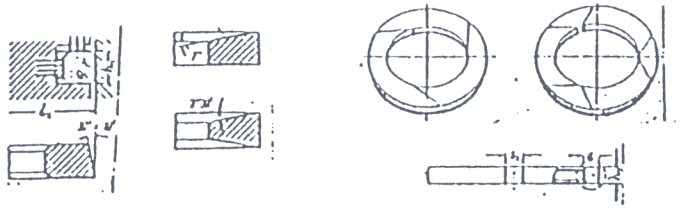
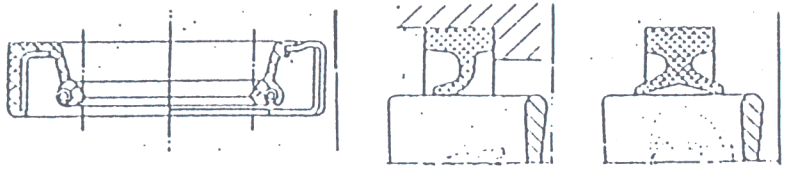
1.

Tesnila za tesnenje med rotirajočimi deli

Pri visokih rotacijskih hitrostih, visokih pritiskih in temperaturah uporabimo za tesnenje odlikovno obstojne gladke elemente iz kovine, sive litine in sinter kovine.

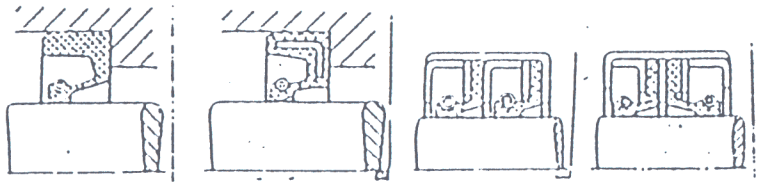


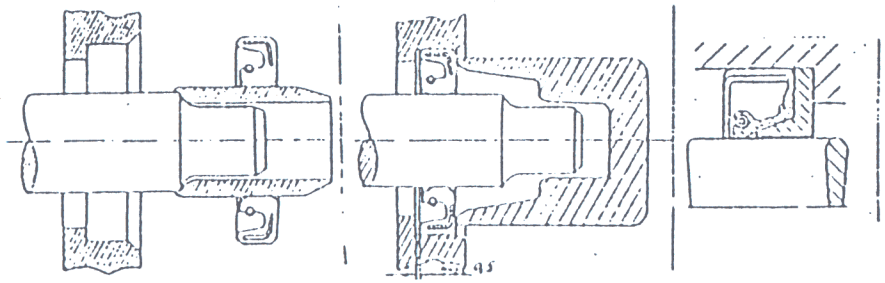
Za tesnenje na vrtečih gredeh in ohišjih ter pri majhnih razlikah pritiskov, pa je p primerna uporaba klobučastih tesnil (simering) iz gume ali umetnih mas.



Tovrstna tesnila delimo na:

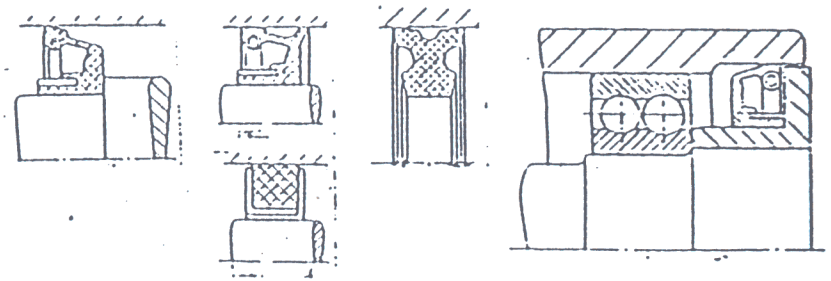
- radialno tesnenje navznoter (gredi , vretena)





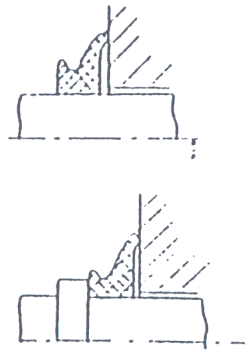
Načini montiranja

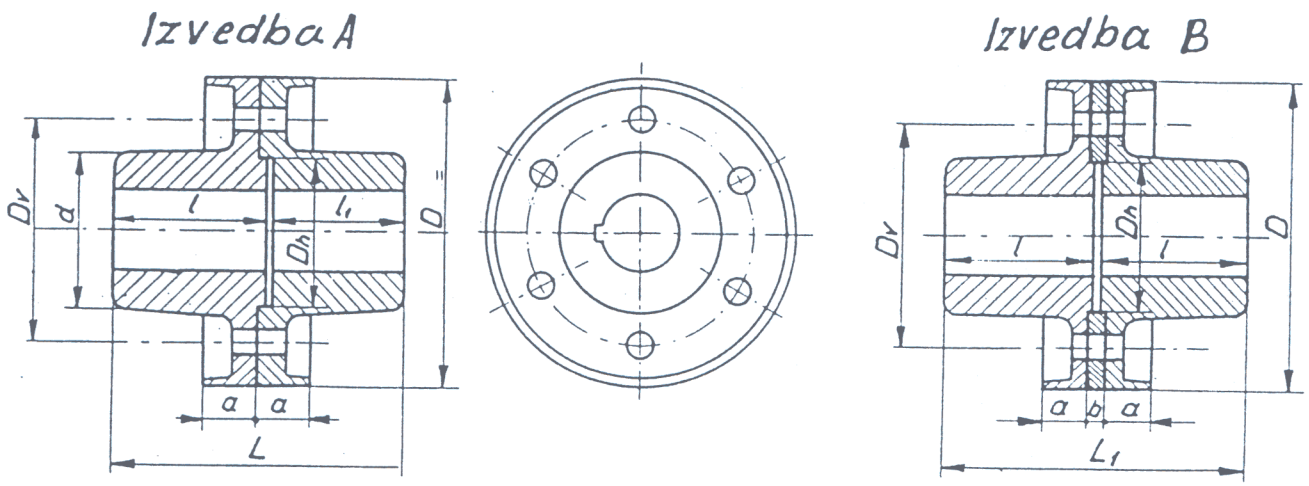
- radialno tesnenje navzven (bobni, obročki, tesnenje na ohišje)



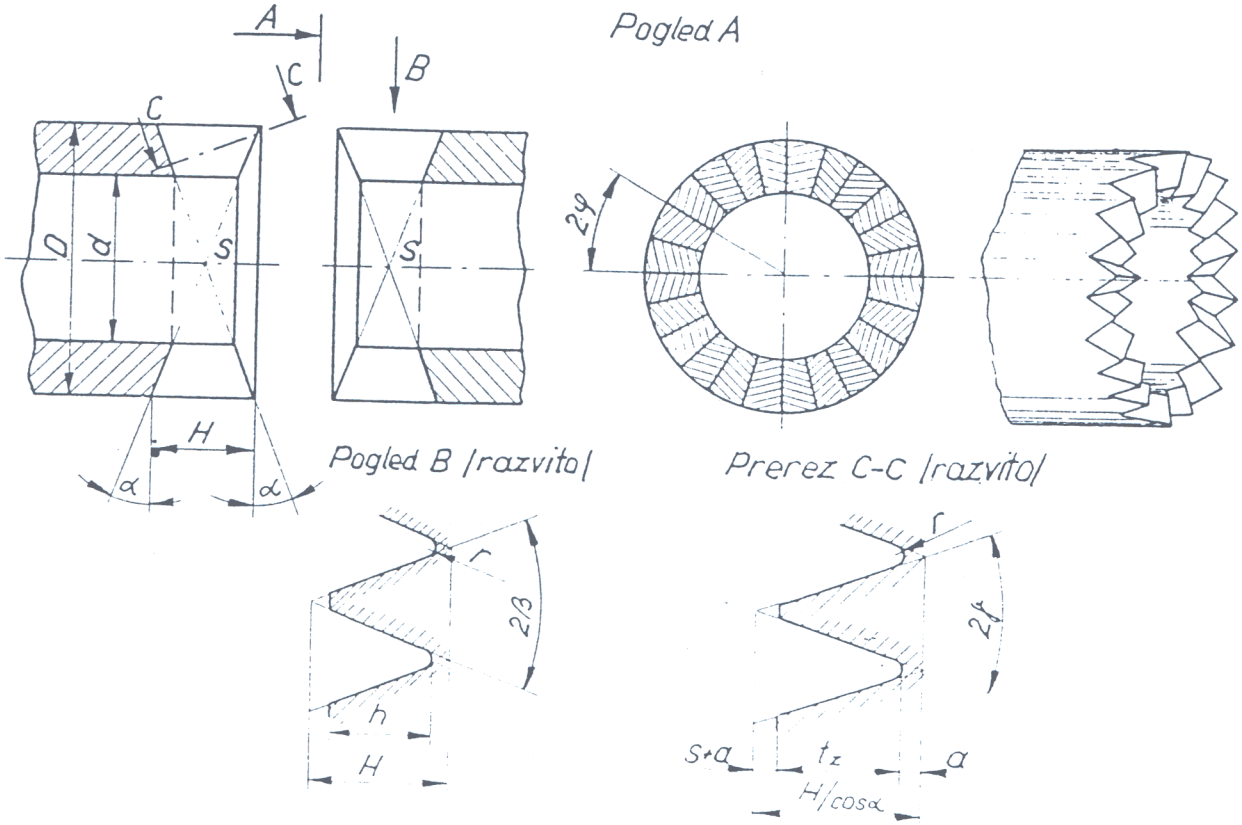
- aksialno tesnenje vrtečih gredi (gladko obročno tesnenje)

V-tesnila

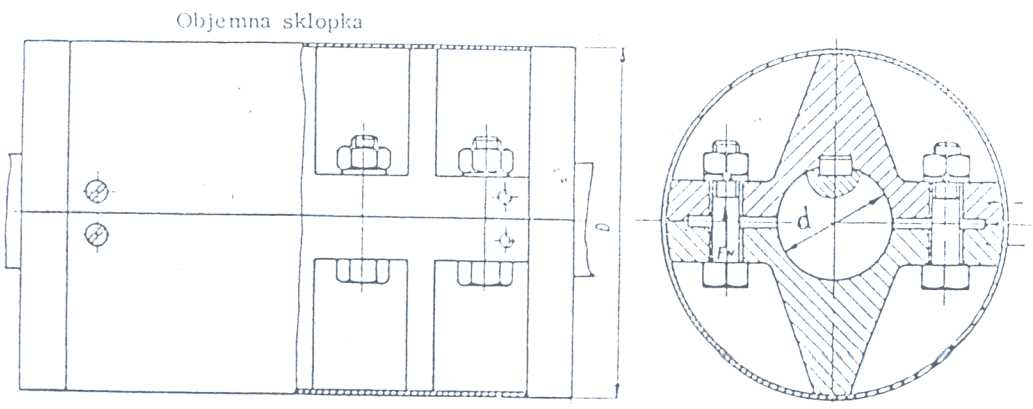


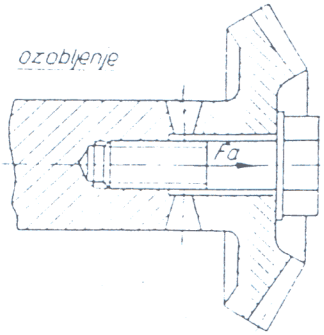


Slika 14.1



Slika 19.1





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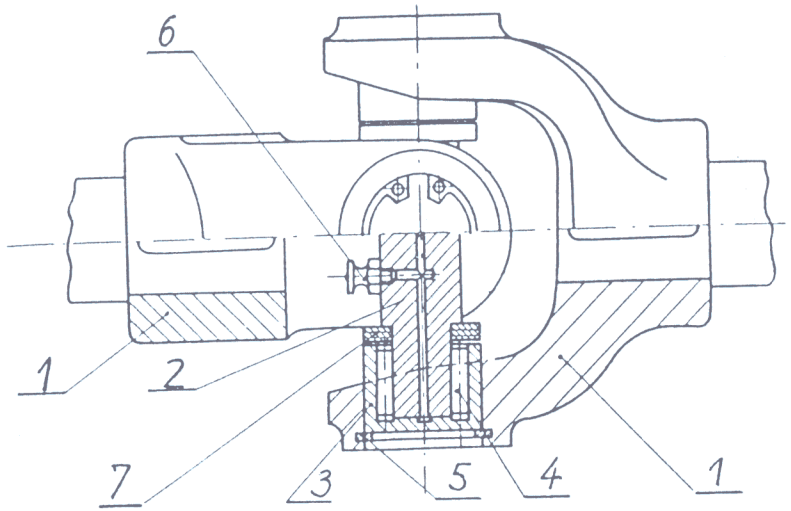

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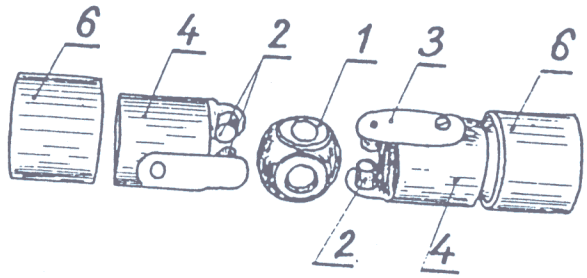

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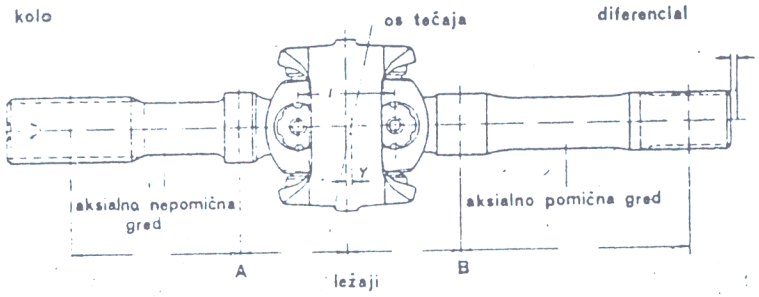
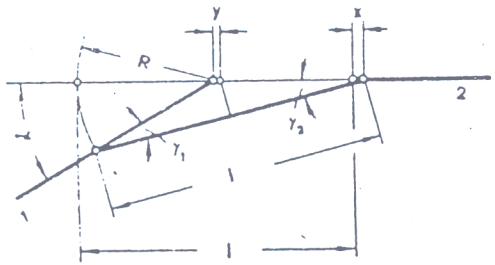
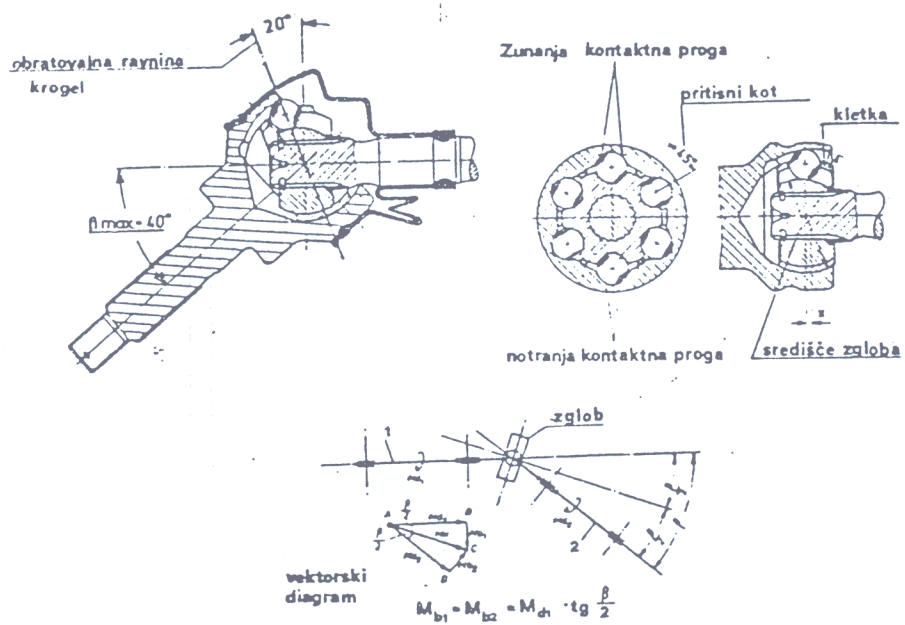


