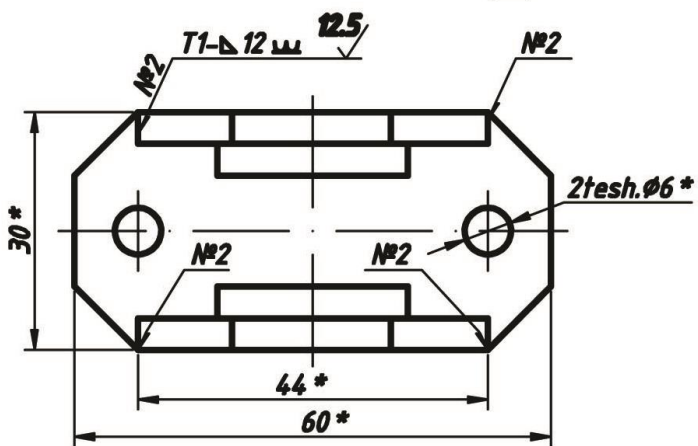
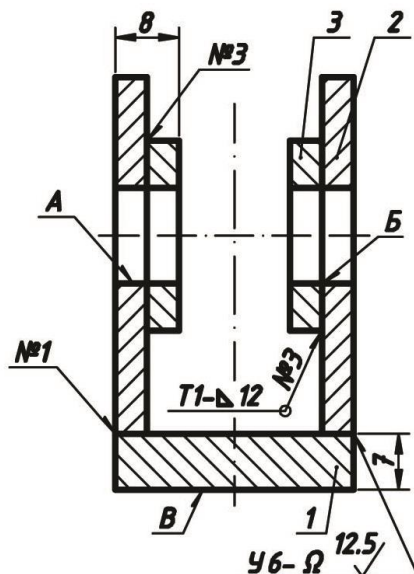
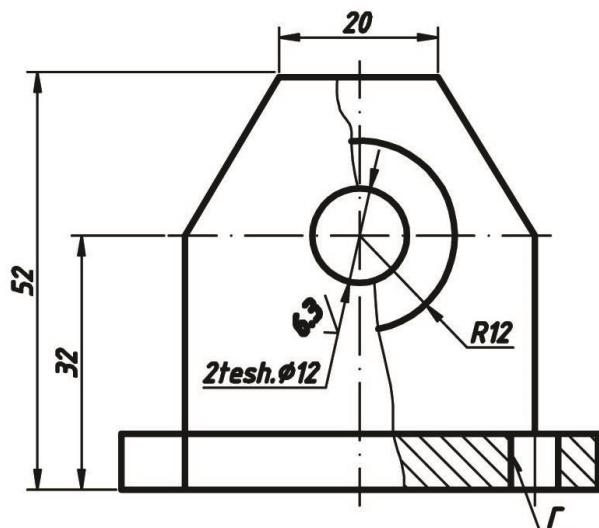
a)



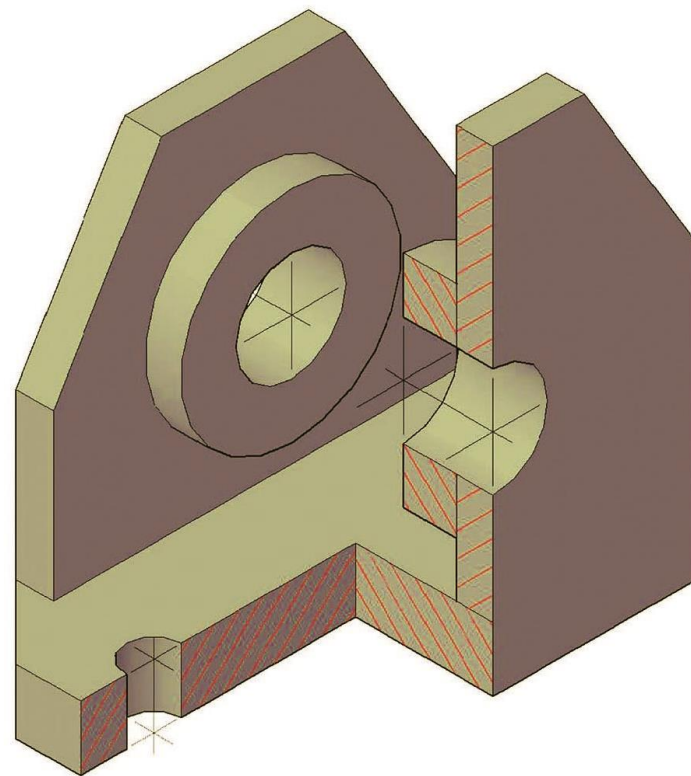
b)

PAYVAND CHOKLI BIRIKMALAR

Payvand chokli birikmaga oid grafik vazifaga namuna chizma.

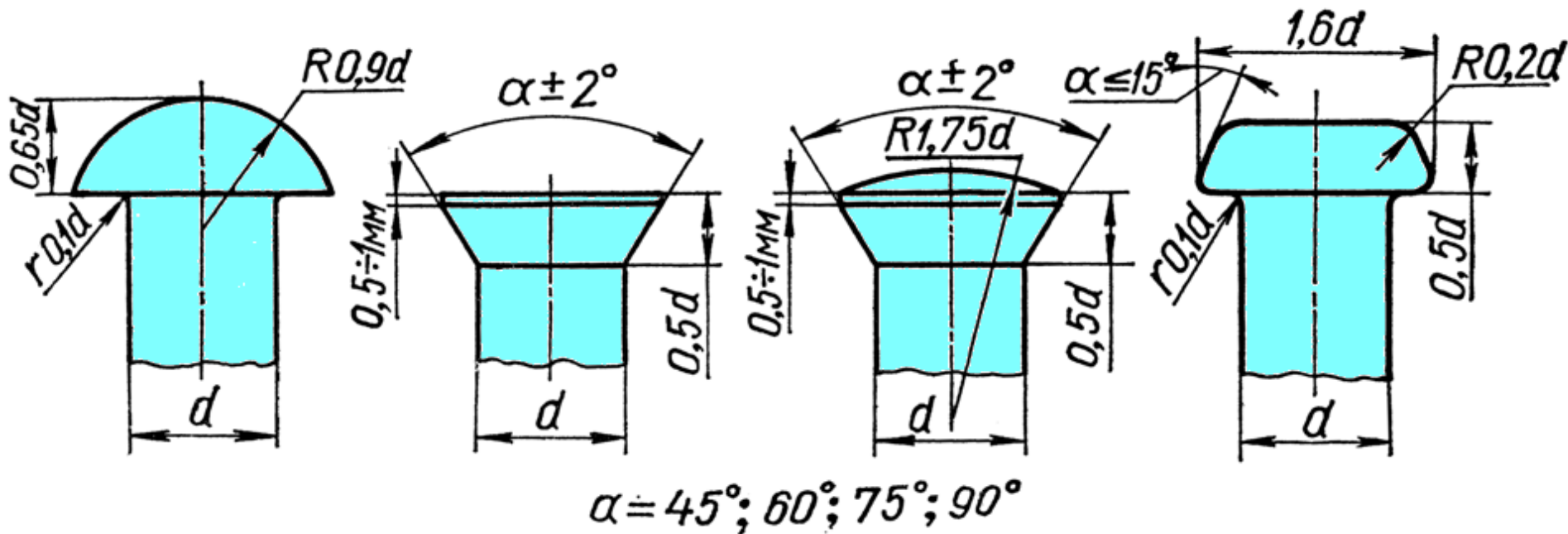


Izometriya $a:b:c=1:1:1$



PARCHIN CHOKLI BIRIKMALAR

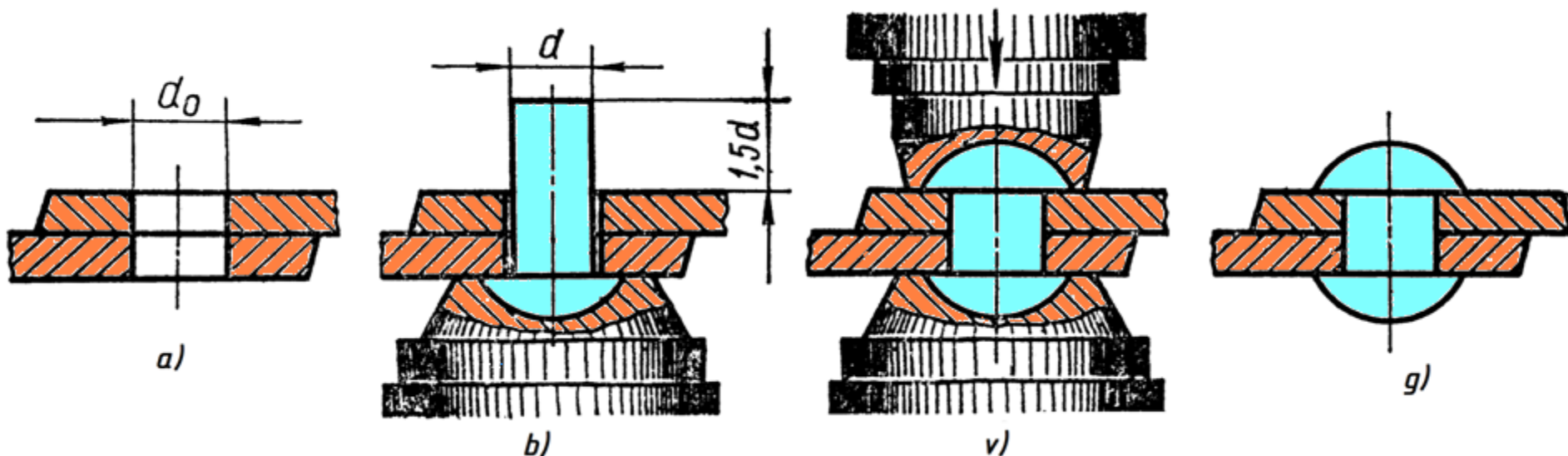
Parchin chokli birikmani hosil qiluvchi asosiy detallardan biri - parchin mix silindrik sterjen bo'lib, uning bir uchi kallak (qalpoq) bilan yakunlanadi. Parchin mix qalpog'i *yarim yumaloq, yashirin, yarim yashirin va kesik konus* shaklida tayyorlanishi mumkin. Parchin chokli birikmalarning ish chizmasi parchin mixlar (zaklepkalar) vositasida hosil qilinadi.



PARCHIN CHOKLI BIRIKMALAR

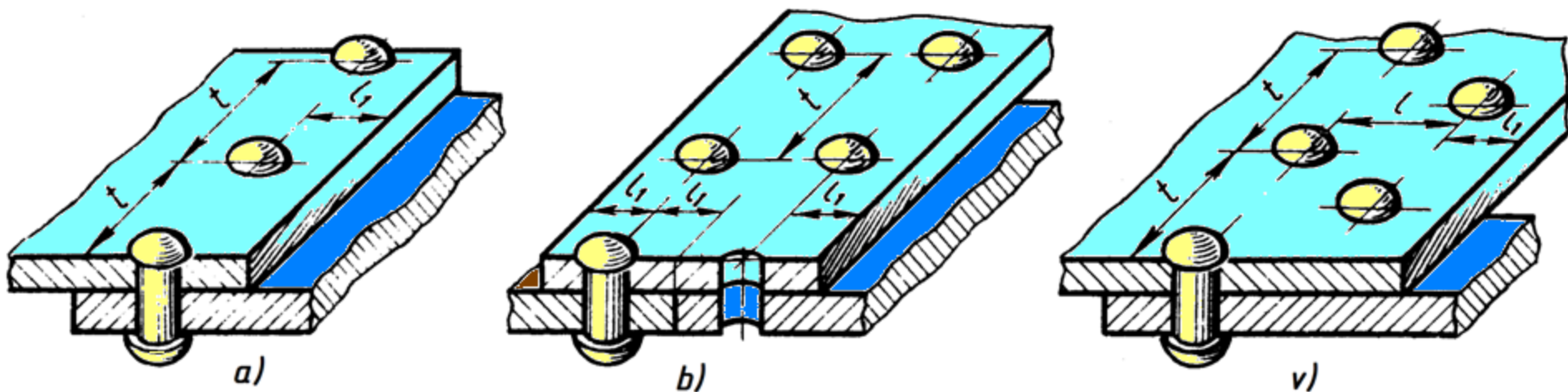
Parchinlash jarayoni quyidagi tartibda amalga oshiriladi.