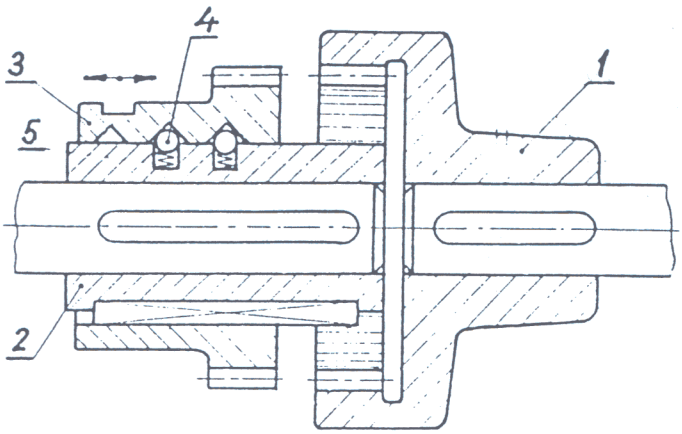
Sl. 5.09



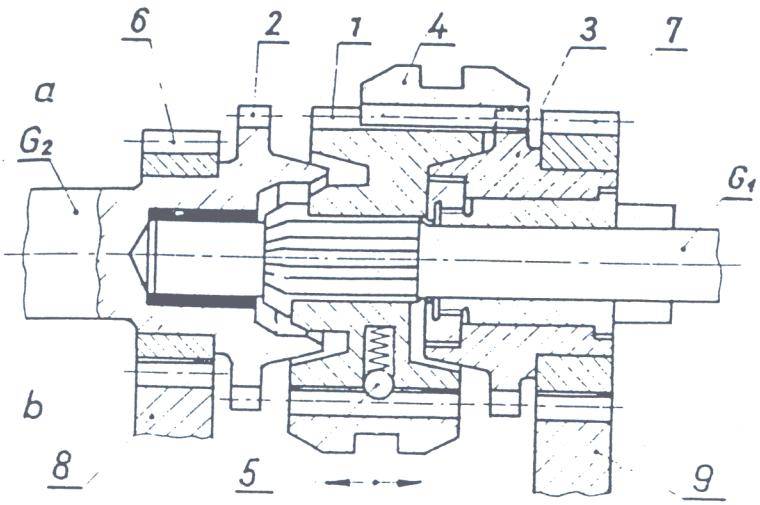
Sl. 5.10



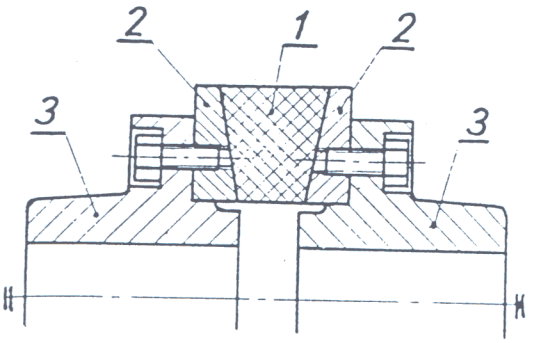
Sl. 5.08



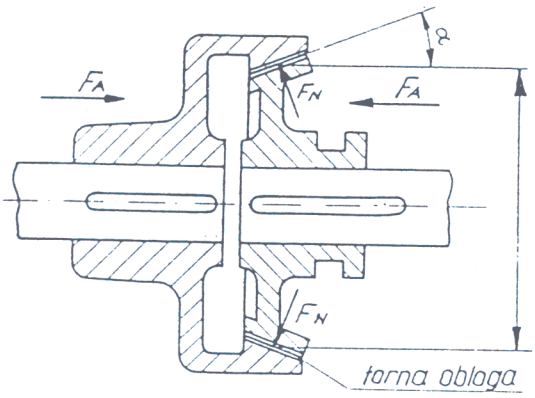
Slika 8o.1

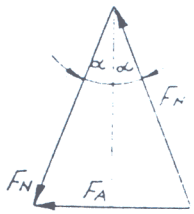


Slika 81.1

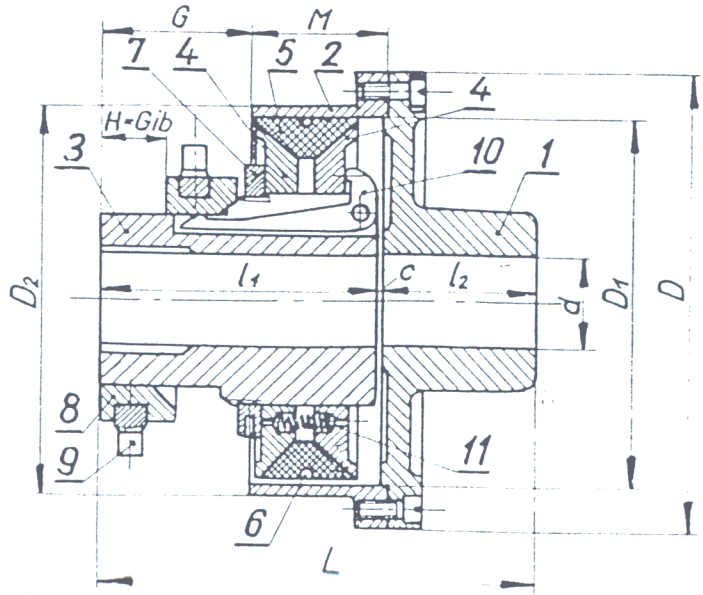


Slika 71.1



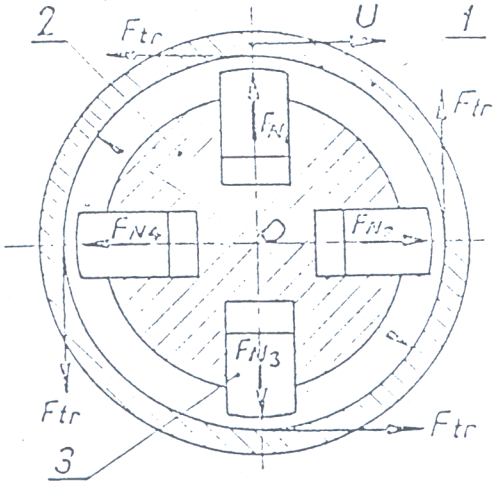


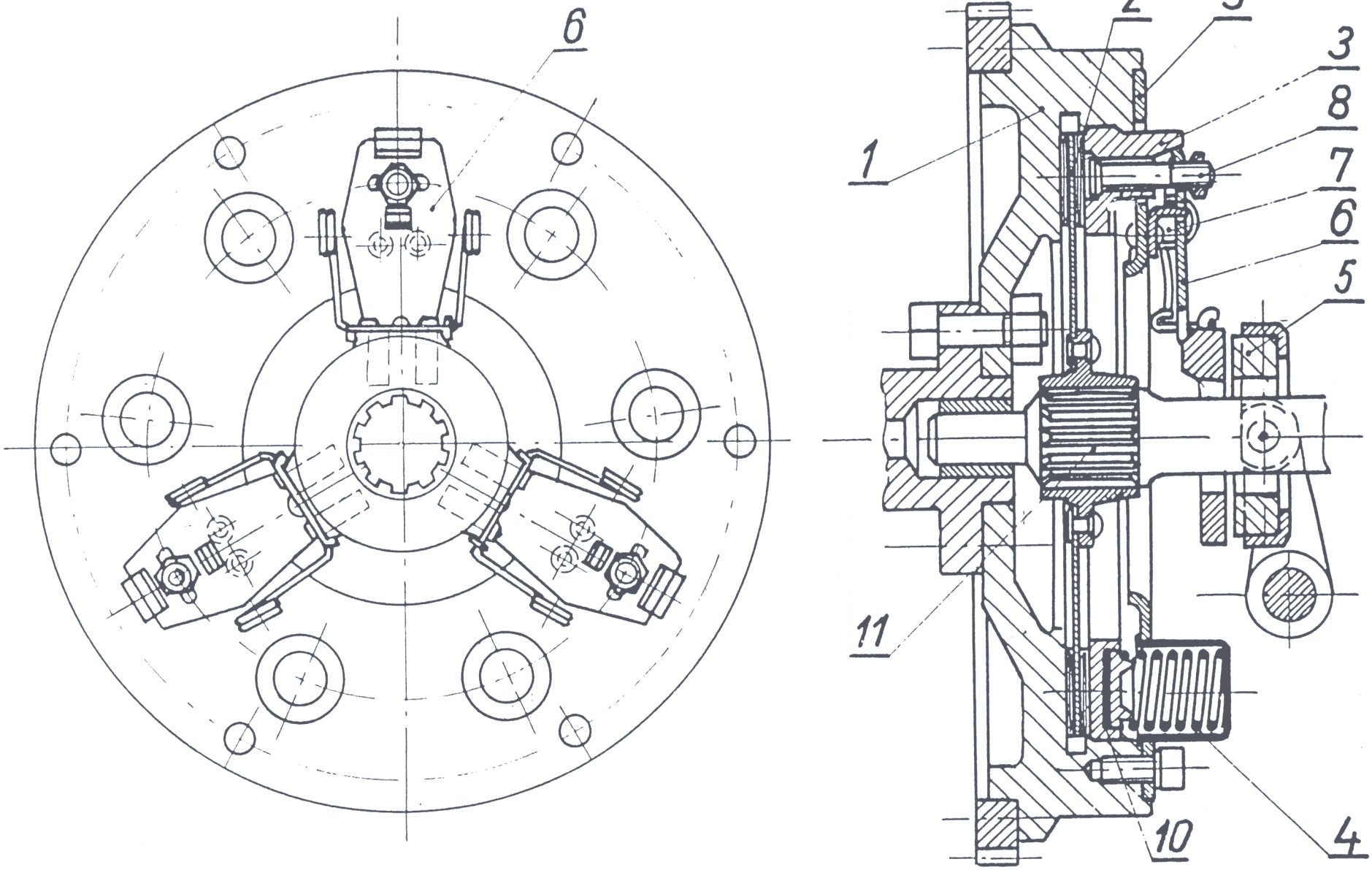
Slika 99.1



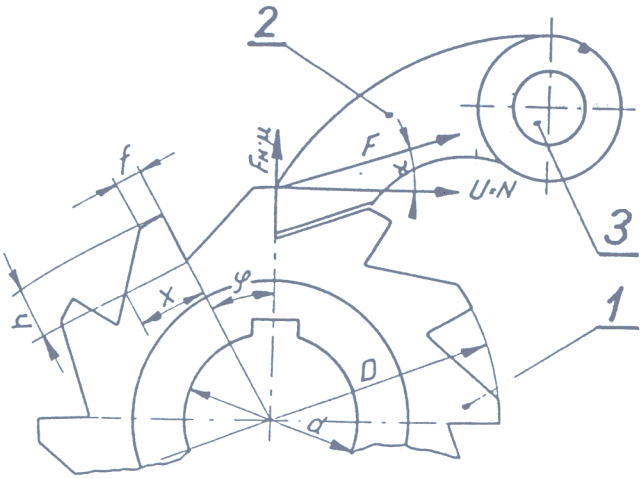
Slika 1o2.1

Čeljustna torna sklopka

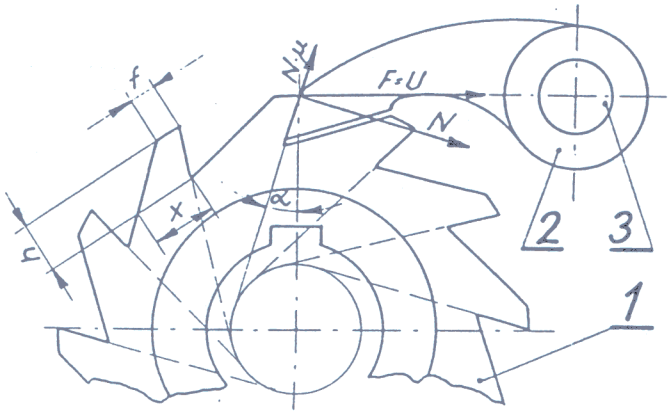




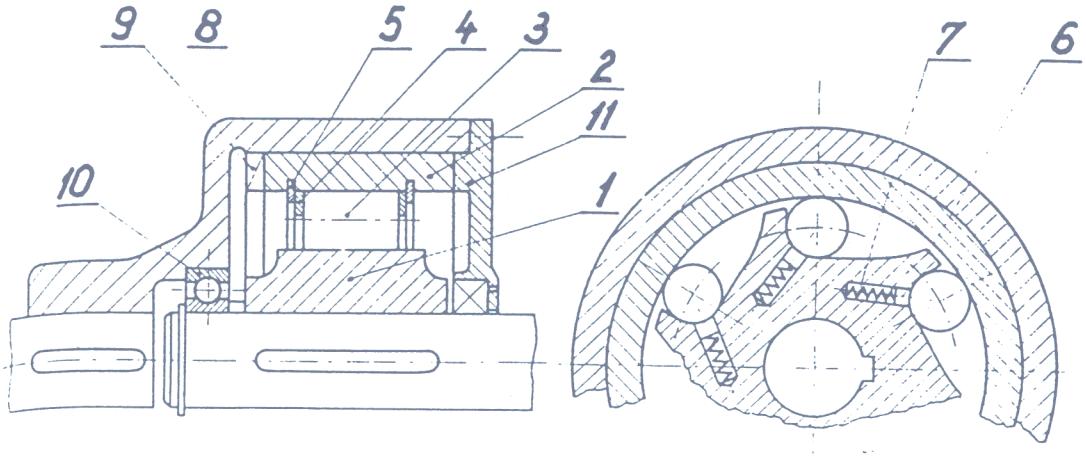
Slika 1o7.1



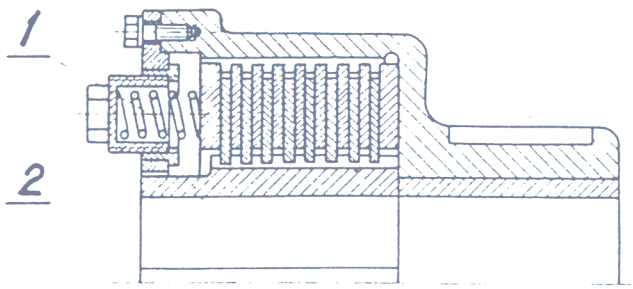
Slika 135.1



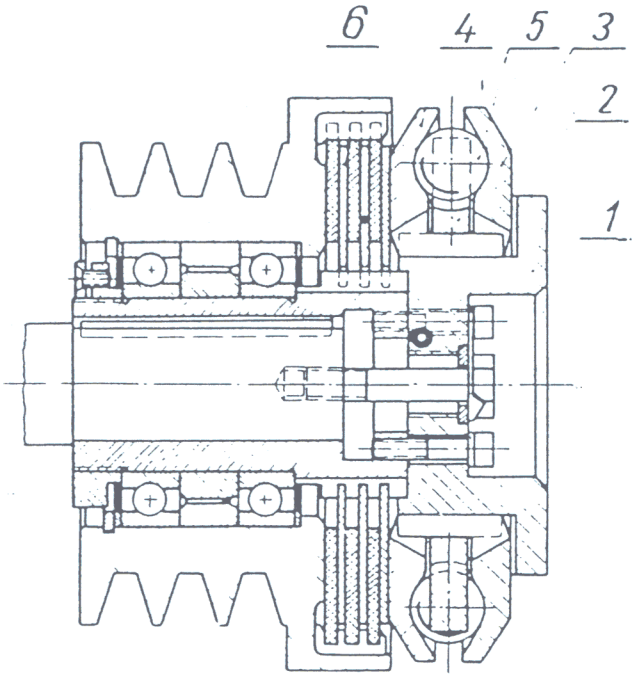
Slika 135.2



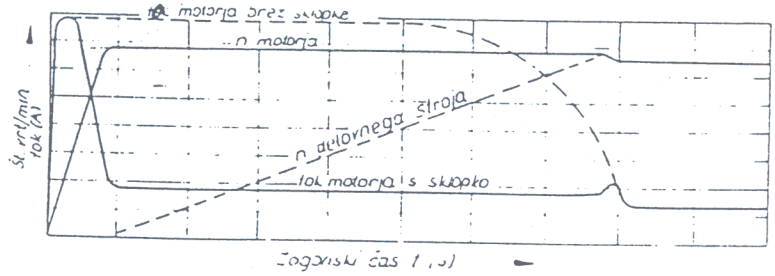
Slika 147.1



Slika 15o.2



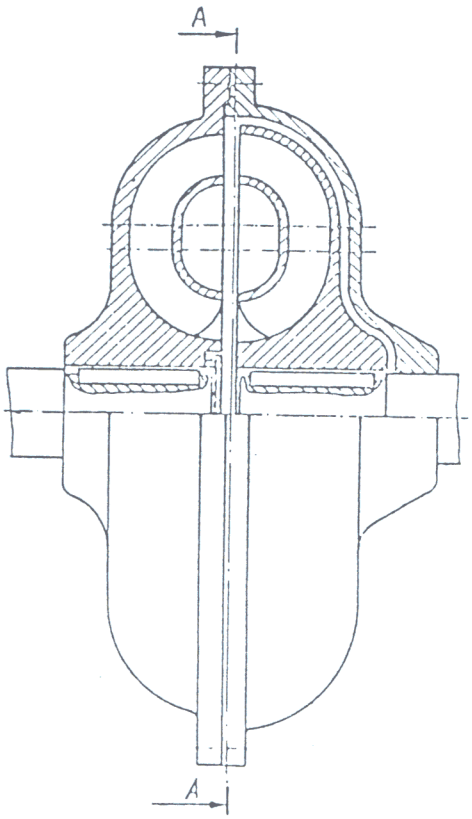
Slika 159.2



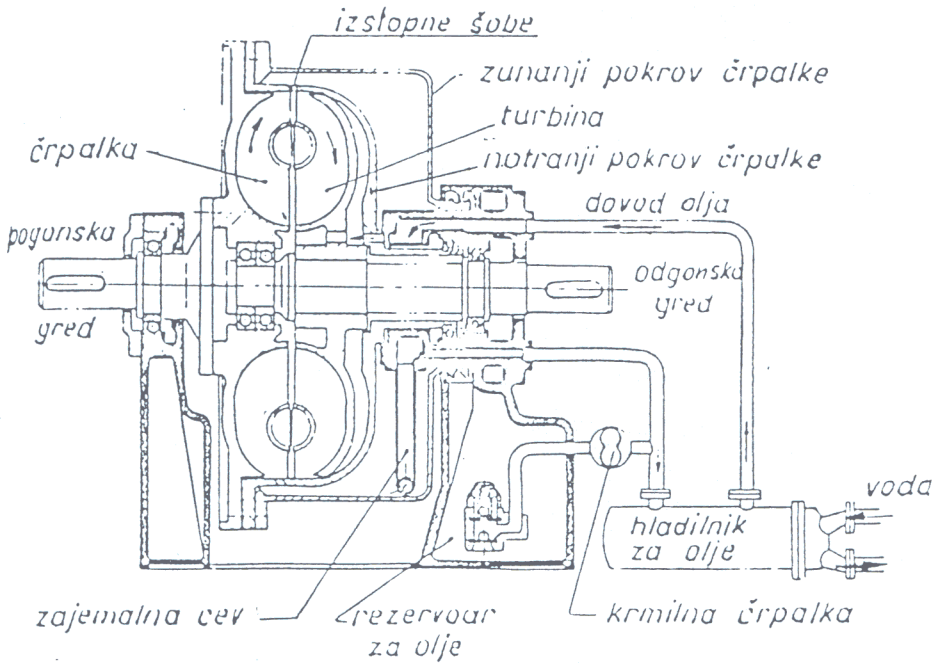
Slika 159.1

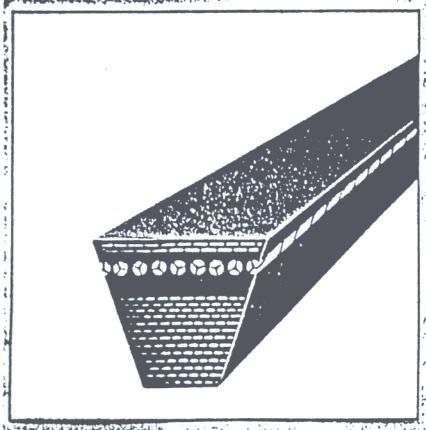
Hidravlične sklopke

a. nekrmiljene



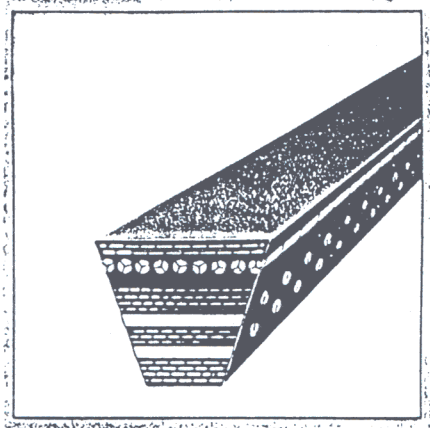
b. Krmiljene





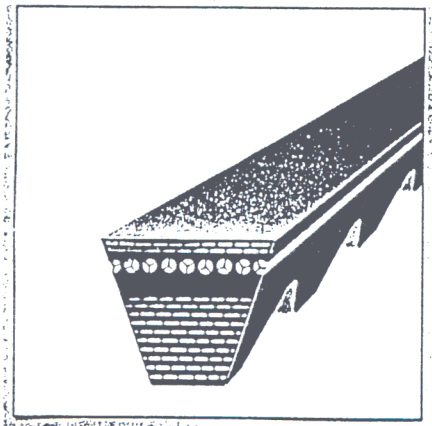
DURAVEL

Izradujemo DURAVEL — uzane klinaste remene sa nasečenom ivicom i presecima AV 10 i AV 13.



DURAVEL

varijanta sa poboljšanim osobinama. Dodatnim umecima povećana je poprečna krutost, što je pogodno za veće prenose.



DURAVEL FLEX (DURAVEL N)

varijanta sa poboljšanom fleksibilnošću. Unutrašnje ozupčenje omogućava upotrebu remenice manjeg prečnika. Ovi remeni su veoma izdržljivi i prikladni prvenstveno za veće prenose.

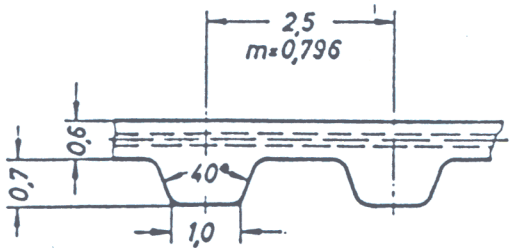
DURAVEL su uzani klinasti remeni sa nasečenom ivicom za pogon pomoćnih agregata u motornim vozilima (alternatora, ventilatora, pumpi za vodu) i ostalih mašina i uređaja.

Prednost Duravel klinastih remena sa sečenom ivicom u poređenju sa običnim klinastim remenima su:
- do dva puta duži vek,
- dvadeset do trideset procenata veći prenos snage,
- veća otpornost na klizanje i habanje,
- otpornost na ulja, ozon i povišenu temperaturu,
- ravnomeran i tih pogon.

Dimenzije Duravel klinastih remena Sava Kranj odgovaraju većini putničkih motornih vozila i mnogim teretnim vozilima i autobusima. Izrađujemo ih u skladu ISO 2790. Remene izrađujemo u dužini od 670 do 1600 mm.

T 2,5

Synchroflex-Zahnriemen



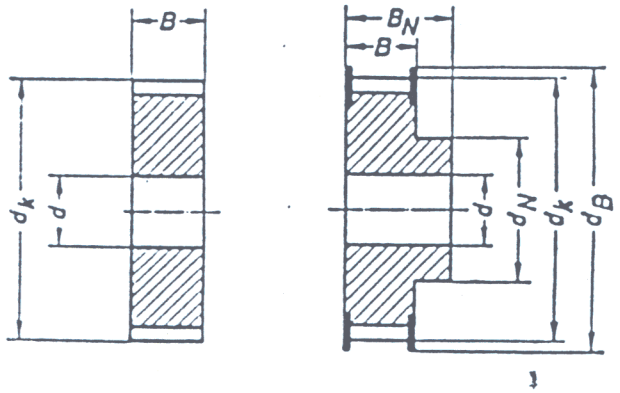
Bestellbeispiel

10	T 2,5/380
Breite	Type/Länge

Type	Riemenlänge mm	Zähnezahl
T 2,5/120	120,00	48
T 2,5/160	160,00	64
T 2,5/200	200,00	80
T 2,5/245	245,00	98
T 2,5/265	265,00	106
T 2,5/285	285,00	114
T 2,5/330	330,00	132
T 2,5/380	380,00	152
T 2,5/420	420,00	168
T 2,5/480	480,00	192
T 2,5/500	500,00	200
T 2,5/600 FA	600,00	240
T 2,5/650	650,00	260
T 2,5/780	780,00	312

FA = mit verstärktem Rücken

Synchroflex-Zahnräder T 2,5



Bestellbeispiel

14	T 2,5/38	—	2
Breite	Type/Zähnezahl	—	Bordscheiben

(Seite 32)
Lagerräder Seite 33

z	d_k mm	d_{max} mm	d_B mm	z	d_k mm	d_{max} mm	d_B mm
12	9,00	3	12	42	32,90	24	36
13	9,80	3,5	13	43	33,70	24	37
14	10,60	4	14	44	34,50	25	38
15	11,40	5	15	45	35,30	26	39
16	12,20	6	16	46	36,10	27	39
17	13,00	7	16	47	36,90	27	40
18	13,80	7	17	48	37,70	27	41
19	14,60	8	18	49	38,45	28	42
20	15,40	9	19	50	39,25	29	43
21	16,20	10	20	51	40,05	30	43
22	17,00	10	20	52	40,85	30	44
23	17,80	11	21	53	41,65	30	45
24	18,55	11	22	54	42,45	31	46
25	19,35	12	23	55	43,25	32	47
26	20,15	13	23	56	44,05	32	47
27	20,95	13	24	57	44,85	32	48
28	21,75	13	25	58	45,65	33	49
29	22,55	14	26	59	46,45	34	50
30	23,35	15	27	60	47,25	35	51
31	24,15	16	27	61	48,05	36	51
32	24,95	16	28	62	48,85	37	52
33	25,75	17	29	63	49,60	37	53
34	26,55	17	30	64	50,40	37	54
35	27,35	20	31	65	51,20	38	55
36	28,10	20	31	66	52,00	38	55
37	28,90	21	32	67	52,80	39	56
38	29,70	21	33	68	53,60	39	57
39	30,50	22	34	69	54,40	40	58
40	31,30	23	35	70	55,20	41	59
41	32,10	24	35	71	56,00	42	59

d_{max} = max. Bohrung für Räder mit Bordscheiben

Riemennormbreite b mm	4	6	10
Radbreite B mm	8	10	14

Zahnmaße, Toleranzen

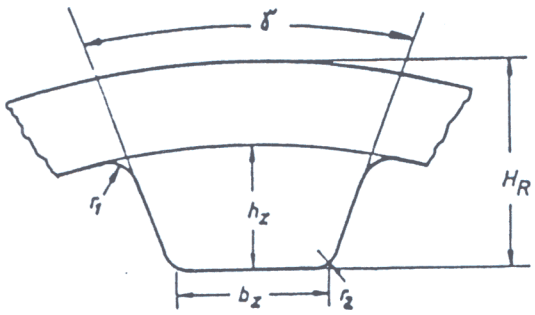


Tabelle 1a

	XL	L	H	XH	XXH
Zahnwinkel x	50	40	40	40	40
Zahnlückentiefe h_2	1,27	1,90	2,29	6,35	9,53
Kopfradius r_1	0,38	0,51	1,02	1,57	2,29
Fußradius r_2	0,38	0,51	1,02	1,19	1,52
Zahnbreite b_z	1,37	3,25	4,43	7,94	12,12
Gesamt Riemenstärke H_R	2,38	3,17	4,76	11,12	15,87

Breiten-Toleranzen (mm) für OPTIBELT-ZR Zahnflachriemen

Tabelle 1b

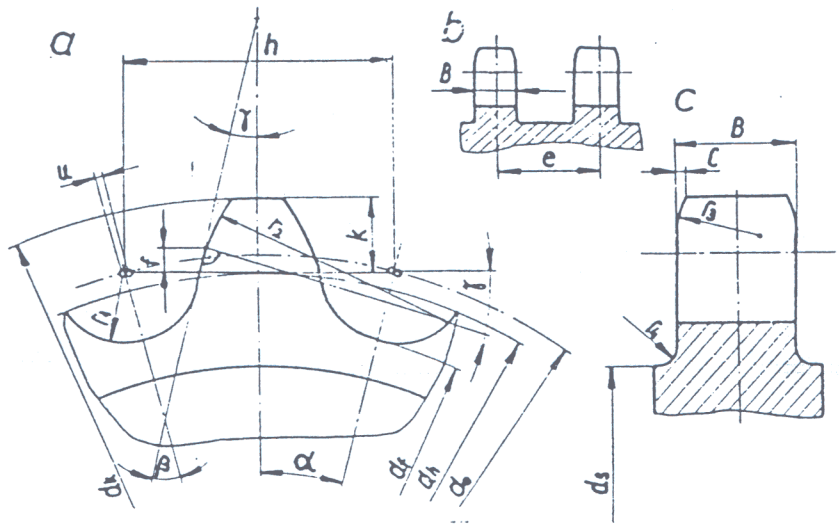
Breiten der Zahnflachriemen	Längen der Zahnflachriemen mm		
	bis 838	839 bis 1676	über 1676
über 1/8" ≙ 3,17 mm bis 7/16" ≙ 11,1 mm	+ 0,4 − 0,8	+ 0,4 − 0,8	
über 7/16" ≙ 11,1 mm bis 1 1/2" ≙ 38,1 mm	+ 0,8 − 0,8	+ 0,8 − 1,2	+ 0,8 − 1,2
über 1 1/2" ≙ 38,1 mm bis 2" ≙ 50,8 mm	+ 0,8 − 1,2	+ 1,2 − 1,2	+ 1,2 − 1,6
über 2" ≙ 50,8 mm bis 2 1/2" ≙ 63,5 mm	+ 1,2 − 1,2	+ 1,2 − 1,6	+ 1,6 − 1,6
über 2 1/2" ≙ 63,5 mm bis 3" ≙ 76,2 mm	+ 1,2 − 1,6	+ 1,6 − 1,6	+ 1,6 − 2,0
über 3" ≙ 76,2 mm bis 4" ≙ 101,6 mm	+ 1,6 − 1,6	+ 1,6 − 2,0	+ 2,0 − 2,0
über 4" ≙ 101,6 mm	+ 2,4 − 2,4	+ 2,4 − 2,8	+ 2,4 − 3,2

Längen-Toleranzen (mm) für OPTIBELT-ZR Zahnflachriemen

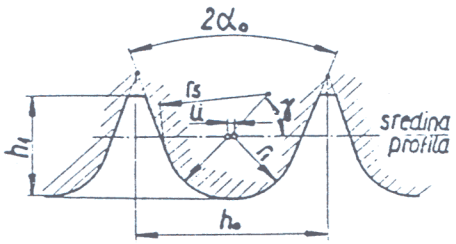
Tabelle 2

von 127 mm bis 254 mm	von 255 bis 381	von 382 bis 508	von 509 bis 762	von 763 bis 1016	von 1017 bis 1270	von 1271 bis 1524	von 1525 bis 1778
± 0,20 mm	± 0,23	± 0,25	± 0,30	± 0,33	± 0,38	± 0,41	± 0,43

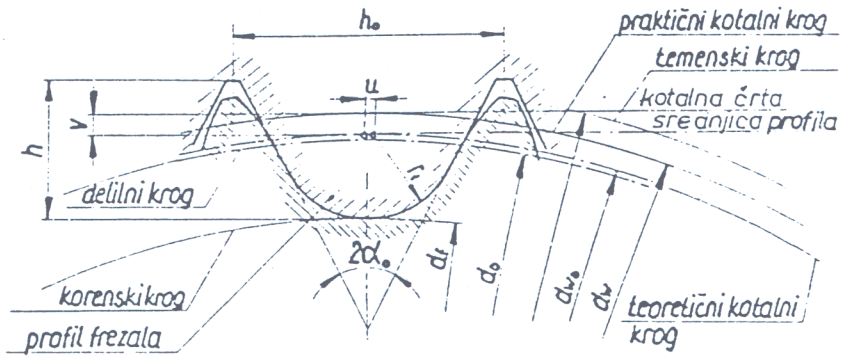
Für jede weitere 25,4 mm Länge sind 0,0254 mm zuzurechnen!