1. Dastlab, biriktiriladigan detallarga silindrik teshik ochiladi.
2. Oldindan qizdirilgan parchin mix (diametri 10 mm dan kichik parchin mixlar qizdirilmaydi) bu teshikka qo'yiladi va uning qalpoq tomoni pastga qaratiladi va qalpoq formasiga mos taglik qo'yiladi.
3. Maxsus mashinada (yoki pressda) parchin mixning uchi pachoqlanadi (parchinlanadi). Maxsus mashina yoki pressda ham parchin mix qalpog'i formasiga mos o'yiqli bo'ladi.



PARCHIN CHOKLI BIRIKMALAR

Parchin chokli birikmalarning turlari va chizilishi. Parchin mixlar chokda bir yoki bir necha (besh qatorgacha) qator bo'lishi mumkin. Parchin choklar parchin mixlarning o'zaro joylashishiga qarab, *shaxmat tartibli va parallel choklarga* bo'linadi. Birikuvchi detal (list)larning bir-biriga nisbatan o'zaro joylashishiga qarab parchin chokli birikmalar: *ustma-ust (a, v) va uchma-uch birikmalarga (b)* bo'linadi. Uchma-uch choklarga bir yoki ikki tomonlama tagliklar qo'yiladi. Kesuvchi tekislik parchin mix o'qi orqali o'tsa, ular qirqimda kesmasdan, ya'ni shtrixovkalanmasdan ko'rsatiladi.