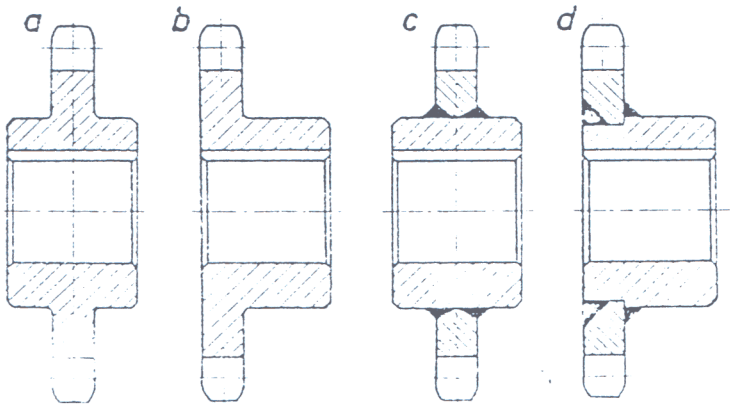
Sl. 19.1



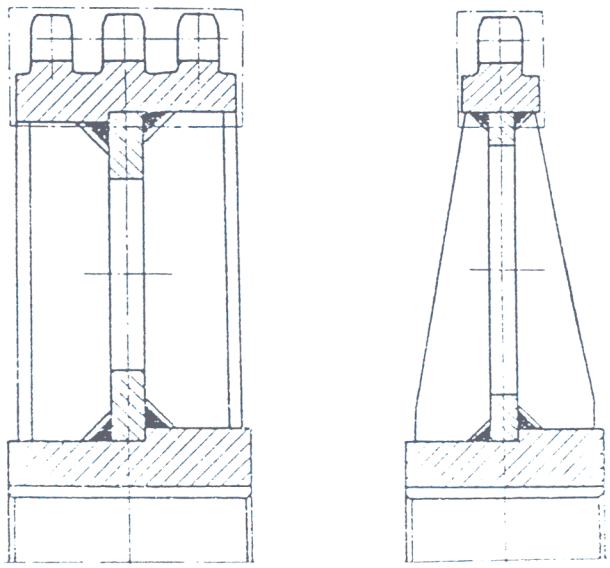
Sl.25.1



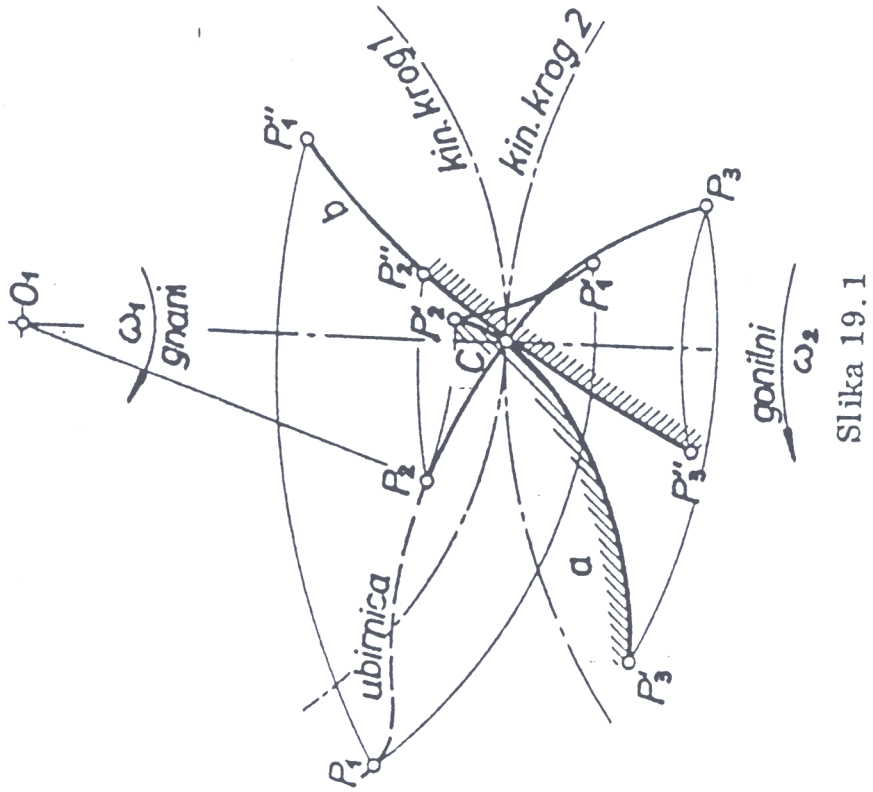
Sl. 25.2



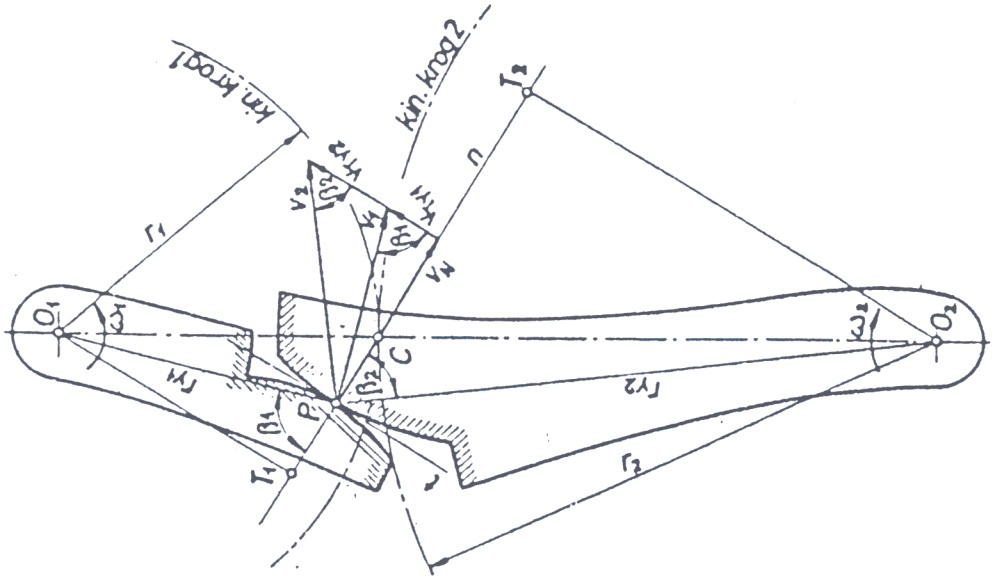
Sl. 32.1



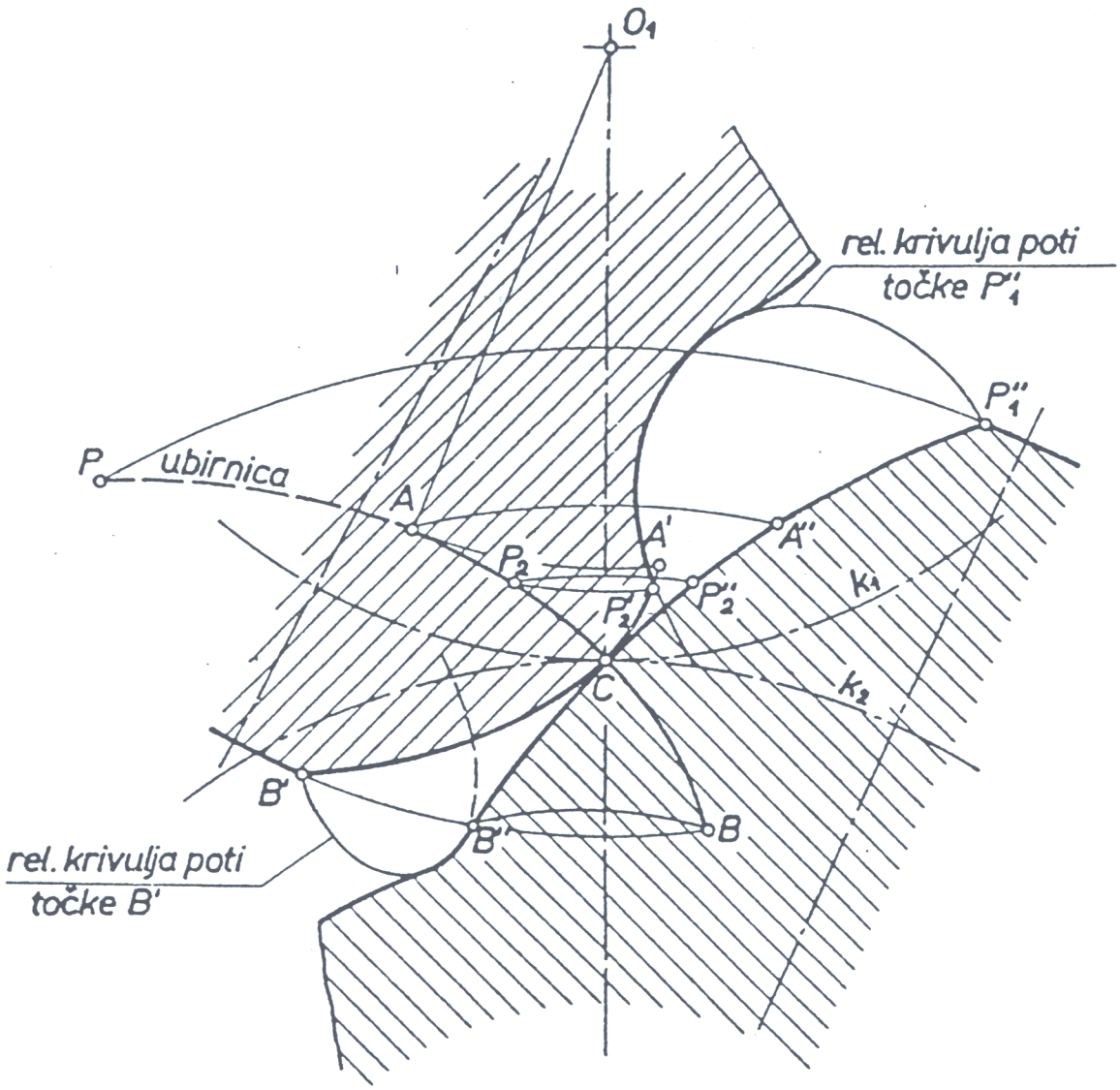
Sl. 34.1



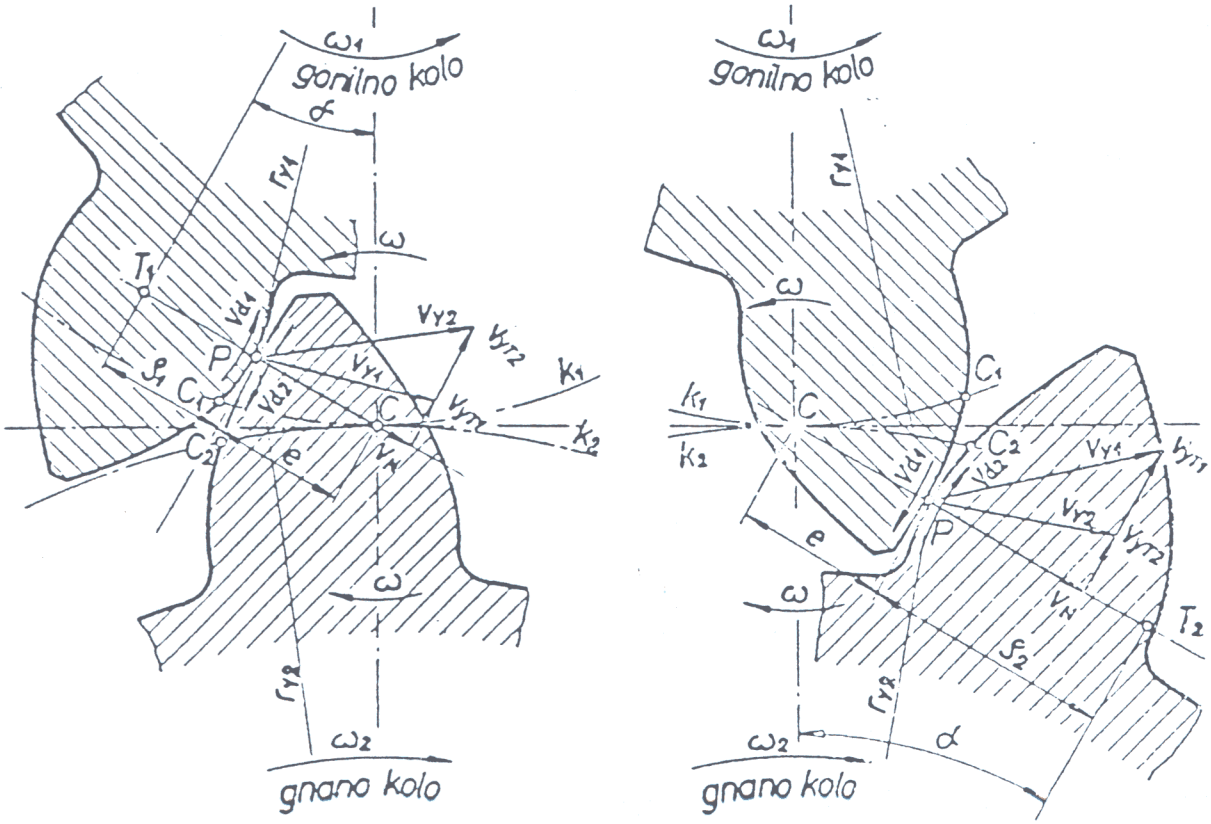
Slika 19.1



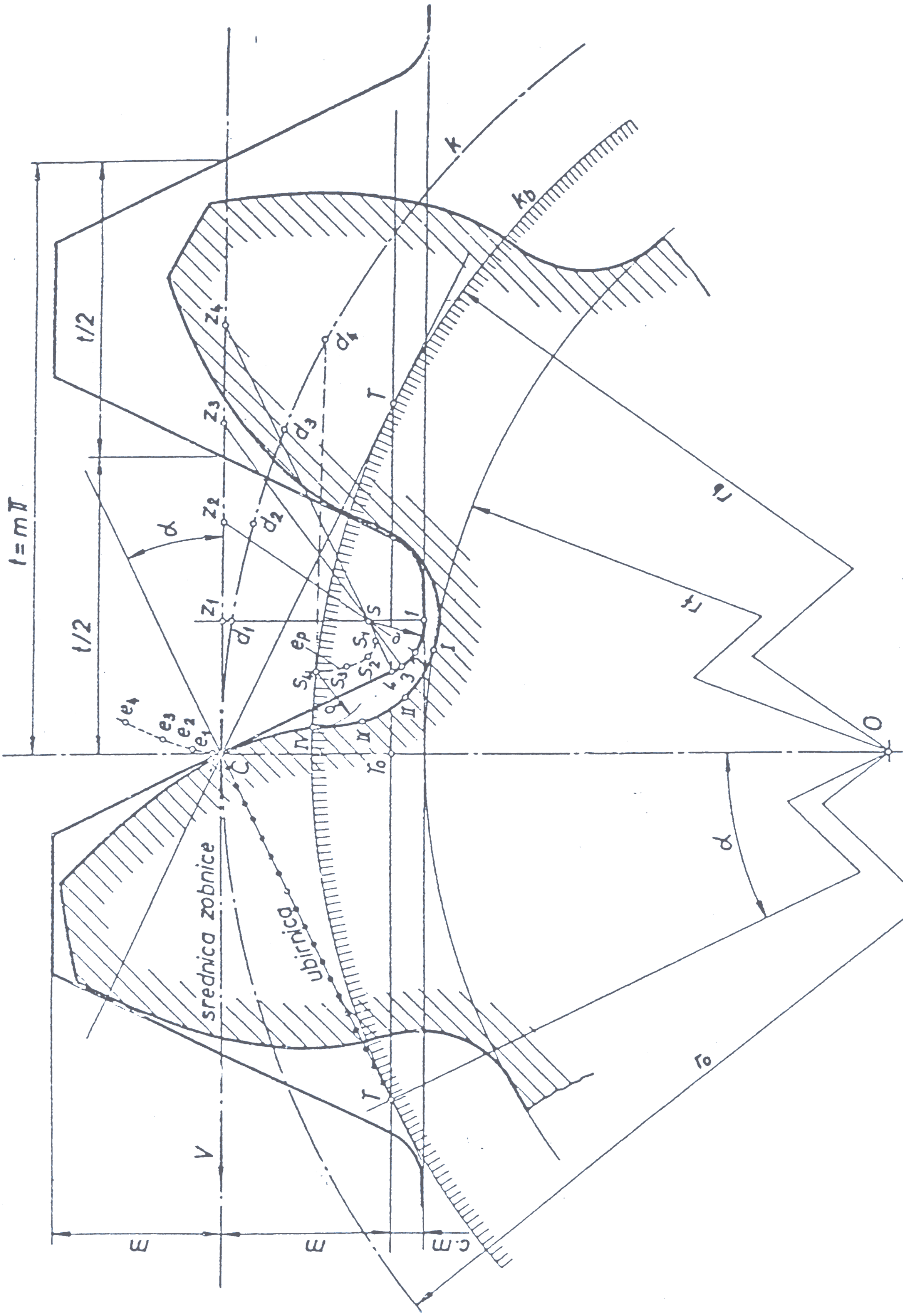
Slika 16.1



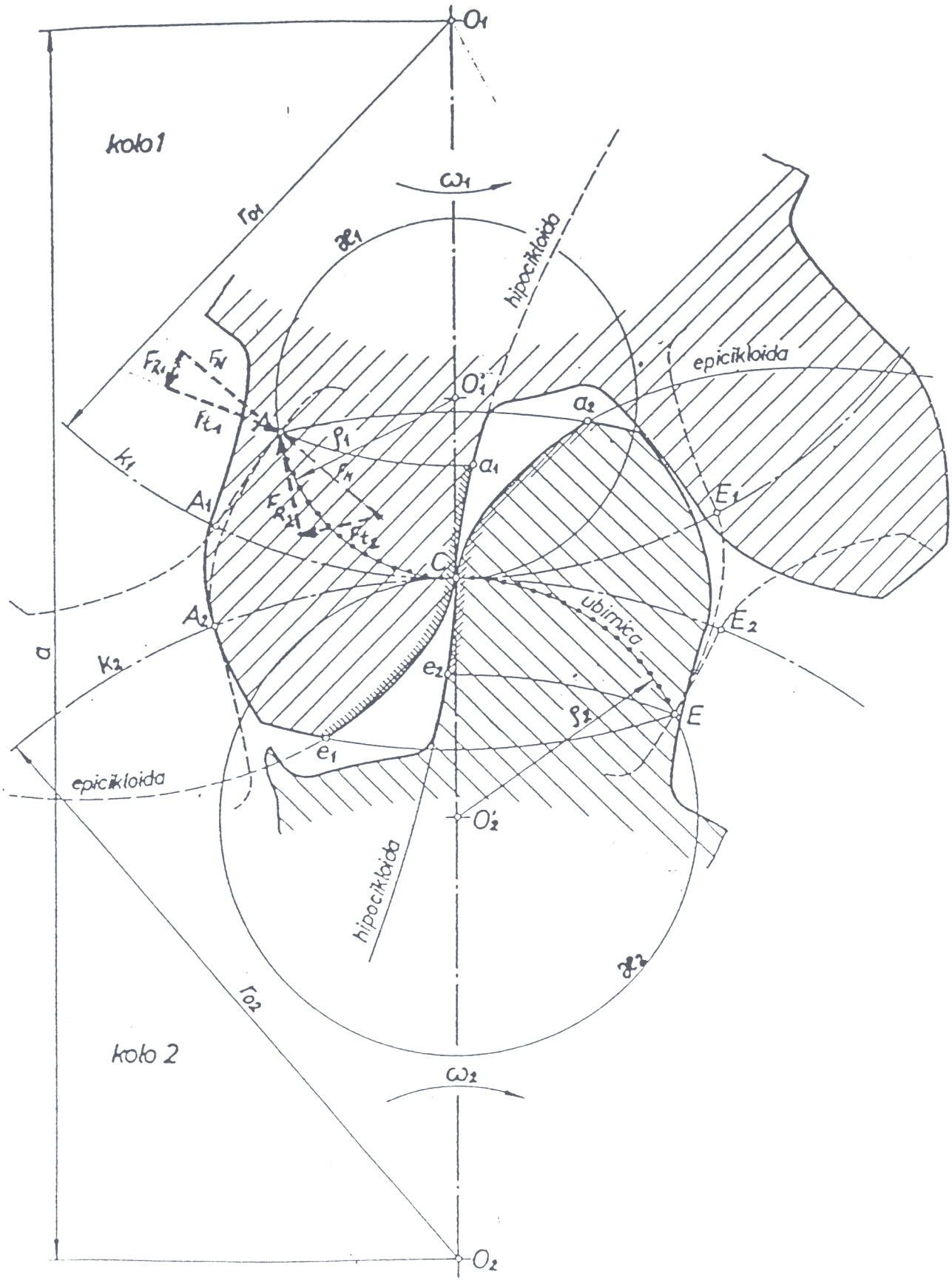
Slika 22.1



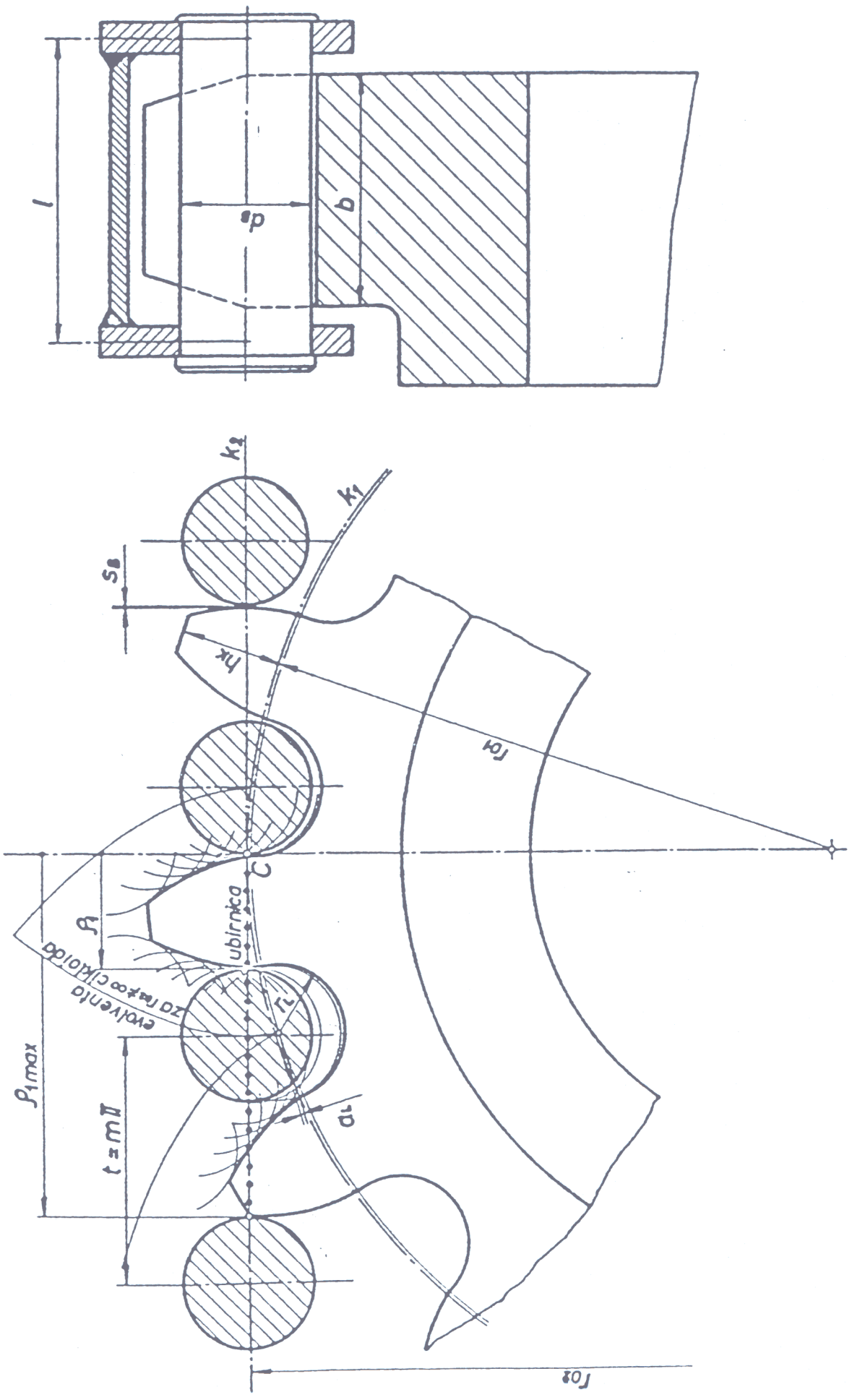
Slika 29.1


t = mπ
t/2
t/2
α
C
O
k
k_b
srednica zobnice
ubirnica
V
m
m
c.m
r_0
T
S
e_p
z_1
z_2
z_3
z_4
d_1
d_2
d_3
d_4

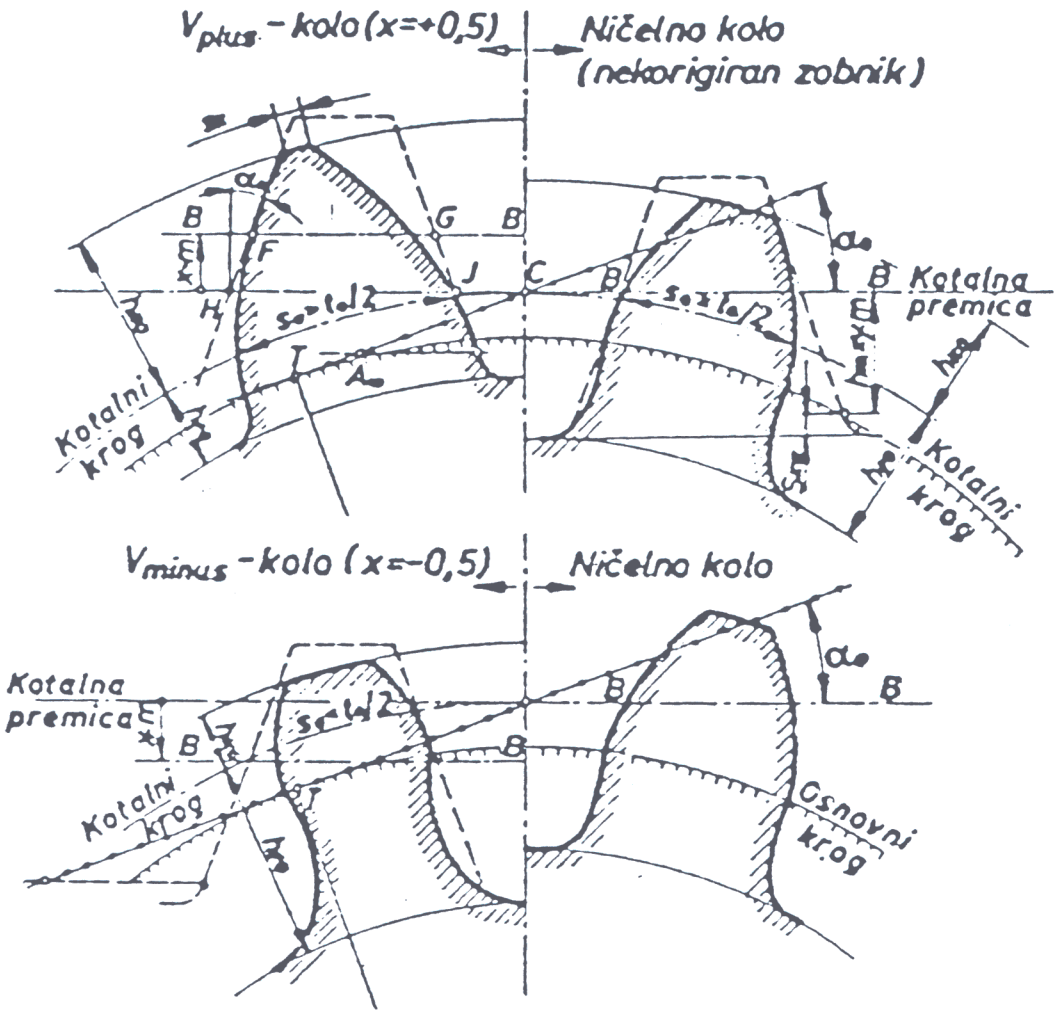
Slika 56.1


O1
koło 1
ω1
r01
g1
hipocikloida
epicikloida
F21
FN
Ft1
A
ρ1
O'1
a2
k1
a1
FN
A1
FR1
Ft2
E1
C
a
A2
E2
k2
ubimica
e2
ρ2
E
e1
epicikloida
O'2
hipocikloida
g2
r02
koło 2
ω2
O2

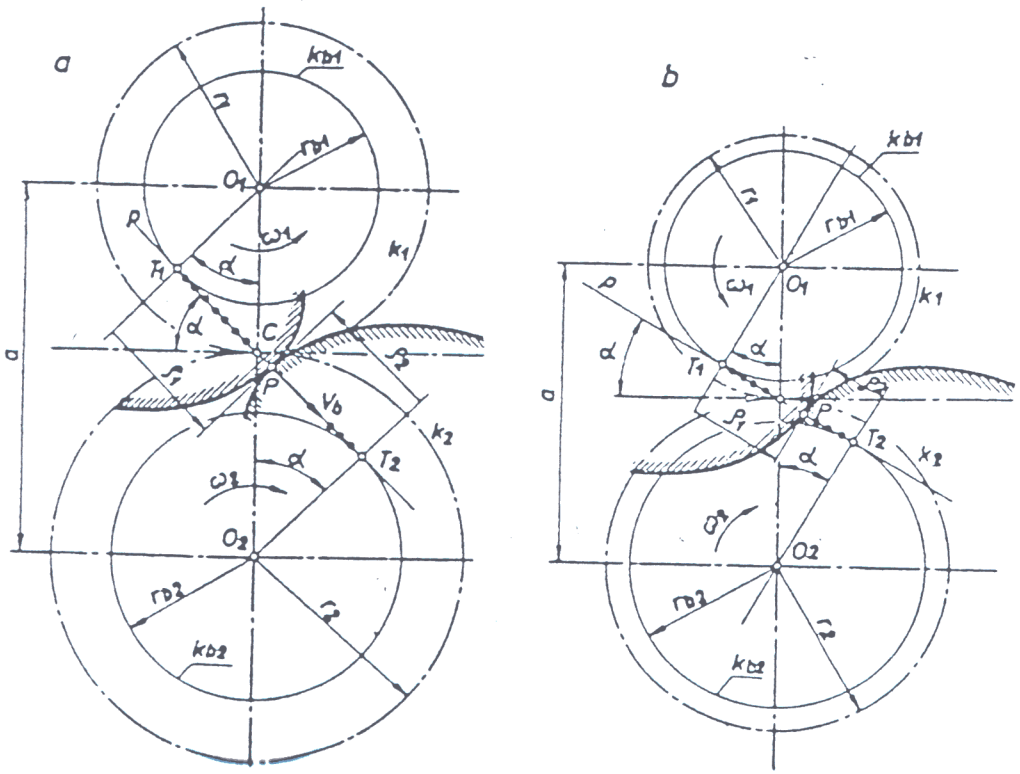
Slika 36.1


l
d
b
k2
k1
sa
hx
fαx
C
ubirnika
A
evolventa
ZO fα≠∞ cilindra
T1
ρ1max
t = mπ
a1
fα2

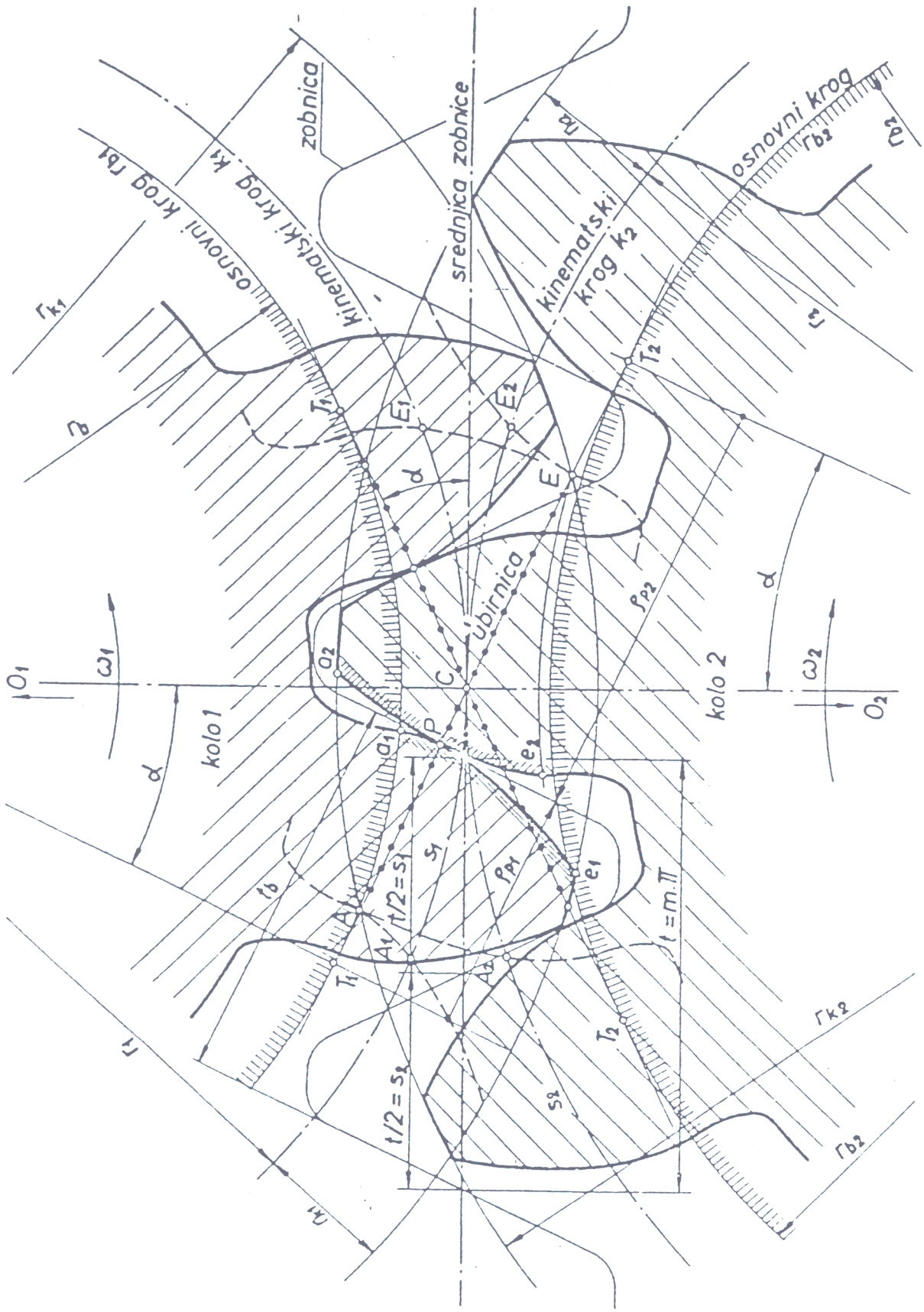
Slika 43.1



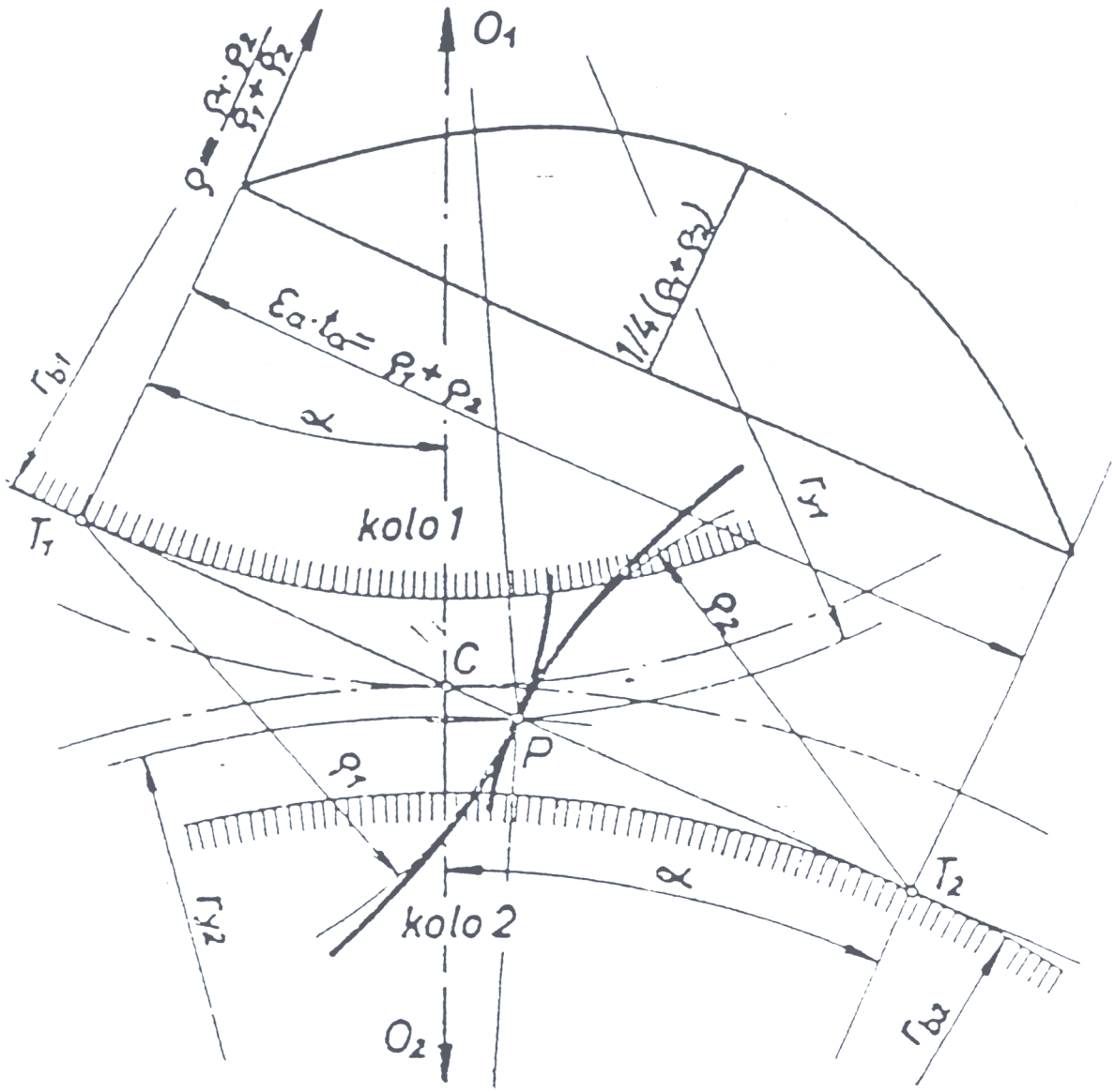
Slika 63.1



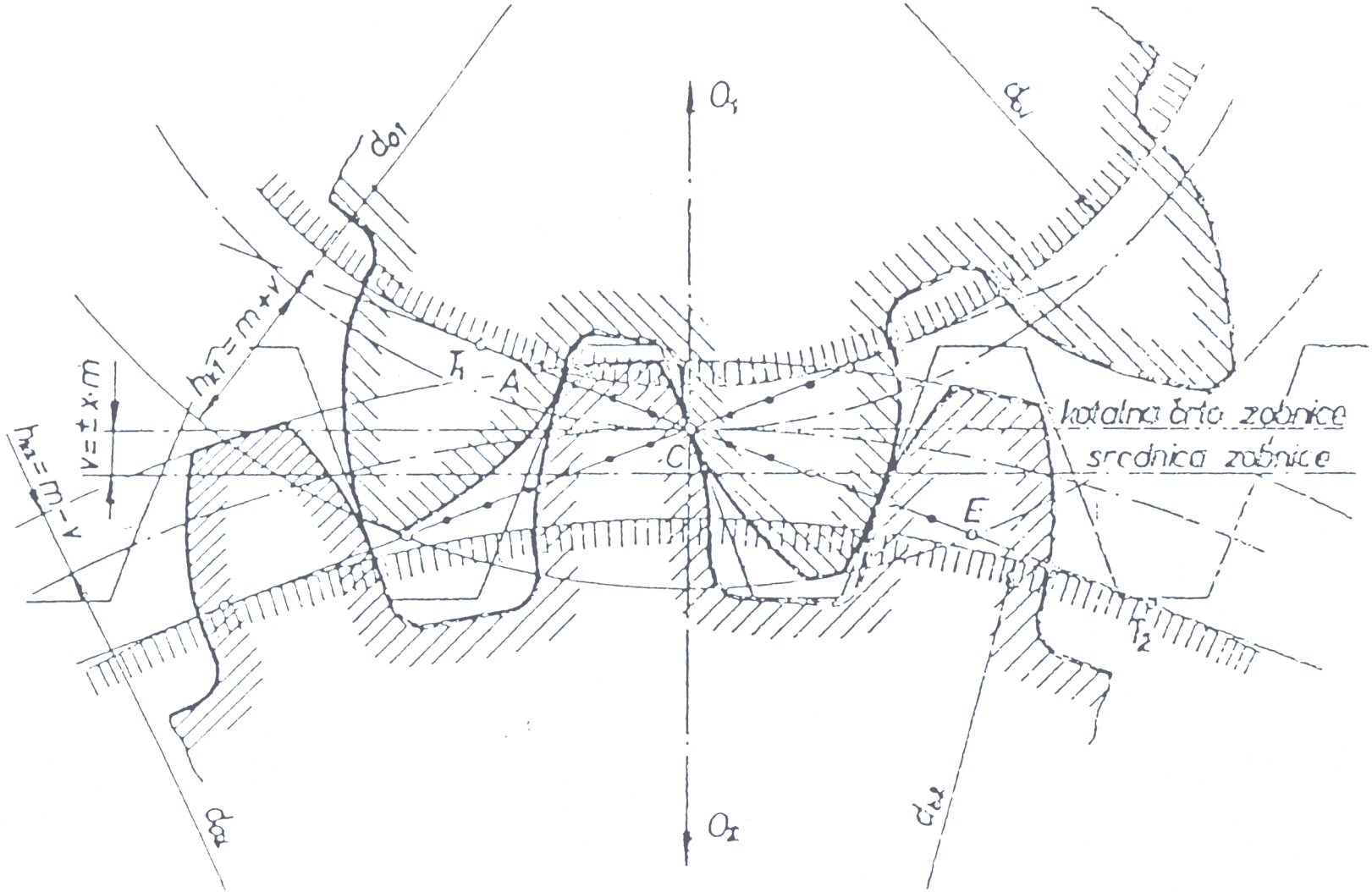
Slika 49.1


zobnica
srednjica zobnice
osnovni krog rb1
kinematski krog k1
kinematski krog k2
osnovni krog rb2
rk1
rb1
rb2
rk2
a
T1
T2
E1
E2
E
d
ubirnica
kolo 1
kolo 2
O1
O2
ω1
ω2
C
P
a1
a2
e1
e2
ρp1
ρp2
sp1
sp2
t/2 = s1
t = m.π
A1
A2