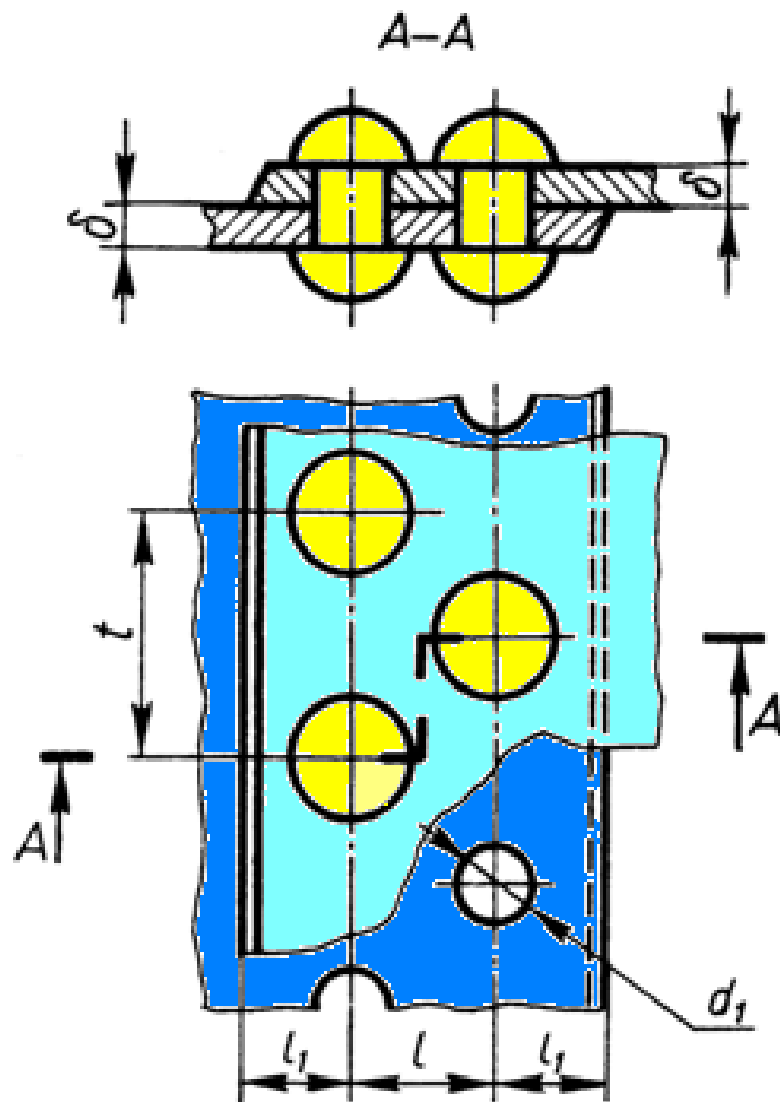
PARCHIN CHOKLI BIRIKMALAR OID

Parchin mixlar chokda bir yoki bir necha (besh qatorgacha) qator bo'lishi mumkin. Parchin choklar parchin mixlarning o'zaro joylashishiga qarab, *shaxmat tartibli va parallel choklarga* bo'linadi.

Birikuvchi detal (list)larning bir-biriga nisbatan o'zaro joylashishiga qarab parchin chokli birikmalar: *ustma-ust (a, v)* va *uchma-uch birikmalarga (b)* bo'linadi.

Uchma-uch choklarga bir yoki ikki tomonlama tagliklar qo'yiladi.

Kesuvchi tekislik parchin mix o'qi orqali o'tsa, ular qirqimda kesmasdan, ya'ni shtrixovkalanmasdan ko'rsatiladi.

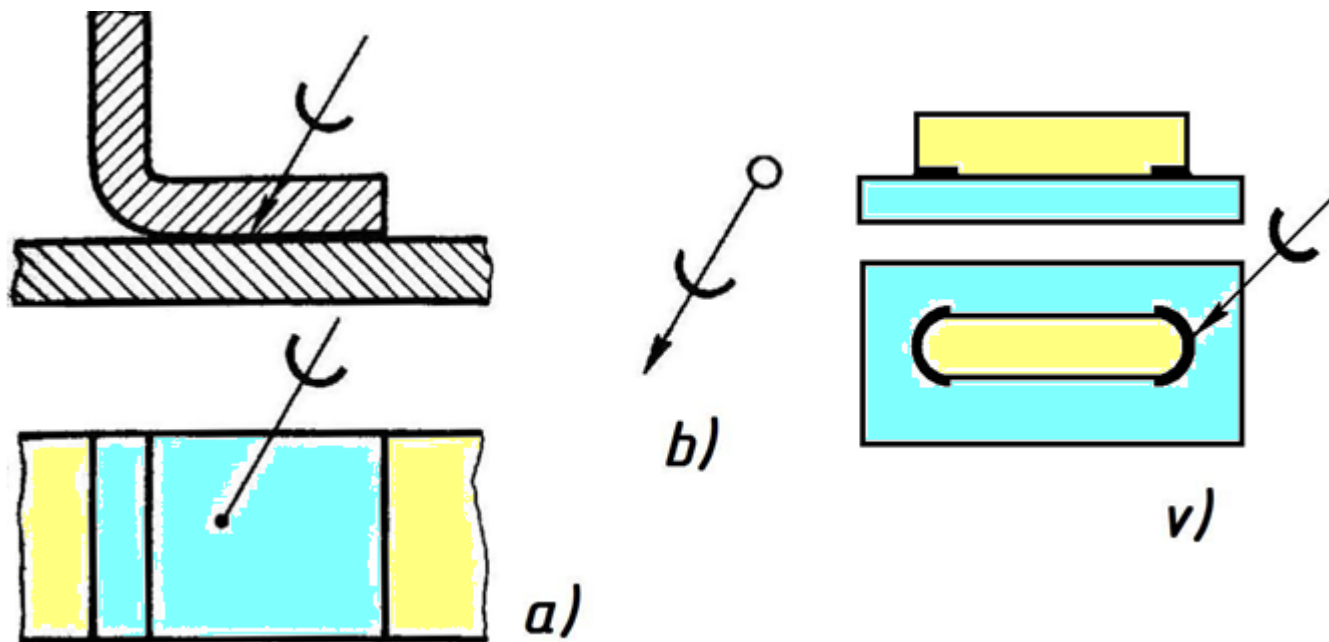


Shaxmat tartibidagi ustm-ust chok
 $d = \delta + 8\text{mm}$; $d_1 = 1,1d$; $t = 2,6d + 15\text{mm}$
 $l_1 = 1,5d$; $l = 0,6t$; $L = 2\delta + 1,5d$
(L - o'rnatilmagan parchin mix uzunligi)

KAVSHARLANGAN BIRIKMALAR

Kavsharlangan birikmalar. Kavsharlangan birikmalarda chok o'ri $2s$ qalinlikda asosiy tutash chiziq bilan chiziladi. Boshqa birikmalardan farqini ko'rsatish uchun chiqarish chizig'iga yarim aylana shaklidagi C belgi s ga teng qalinlikda qo'yiladi (a).

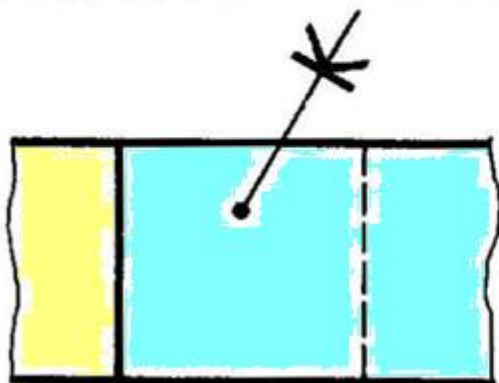
Agar kavsharli chok detalni butun perimetri bo'yicha bajarilgan bo'lsa chiqarish chizig'ining uchiga 3 yoki 5 *mm* diametrda aylana ingichka tutash chiziqda chiziladi (b, v). Ba'zi maydonlarda chegaralangan choklarni $2s$ yo'g'onlikdagi chiziqlarda tasvirlash mumkin (v).



YELIMLANGAN BIRIKMALAR

Yelimlangan birikmalar. Sanoatda, mashinasozlikda, umuman ishlab chiqarishda yupqa metallarni, yog'ochlarni va plastmassa materiallardan qilingan detallarni o'zaro biriktirishda yelimlab biriktirishdan keng foydalaniladi.

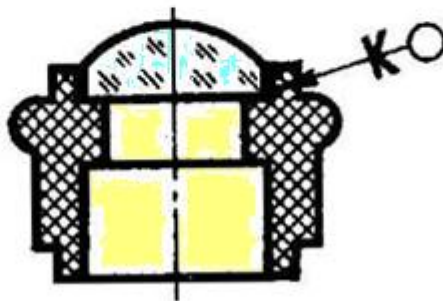
Yelimli birikmada chokni boshqa turdagi birikmalardan farqlash uchun chiqarish chizig'iga K belgi asosiy tutash chiziq qalinligida chizib qo'yiladi (*a*). Yelimli birikmada ham choklar yopiq chiziq bo'yicha bajarilgan bo'lsa chiqarish chizig'ining ikkinchi uchiga ingichka tutash chiziqda 3 yoki 5 *mm* diametrda aylana chiziladi (*b*, *v*).



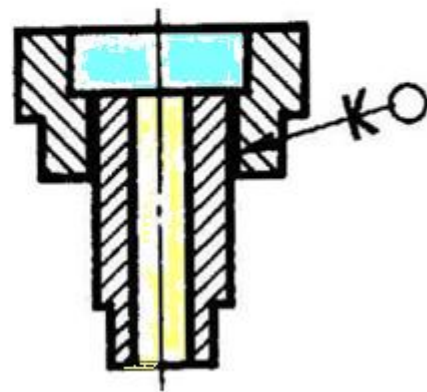
a)



b)