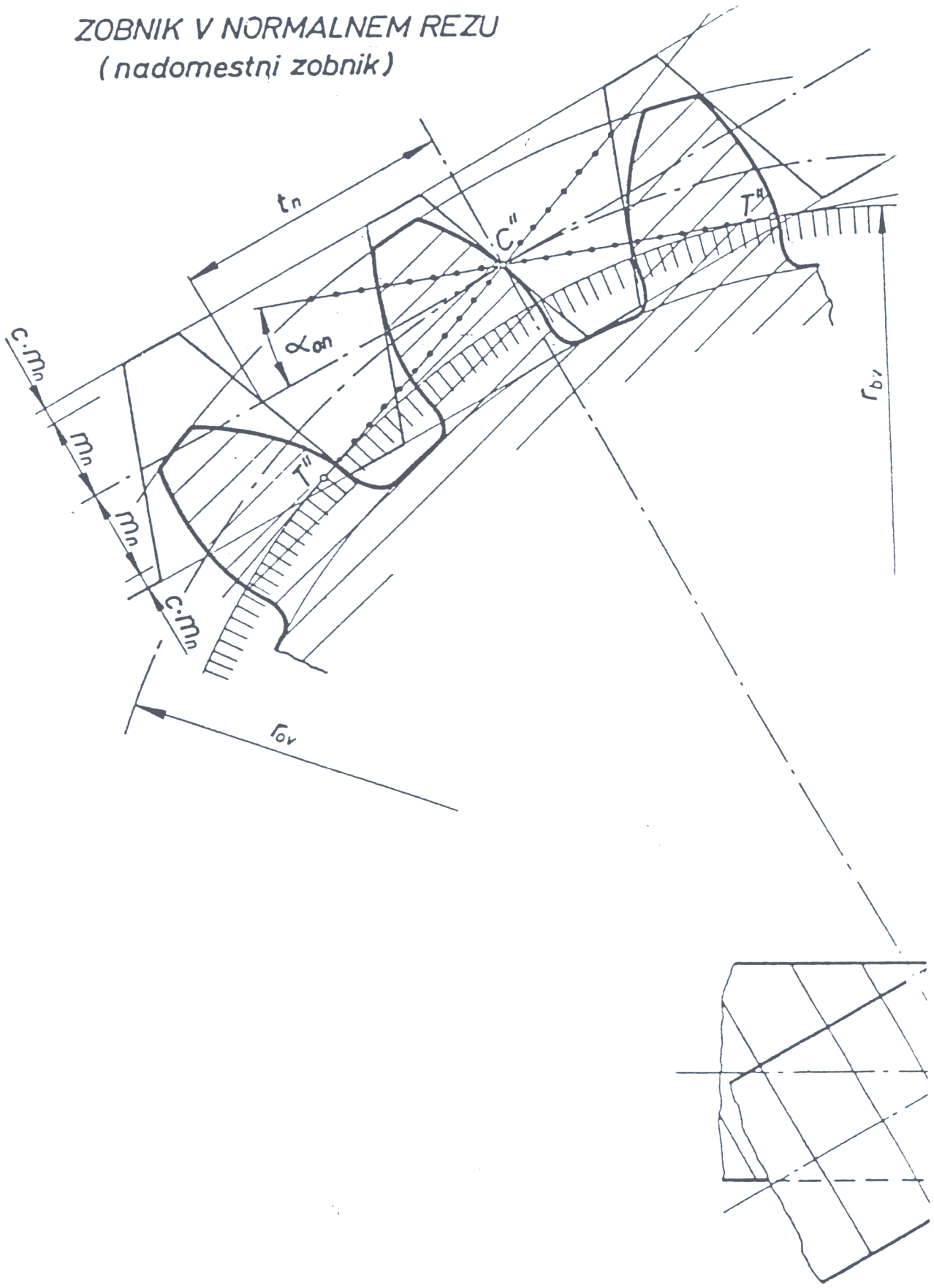
Slika 66. 1


O1
ρ = ρ1·ρ2 / ρ1+ρ2
εα·tα = ρ1+ρ2
1/4(ρ1+ρ2)
rb1
α
T1
kolo 1
ry1
ρ2
C
P
ρ1
α
T2
ry2
kolo 2
O2
rb2

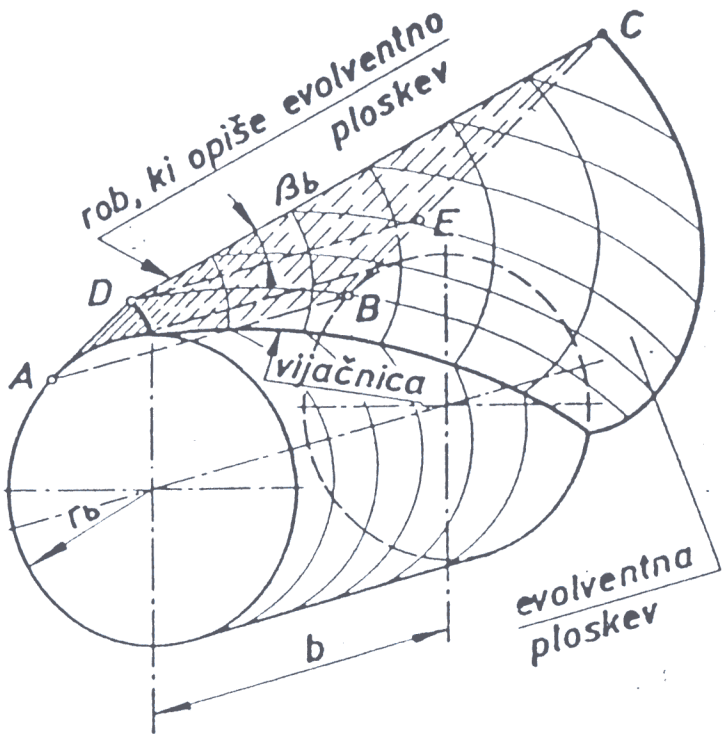
Slika 73.1


O_1
d_{a1}
d_1
$h_{a1}=m+v$
$v=\pm x\cdot m$
$h_{a2}=m-v$
h_1
A
C
E
katalna črta zobnice
srednica zobnice
T_2
d_{a2}
d_2
O_2

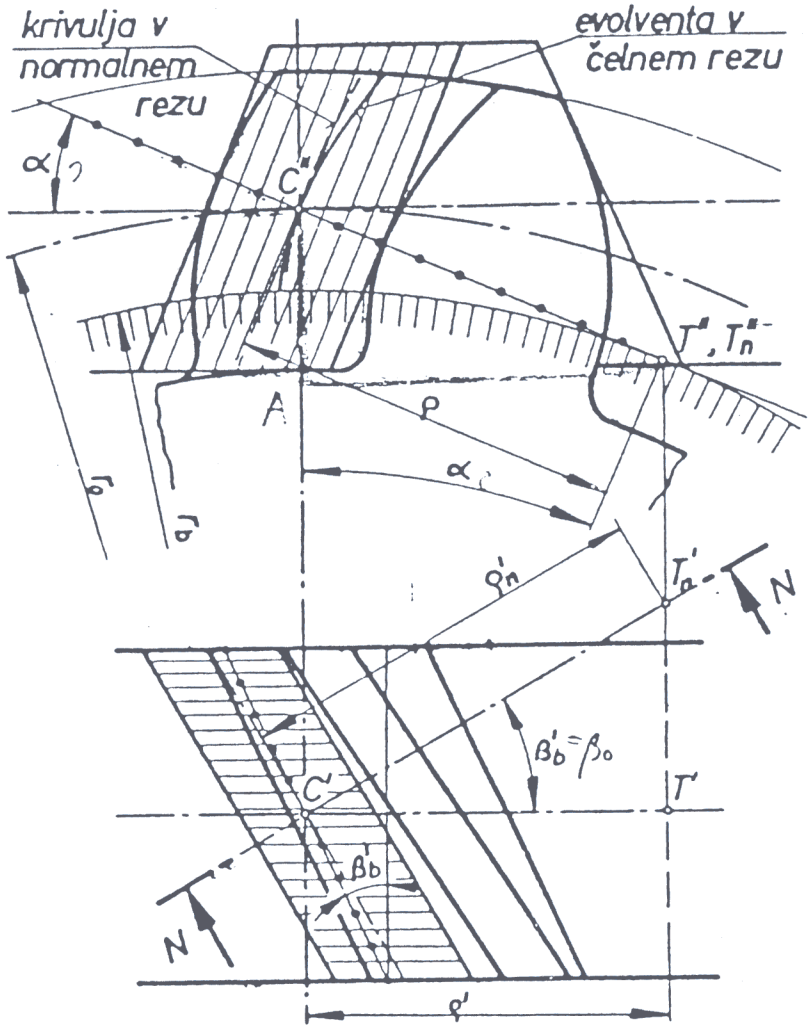
Slika 77.1



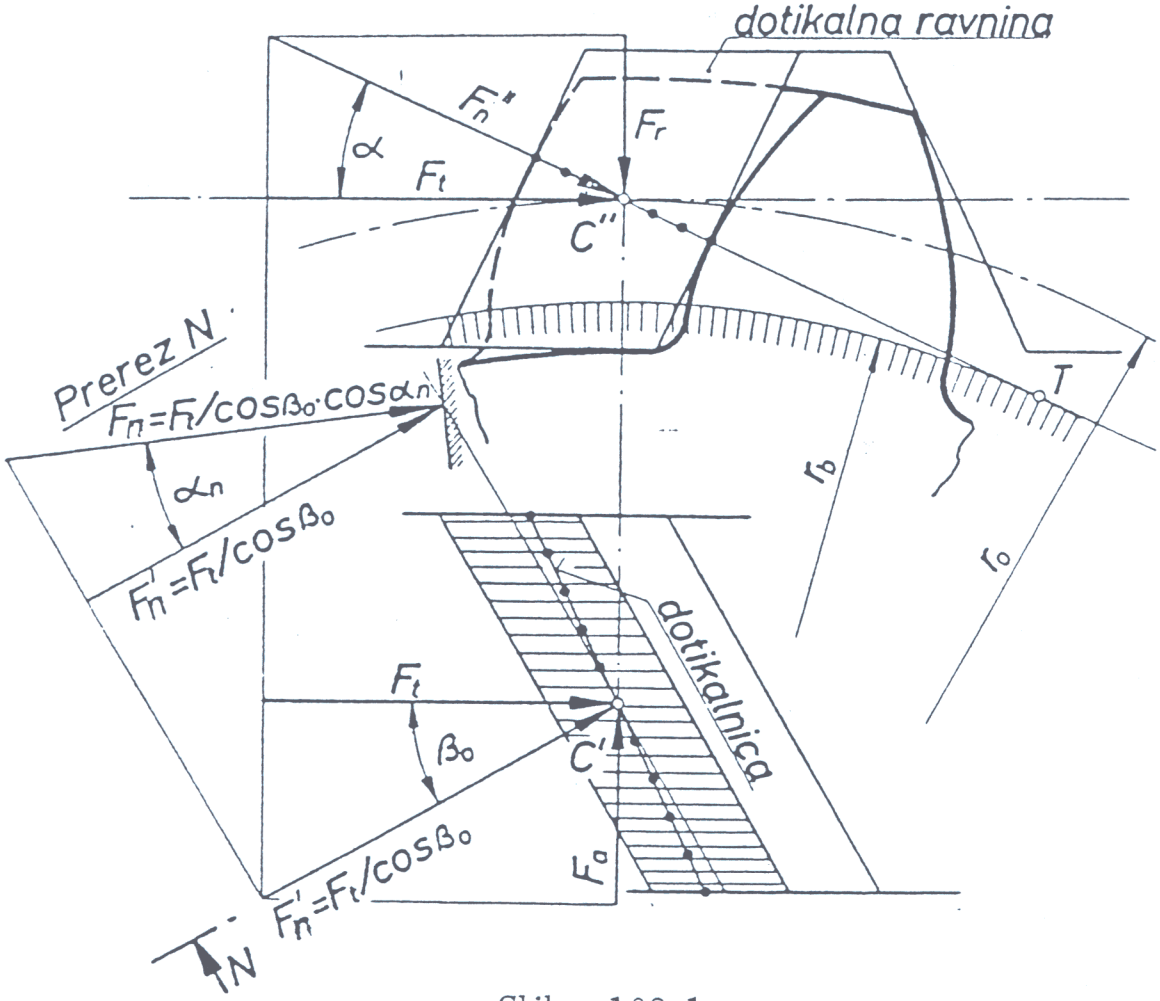
Slika 98.1 (Virtualni zobnik poševnega zobnika na sliki 99.1)



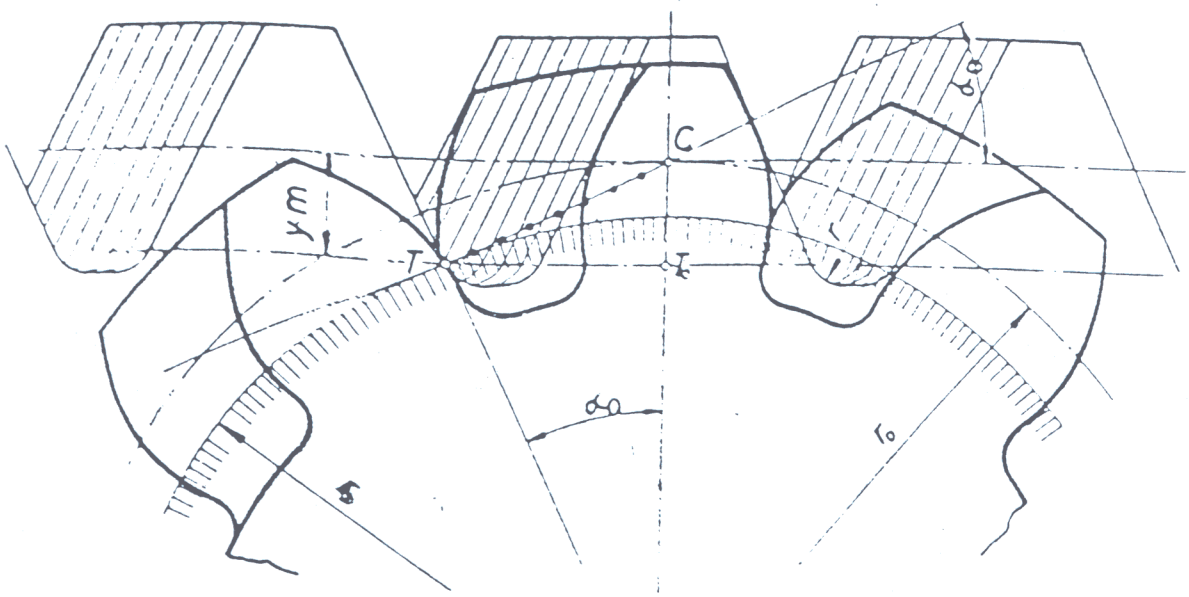
Slika 95.1



Slika 100.1



Slika 108.1



Slika 104.1

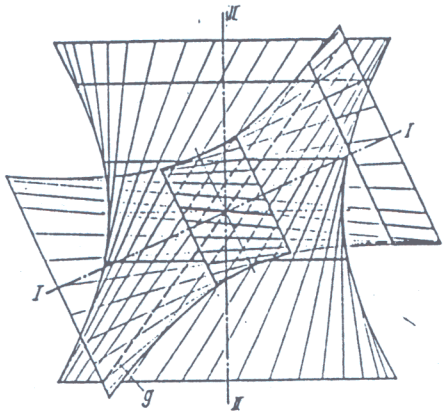


Abb. 6.81. Paarung zweier Drehungshyperboloide
g = erzeugende Gerade; $I-I$ = Drehachse des oberen (Ritzel-) Grundkörpers; $II-II$ = Drehachse des unteren (Rad-) Grundkörpers

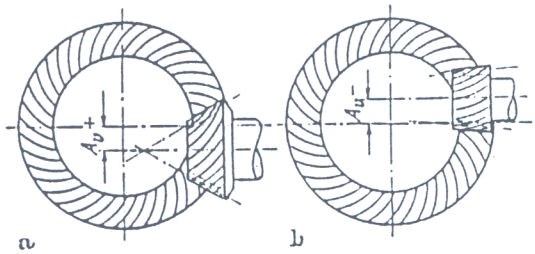


Abb. 6.82. Schraubenkegelrädergetriebe (AVAU-Spiralkegelräder, Klingelnberg)
a) Achsversetzung in Richtung der Spirale (positive Achsversetzung); b) Achsversetzung gegen die Spiralrichtung (negative Achsversetzung) (aus W. Krumme, Klingelnberg-Spiralkegelräder)

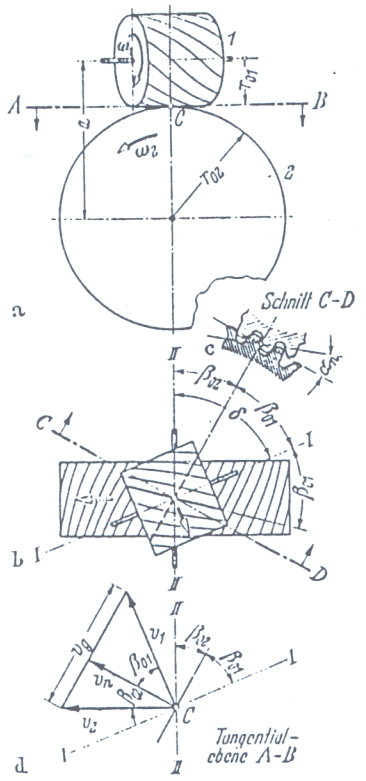


Abb. 6.83. Schraubenstirnrädergetriebe
a) Ansicht von vorn; b) Draufsicht; c) Normalschnitt; d) Geschwindigkeiten

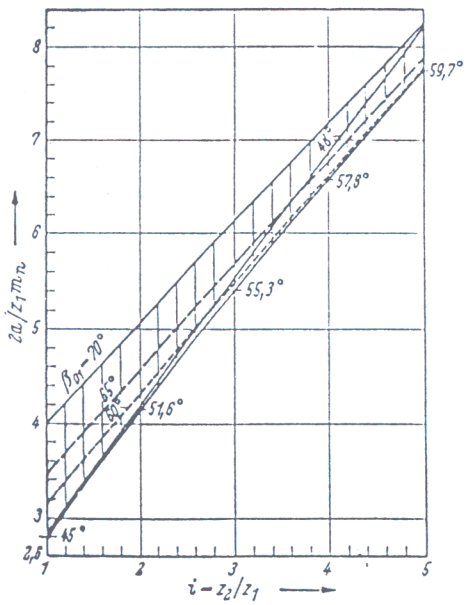


Abb. 6.84. Bereich der $\frac{2a}{z_1 m_n}$-Werte in Abhängigkeit vom Übersetzungsverhältnis $i = z_2/z_1$ für $\delta = 90°$

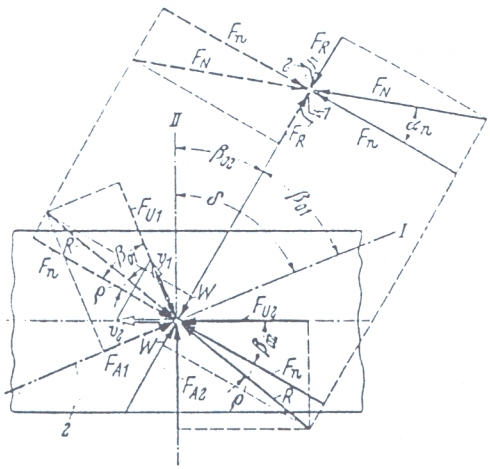


Abb. 6.85. Kräfte an Schraubenstirnrädern
1 = treibendes Rad; 2 = getriebenes Rad; I, II = Drehachsen

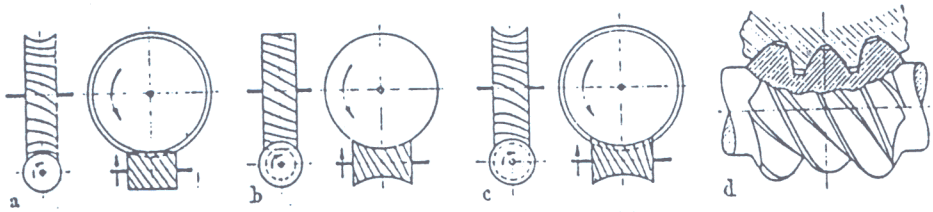


Abb. 6.86. Bauarten von Schneckengetrieben
a) Zylinderschneckengetriebe; b) Globoidschnecke und Schrägstirnrad; c und d) Globoidschneckengetriebe (d Bauart Bostock-Renk)

$$H = z_1 t_a .$$

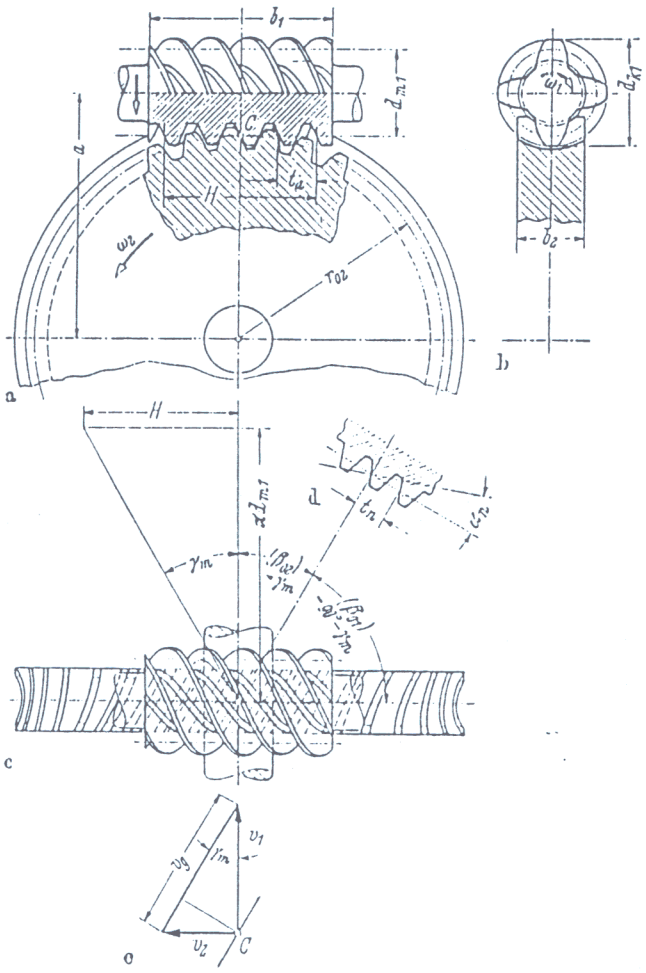


Abb. 6.89. Bezeichnungen und Bestimmungsgrößen am Zylinderschneckengetriebe
a) Achsschnitt der Schnecke; b) Seitenansicht der Schnecke; c) Draufsicht; d) Normalschnitt; e) Geschwindigkeiten

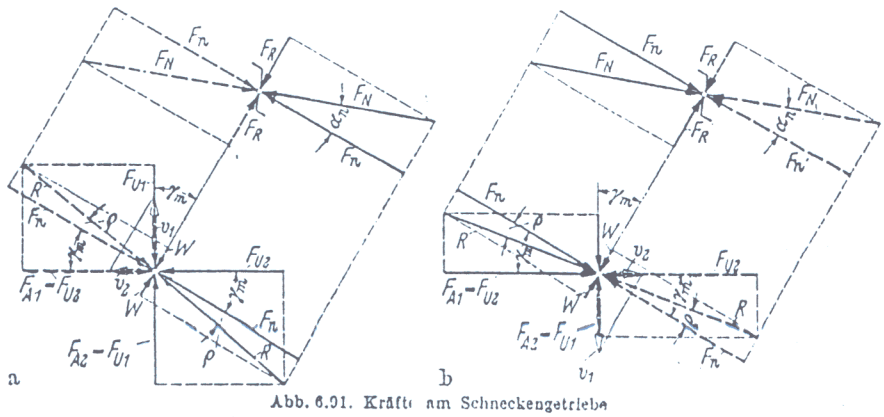
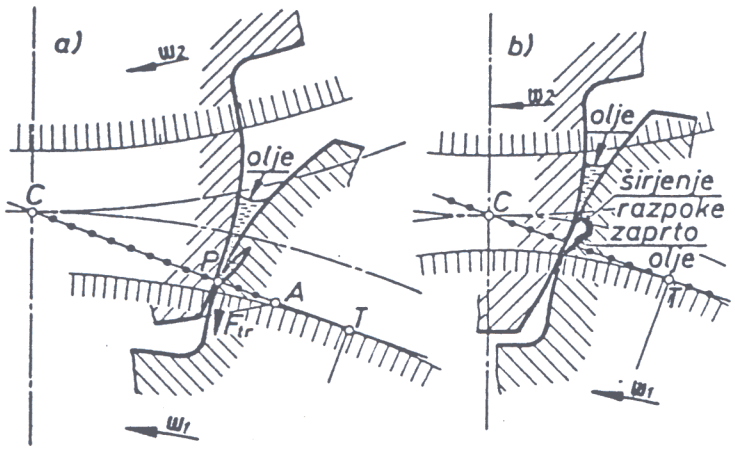
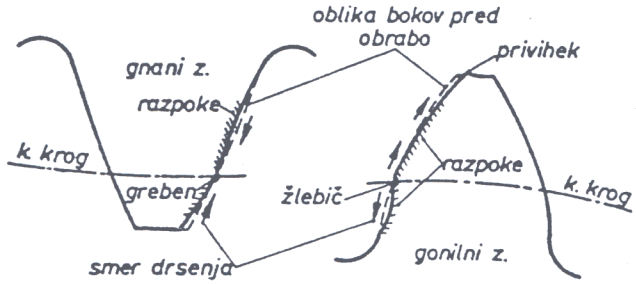


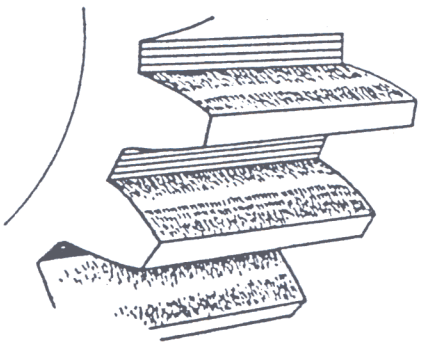
Abb. 6.91. Kräfte am Schneckengetriebe
a) bei treibender Schnecke; b) bei treibendem Schneckenrad



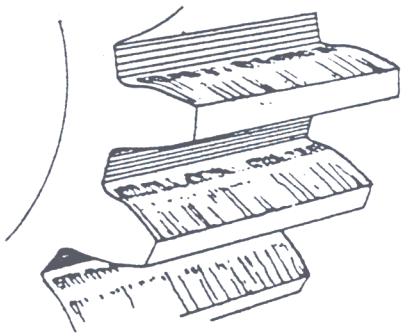
Slika 188.1



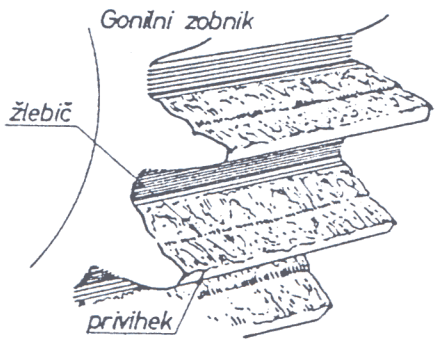
Slika 198.1

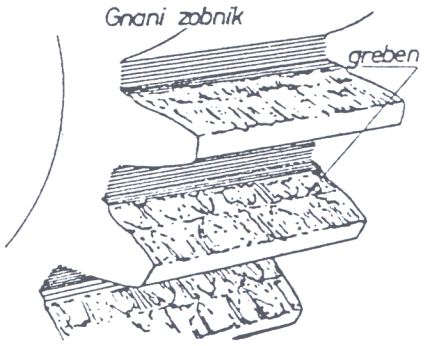


Slika 196.2

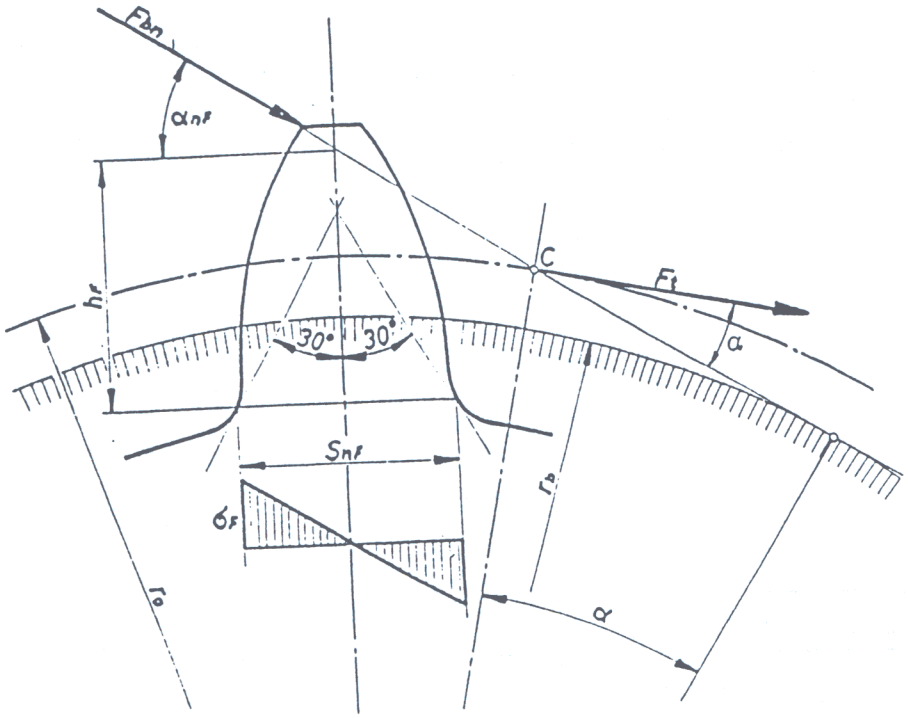


Slika 196.3





Slika 198.2



A Imenske
B Obodne sile
C

$$\sigma_F = \frac{F_t}{b.m_n} \cdot Y_F \cdot Y_S \cdot Y_\beta \cdot K_A \cdot K_V \cdot K_{F\alpha} \cdot K_{F\beta} \leq \sigma_{FP}$$

σ_{FP} — dopustna napetost

$b.m_n$ — modul, širina

Y_F — oblika

Y_S — konc.napetosti

Y_β — poševnost

$K_A \cdot K_V \cdot K_{F\alpha} \cdot K_{F\beta}$ — dodatna obremenitev

trajna trdnost; velikost; časovna trdnost

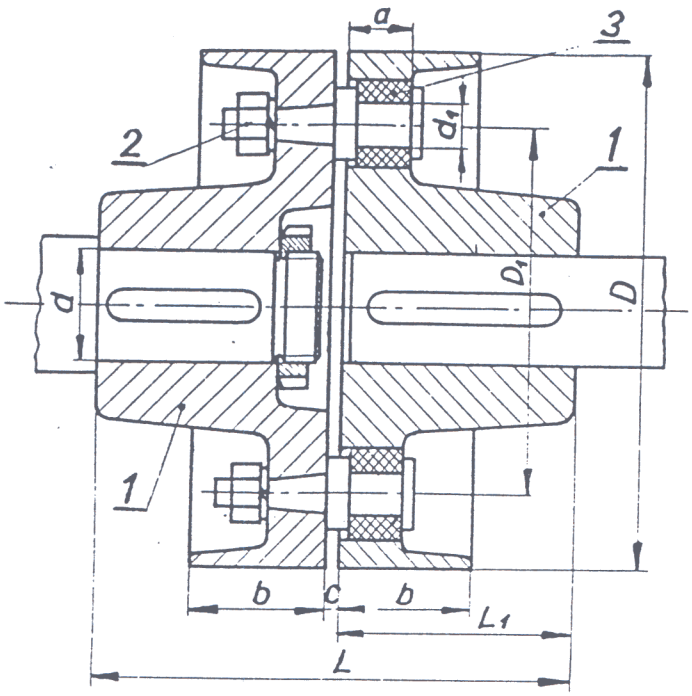
$$\sigma_{FP} = \frac{\sigma_{lim} \cdot Y_{st} \cdot Y_{Nt}}{S_{min}} \cdot Y_\delta \cdot Y_R \cdot Y_X$$

S_{min} — varnost

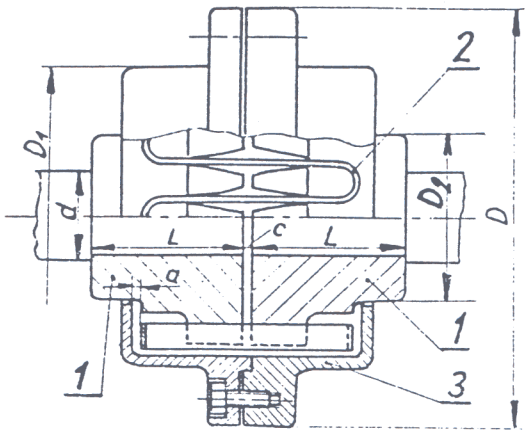
Y_δ — občutljivost materiala

Y_R — hrapavost

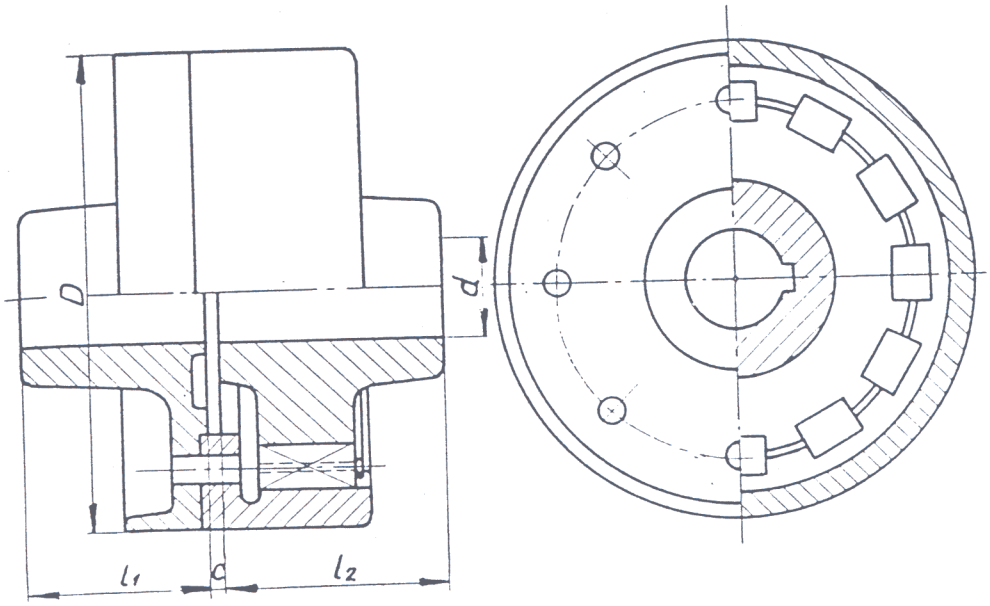
Y_X — velikost



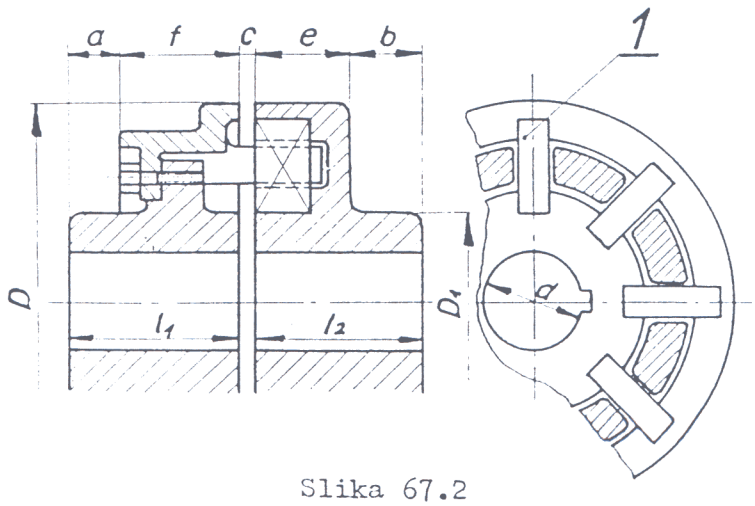
Slika 62.1



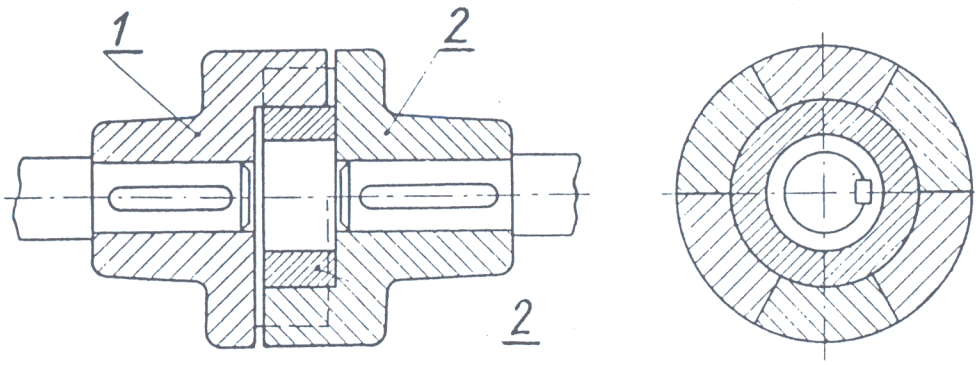
Slika 56.1



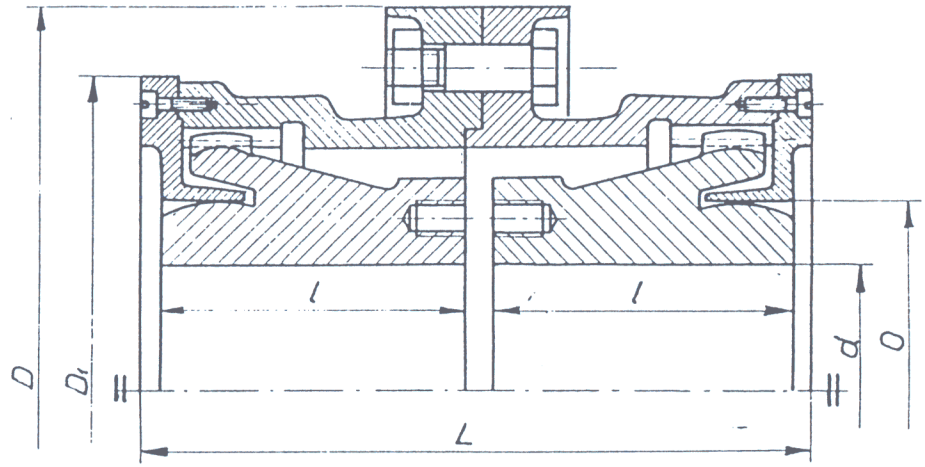
Slika 65.1



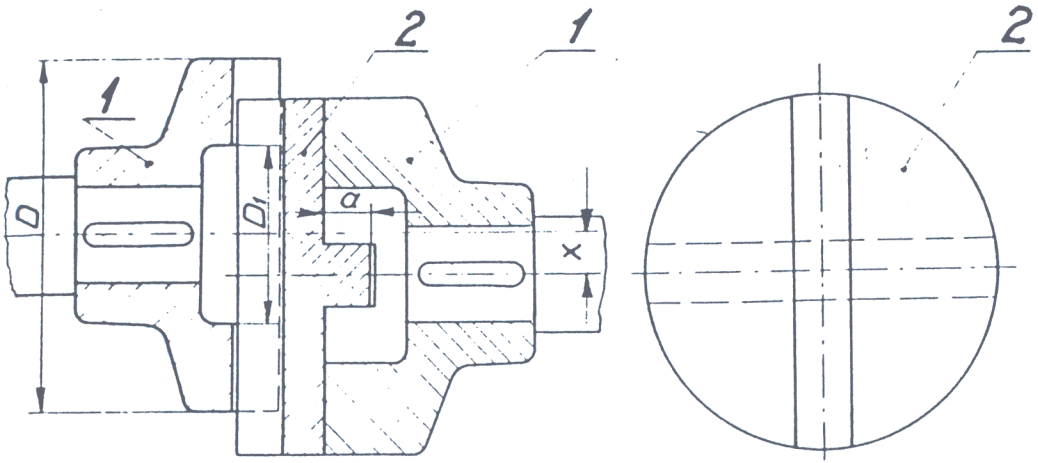
Slika 67.2



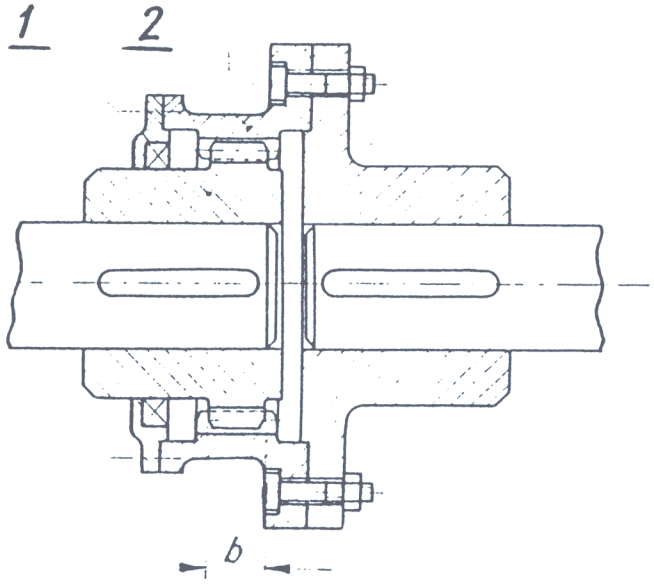
Slika 24.1



Slika 35.1

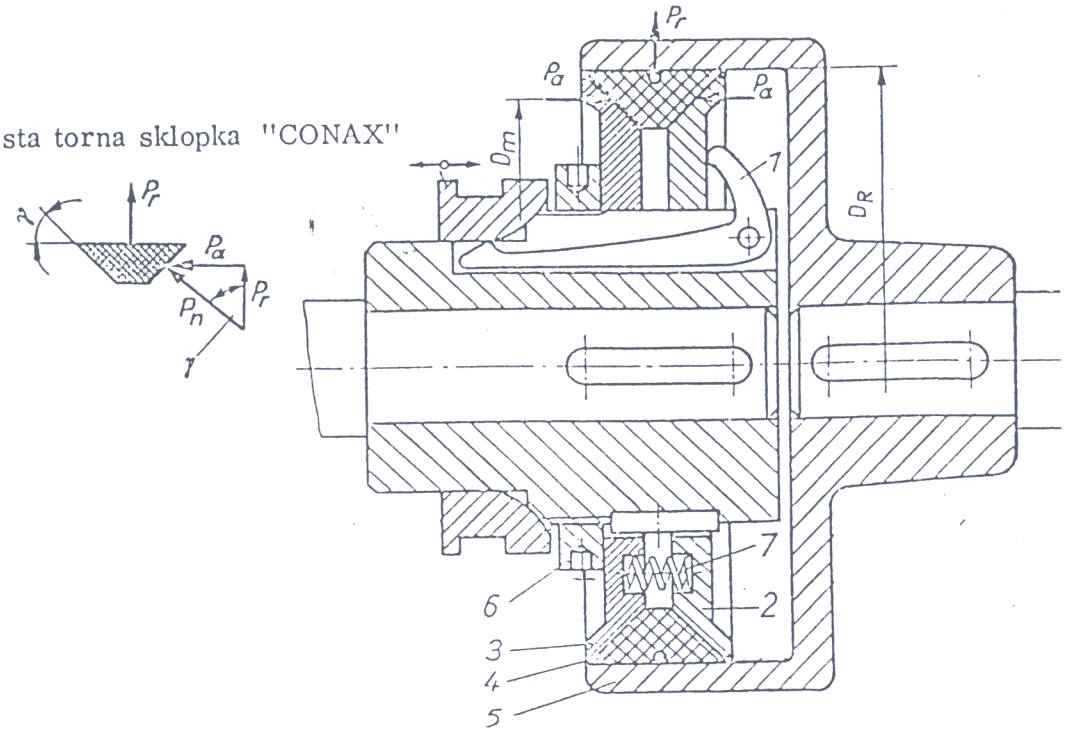


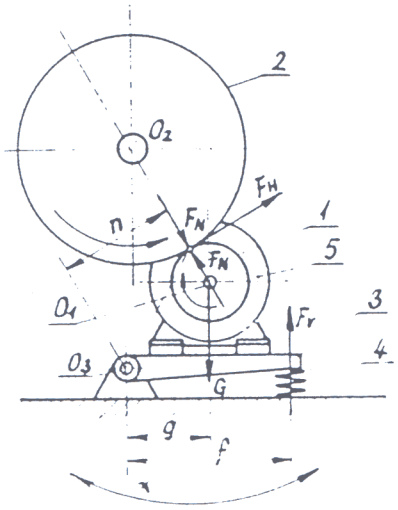
Slika 27.1



Slika 3o.1

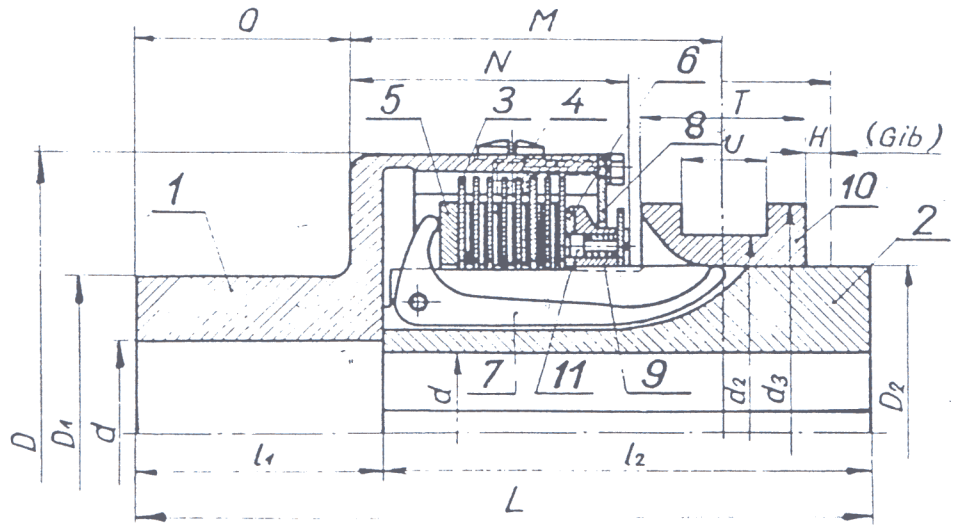
Stožčasta torna sklopka "CONAX"