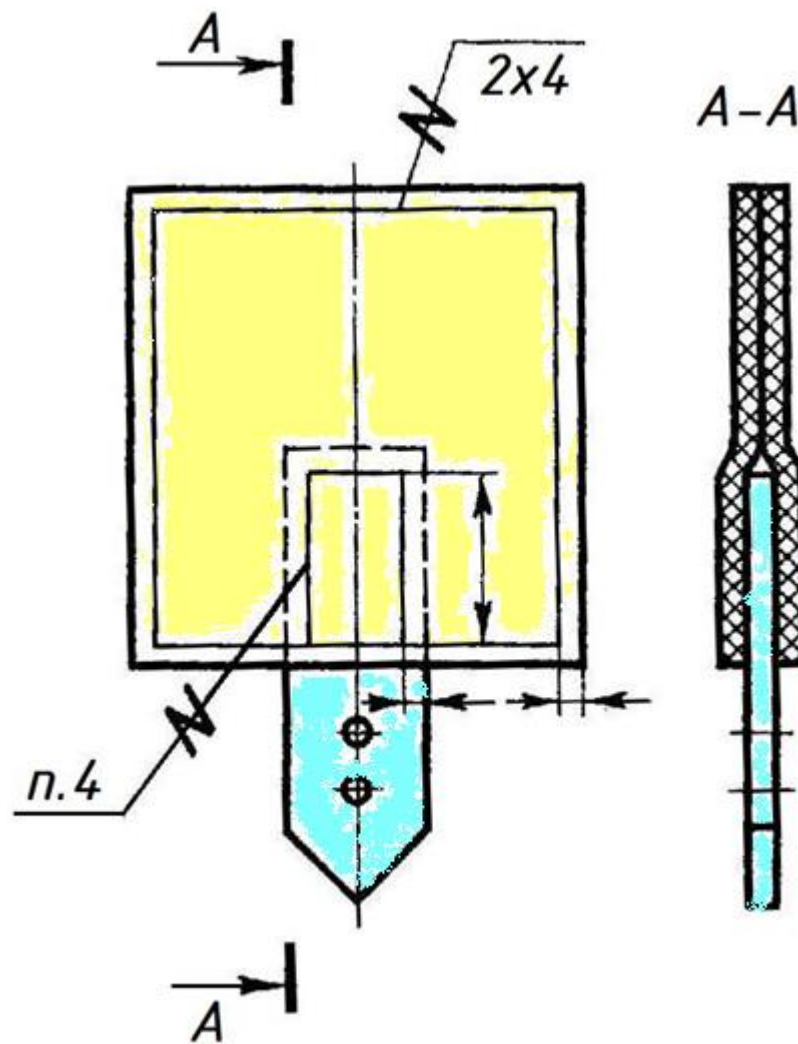
v)



TIKILGAN CHOKLI BIRIKMALAR

Tikilgan chokli birikmalar. Tikish yo'li bilan hosil qilinadigan birikmalar chizmada ingichka tutash chiziq bilan tasvirlanadi va chiqarish chizig'ida uning shartli belgisi hamda tokchasida o'lchami qo'yiladi. Tikilgan chok o'rnidan strelkasiz chiqarish chizig'i chiqariladi. Tikilgan chokning shartli belgisi ∇ shaklida bo'lib, u chiqarish chizig'iga asosiy tutash chiziq qalinligida chizib qo'yiladi.

Agar birikma bir nechta choklarga ega bo'lsa, u holda chizmada chetga yaqin bo'lgan joyda faqat bitta chok ko'rsatiladi. Choklar soni va ular orasidagi masofa chiqarish chizig'ining tokchasi ostida ko'rsatiladi, masalan, 2×4 , bu yerda, 2 - qatorlar soni, 4 - qatorlar orasidagi masofa.



METALL CHANGAKLI BIRIKMALAR (O'zDSt 2.313:97)

Metall changakli birikmalar. Metall changaklar vositasida hosil qilingan birikmalar shartli belgilarda belgilanadi va chiqarish chiziqlarida ko'rsatiladi. Metall changakli chokning shartli belgisi shaklida bo'lib, u chiqarish chizig'iga asosiy tutash chiziq qalinligida chizib qo'yiladi.

Quyida changaklarni o'zaro parallel joylashtirish (*a*), changaklar ketma-ket bitta chiziqda joylashtirilgan chok (*b*), changaklar qiyalatib parallel joylashtirilgan chok (*c*), changaklar burchakka parallel qilib hosil qilingan chok (*d*), ustma-ust tikishda changak yordamida hosil qilingan chokni shartli belgilash belgisi (*e*), burchakli birikma hosil qilingan chokni shartli belgilash belgisi (*f*) ko'rsatilgan.