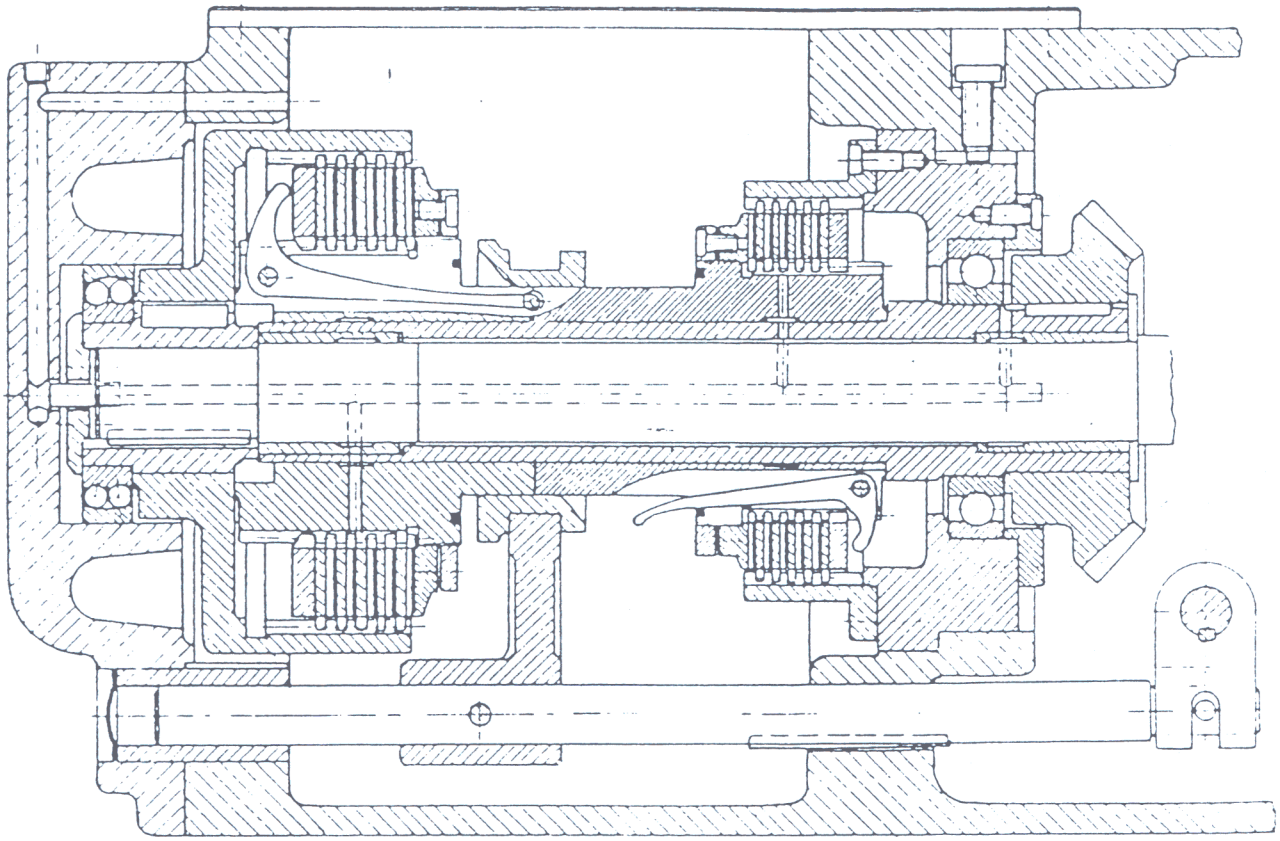


material	torni koeficient μ suho	mazano	Pdop kp/mm^2
SL/SL	0,15...0.25	0,02...0,01	15...2o
SL/Č	0,15...0,2	0,03...0.06	8...14
KALJENO Č/Č	0,1	0,009	5...20
sinter/kal. Č	0,15...0,25	0,06...0,11	
AZBEST/ Č,SL,ČL	0,2...0,4	0,1...0,15	0,5...80
kovinska volna in guma/Č,SL	0,45...0,65	0,1...0,2	0,5...60
grafit/Č	0,25	0,15..0,1	o,5...20

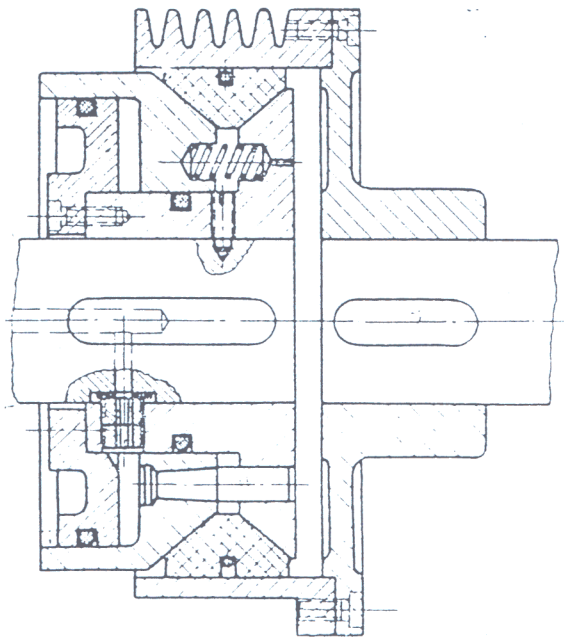
Slika 177.3



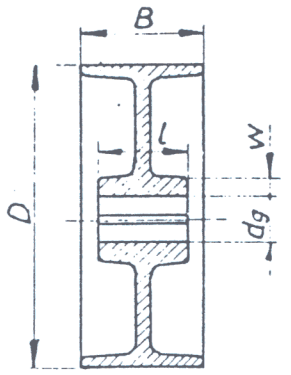
Slika 112.1

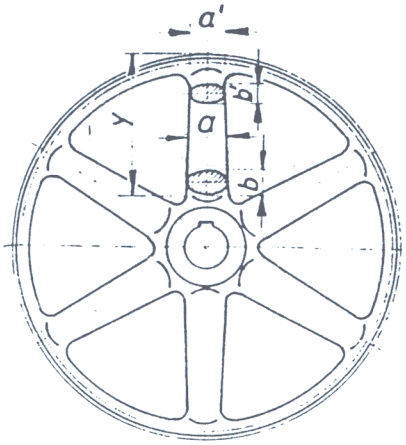


Slika 118.1

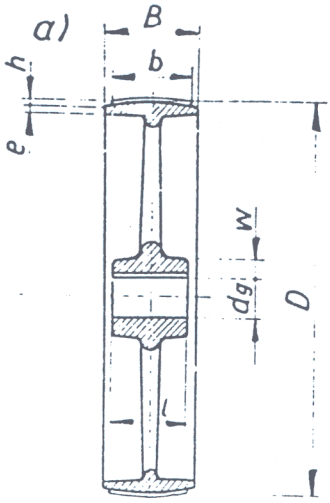


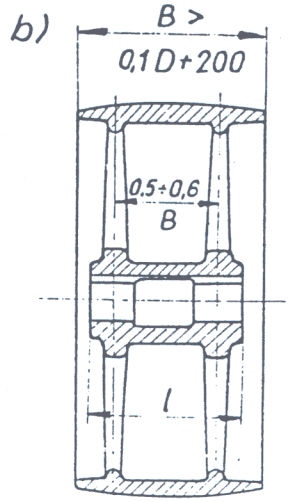
Slika 128.1



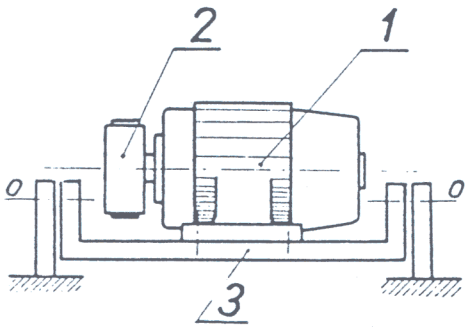


Slika 262.1

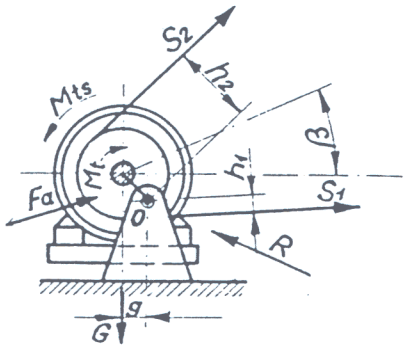


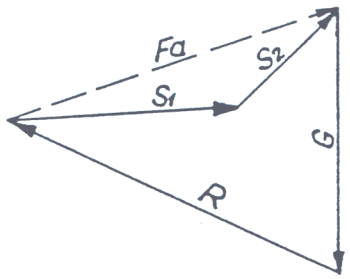


Slika 263.1

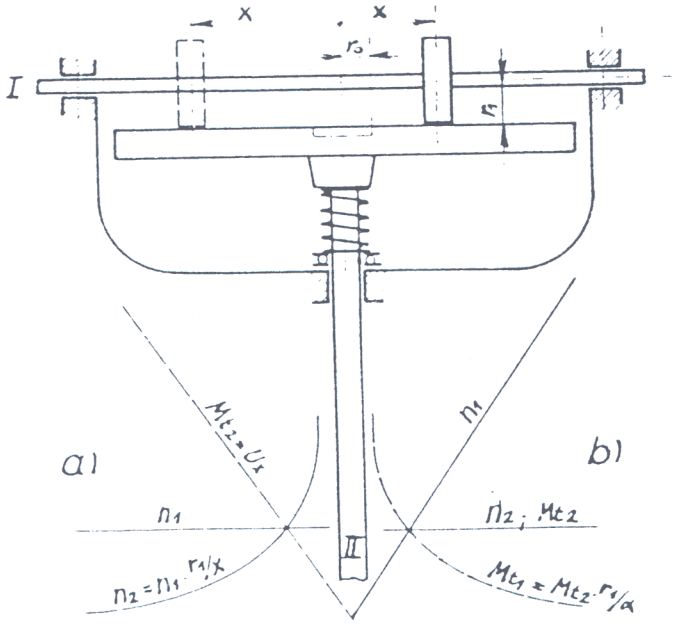


a)

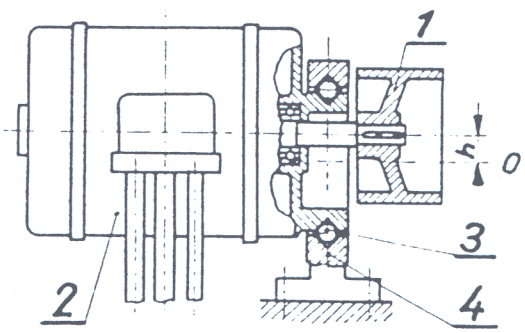




Slika 22o.1

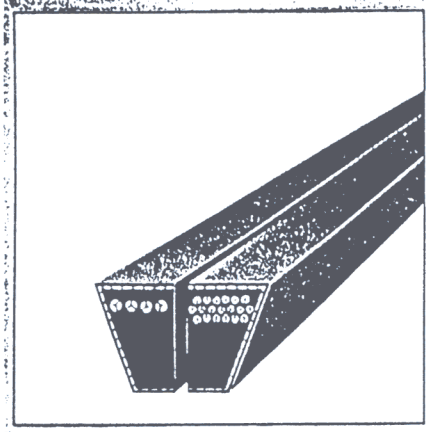


Slika 184.1



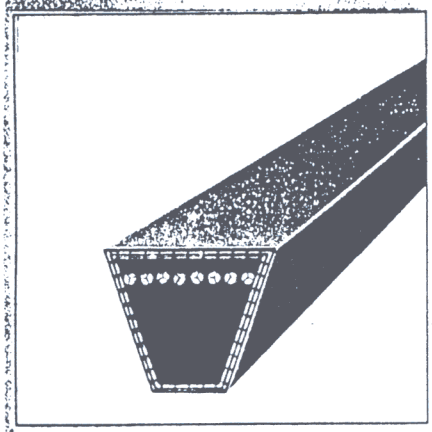
Slika 223.2

VEKTOVEL



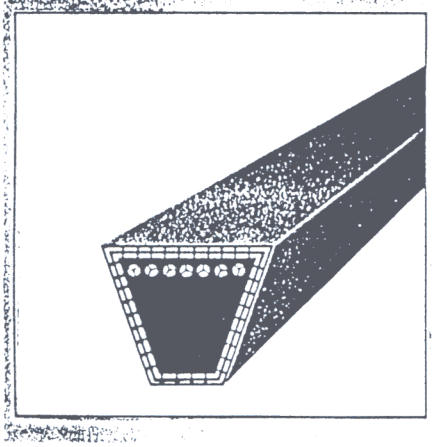
VEKTOVEL M

klasični obloženi klinasti remeni normalnog profila za laku mašinogradnju, lake mašine za obradu i poljoprivrednu mehanizaciju. Ali se takođe mogu koristiti za srednje i teške prenosnike u industriji. Varijante armature su kabelski kord In pramenski kord. Izrađujemo remene sa presekom od Z do D E. Remeni Z namenjeni su uglavnom za belu tehniku, a A, B, C in D za mašinogradnju i poljoprivrednu mehanizaciju. Remene izrađujemo u skladu standarda ISO 4184, DIN 2215, JUS G. E 2.053.



VEKTOVEL SP

uzani obloženi klinasti remeni za prenose velikih opterećenja u industriji. Preseke od SPZ do SPC izrađujemo u skladu standarda ISO 4184, DIN 7753 i JUS G. E 2.063.



VEKTOVEL AV

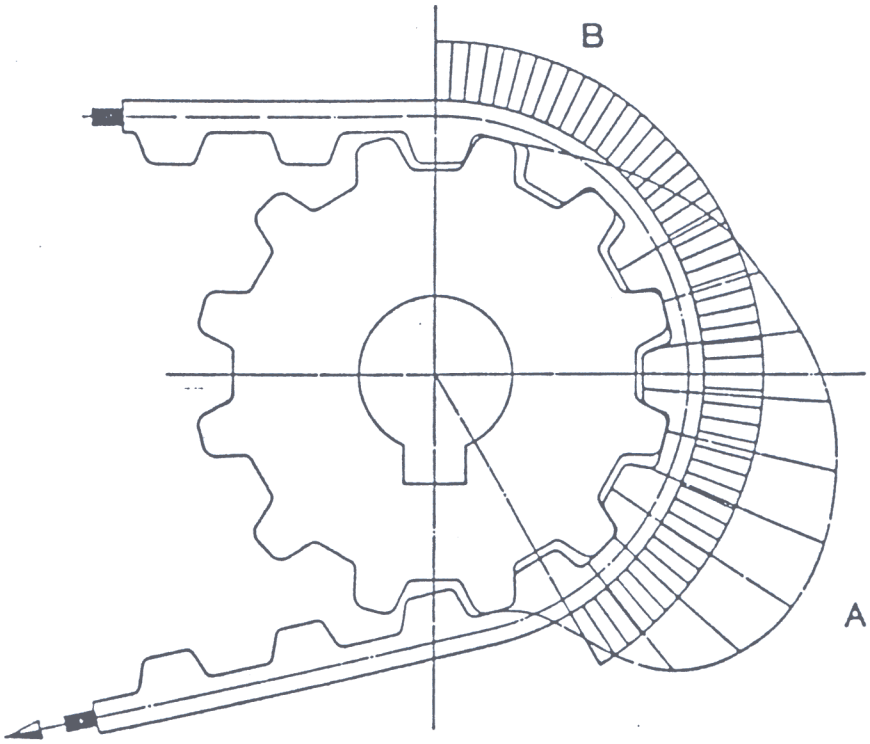
obloženi klinasti remeni preseka 9,5 in 12,5 (po DIN 7753/3) odn. AV 10 in AV 13 (po ISO 2790) za motorna vozila. To su remeni starije generacije za pogon ventilatora u manje zahtevnim uslovima rada. Izrađujemo remene u dužini od 600 do 1000 mm.

Eigenschaften der Synchroflex- Zahnriemen-Antriebe

Synchroner Lauf
Wartungsfrei
Keine Nachdehnung
Hohe Flexibilität
Geringe Vorspannung
Geringe Lagerbelastung
Wirkungsgrad bis 99 %
Riemengeschwindigkeit bis 80 m sec^{-1}
Biegewechselfeste, dehnungsarme
Stahlzugstränge
Hohe Lebensdauer
Doppelverzahnung
auf beiden Seiten voll belastbar

Kleine Baumaße
Große Achsabstände
Geschränkt einsetzbar
Große Übersetzungen ausführbar
Feste Achsabstände möglich (Rückfrage)
Winkelgetreue Übertragung
Günstiges Leistungsgewicht

Ölbeständig
Tropenbeständig
Temperaturbereich
von – 30 °C bis + 80 °C
(kurzzeitig bis 120 °C)
Hohe Abriebfestigkeit
Bedingt beständig
gegen Säuren und Laugen

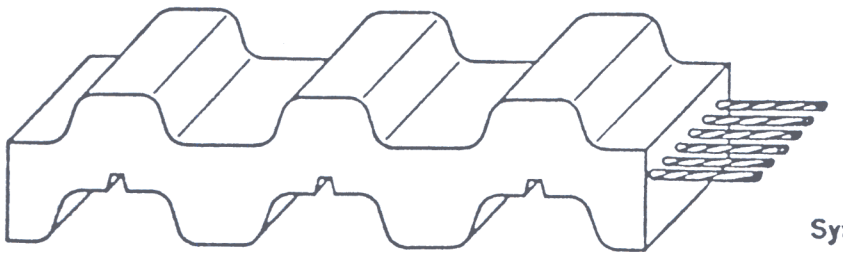


Eingriffsverhältnisse des Synchroflex-Zahnriemens am kleinen Zahnrad

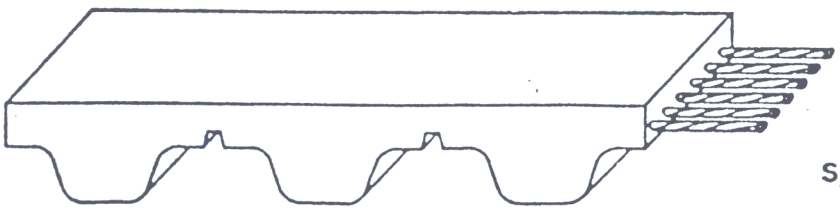
(A) Tatsächliche Spannungsverteilung des Zahneingriffs über die Umschlingung

(B) Rechnerische Spannungsverteilung bei Flächengleichheit (A) = (B)

Aufbau des Synchroflex-Zahnriemens



Synchroflex-Zahnriemen doppelt verzahnt



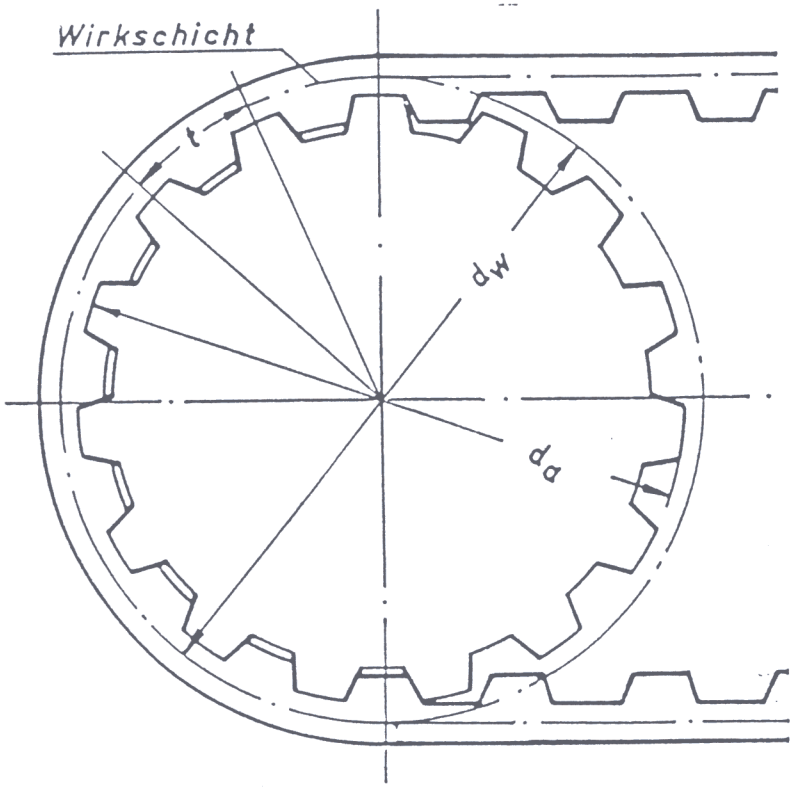
Synchroflex-Zahnriemen einfach verzahnt

Zahnteilungen

OPTIBELT-ZR Zahnflachriemen und Scheiben werden in fünf Standard-Zahnteilungen hergestellt:

Teilung 1/5" ≙ 5,08 mm, Type XL
Teilung 3/8" ≙ 9,525 mm, Type L
Teilung 1/2" ≙ 12,7 mm, Type H
Teilung 7/8" ≙ 22,225 mm, Type XH
Teilung 1 1/4" ≙ 31,75 mm, Type XXH

Die Zahnteilung ist beim Riemen der Abstand von Mitte Zahn zu Mitte Zahn in Höhe der Wirkschicht gemessen, die der Lage des Zugstrangs entspricht. Bei der Zahnscheibe ist der Wirkdurchmesser eine theoretische Größe, die außerhalb des Außendurchmessers liegt.



Aus dem Riemencode, mit dem alle Standardriemen versehen sind, lassen sich die wichtigsten Abmessungen ableiten:

Wirklänge (in Zoll)
Teilung (in Buchstaben)
Riemenbreite (in Zoll)

Beispiel: Zahnflachriemen 225 L 075

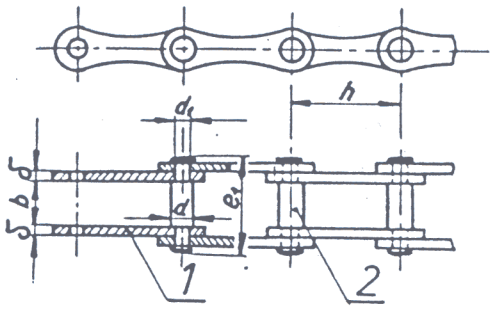
225 — 22,5" Wirklänge
L — Teilung 3/8", Type L
075 — 3/4" Riemenbreite

Aus dem Code, mit dem alle Standard-Zahnscheiben versehen sind, lassen sich die wichtigsten Daten ableiten:

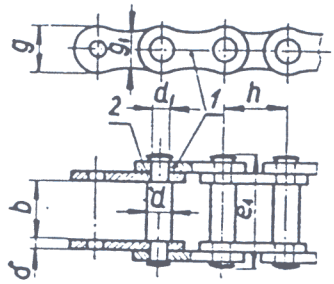
Zähnezahl
Teilung
Riemenbreite

Beispiel: Zahnscheibe 20 L 075

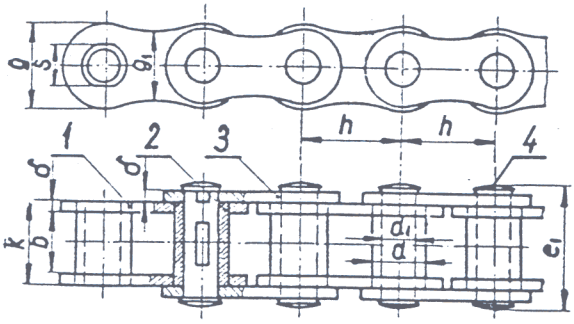
20 — Anzahl der Zähne (d_w = 60,63 mm, d_a = 59,95 mm)
L — Teilung 3/8", Type L
075 — Scheibenbreite für Zahnflachriemen mit 3/4" Breite



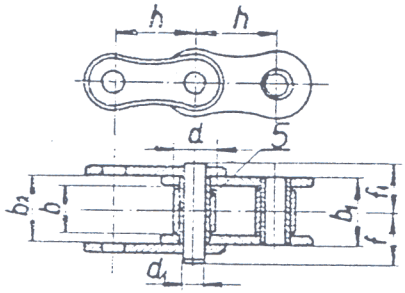
Sl. 7.1



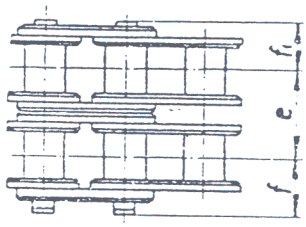
Sl. 7.2



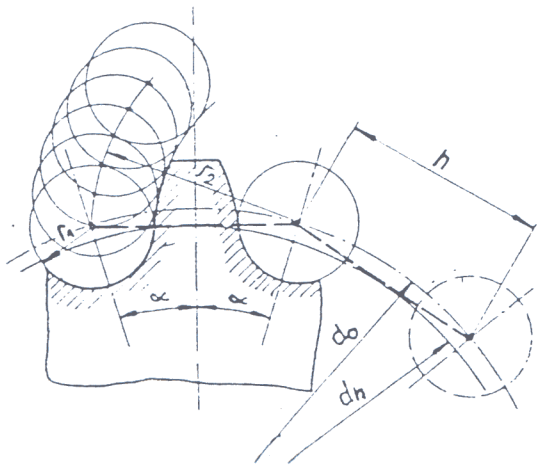
Sl. 9.1



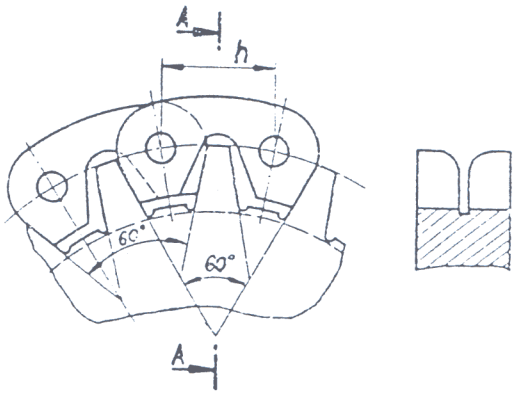
Sl. 1o.1



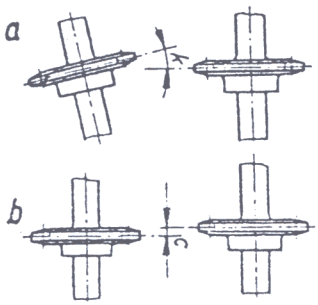
Sl. 1o.2



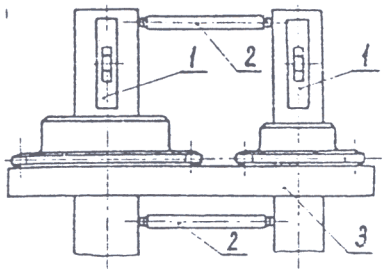
Sl. 16.1



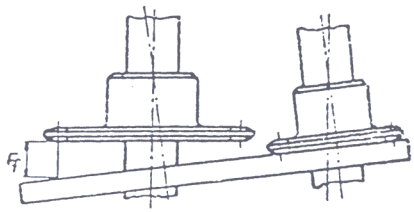
Sl. 13.1



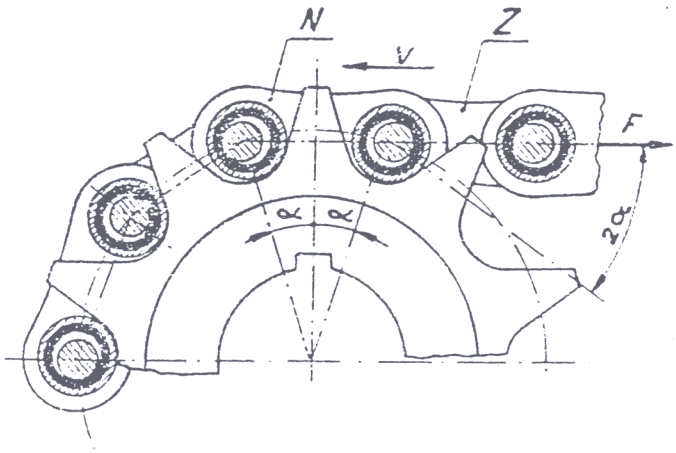
Sl. 45.1



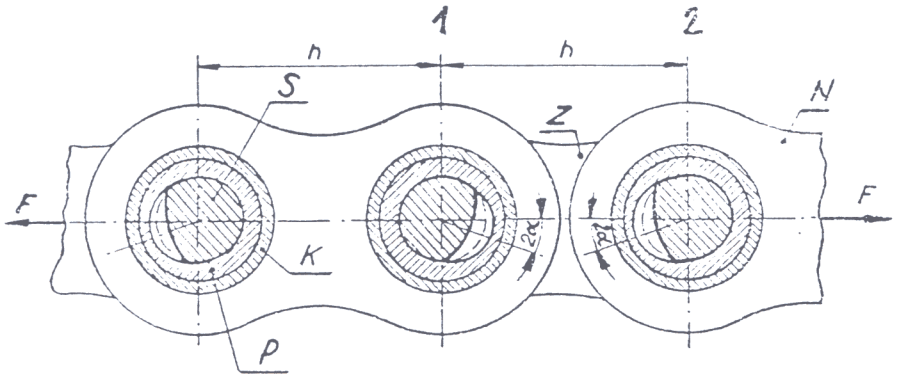
Sl. 45.2



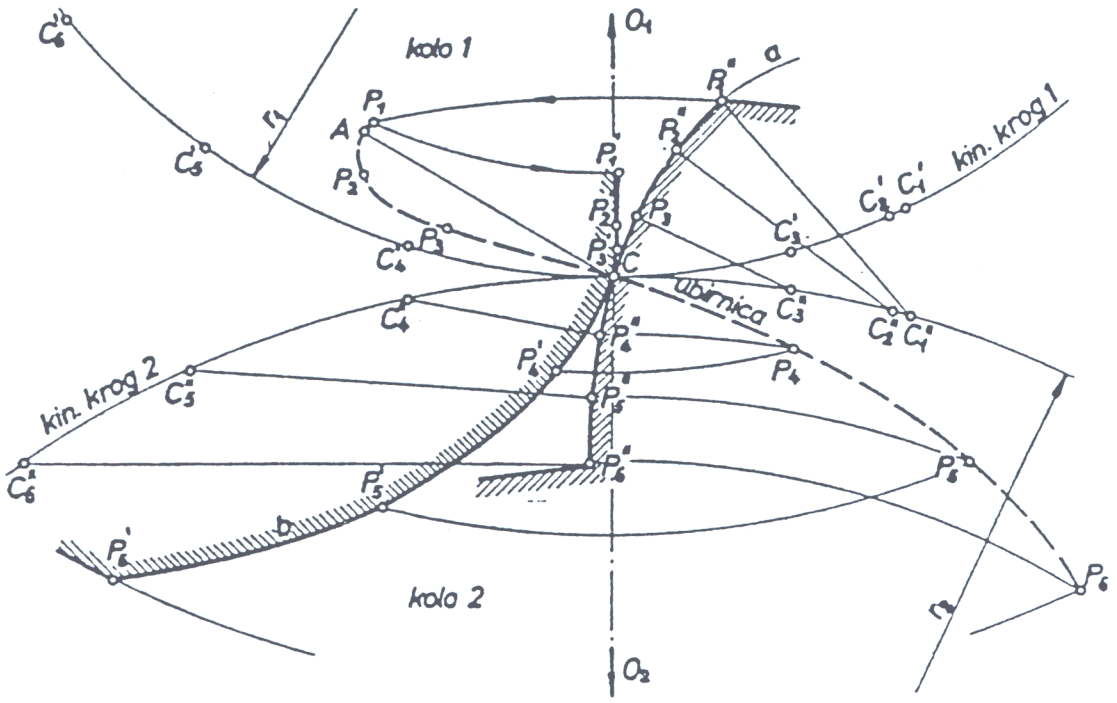
Sl.45.3



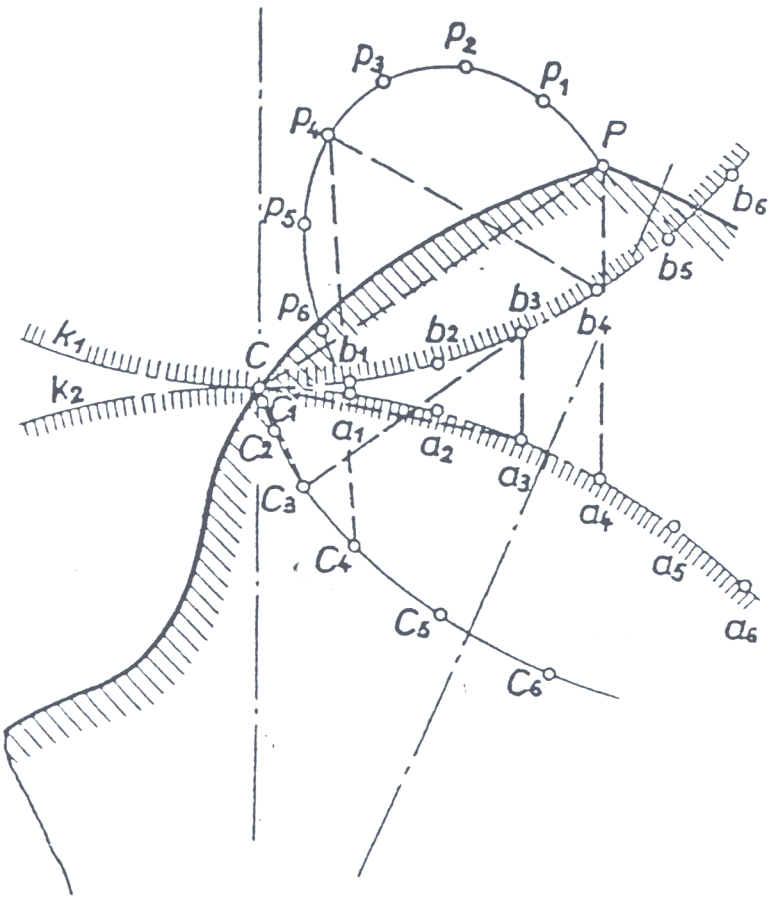
Sl. 1o4.1



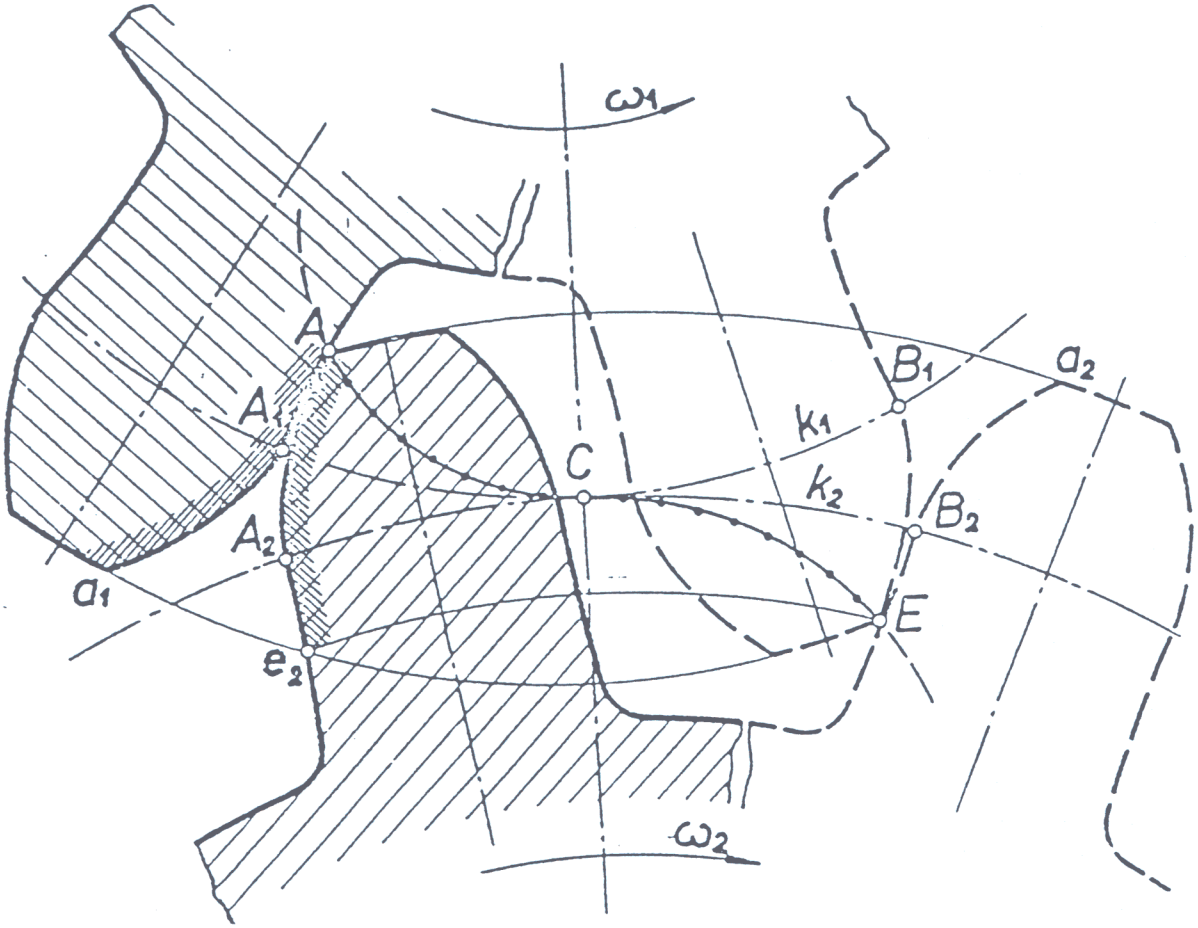
Sl. 1o5.1



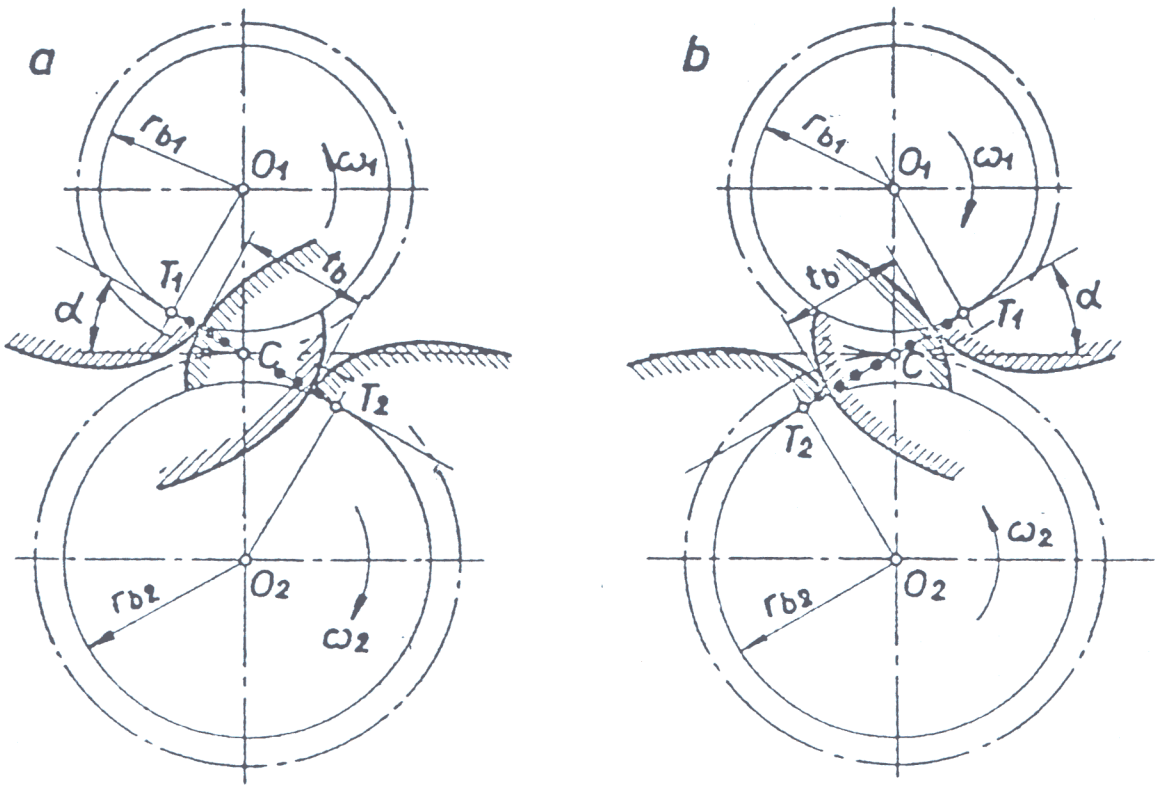
Slika 18.1



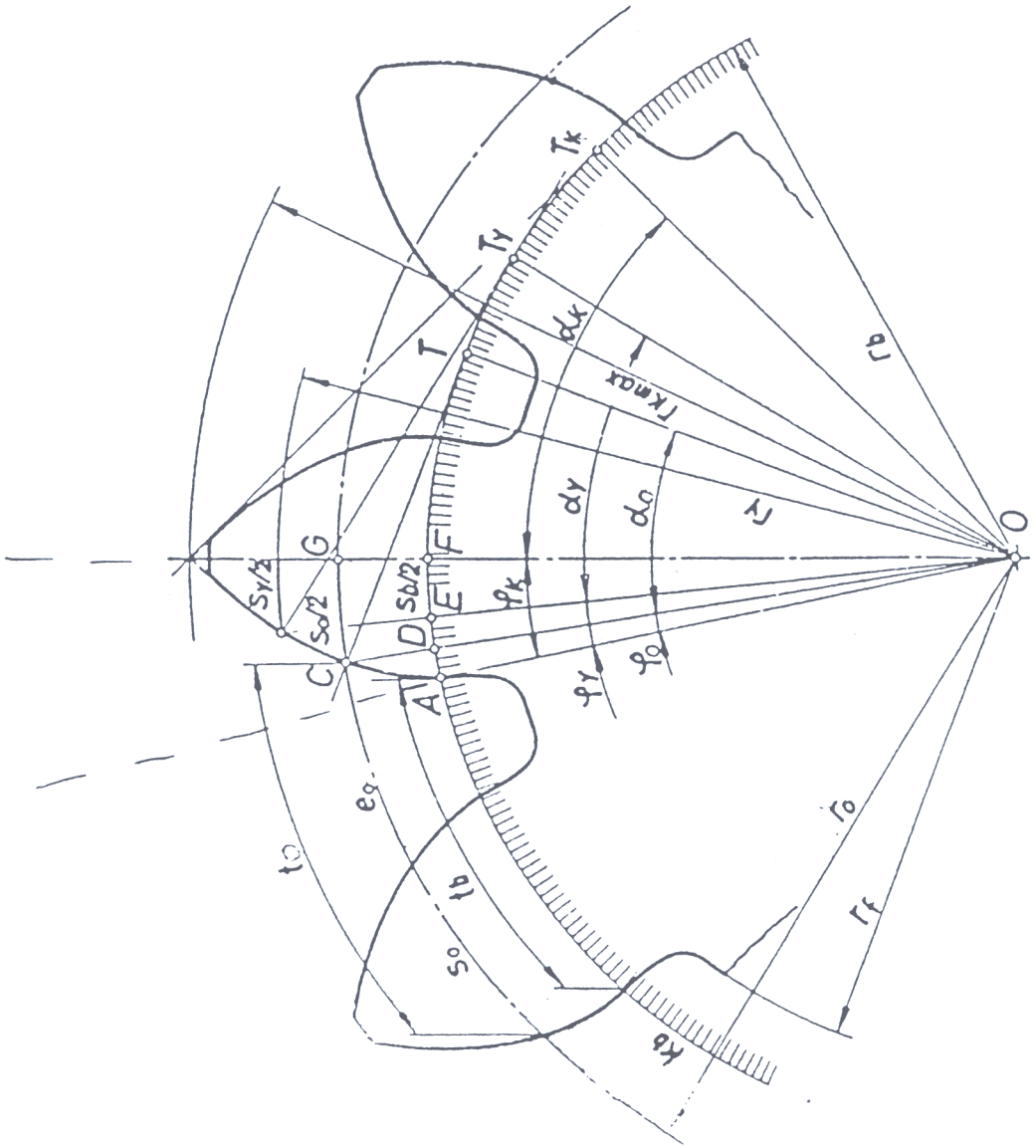
Slika 23.1



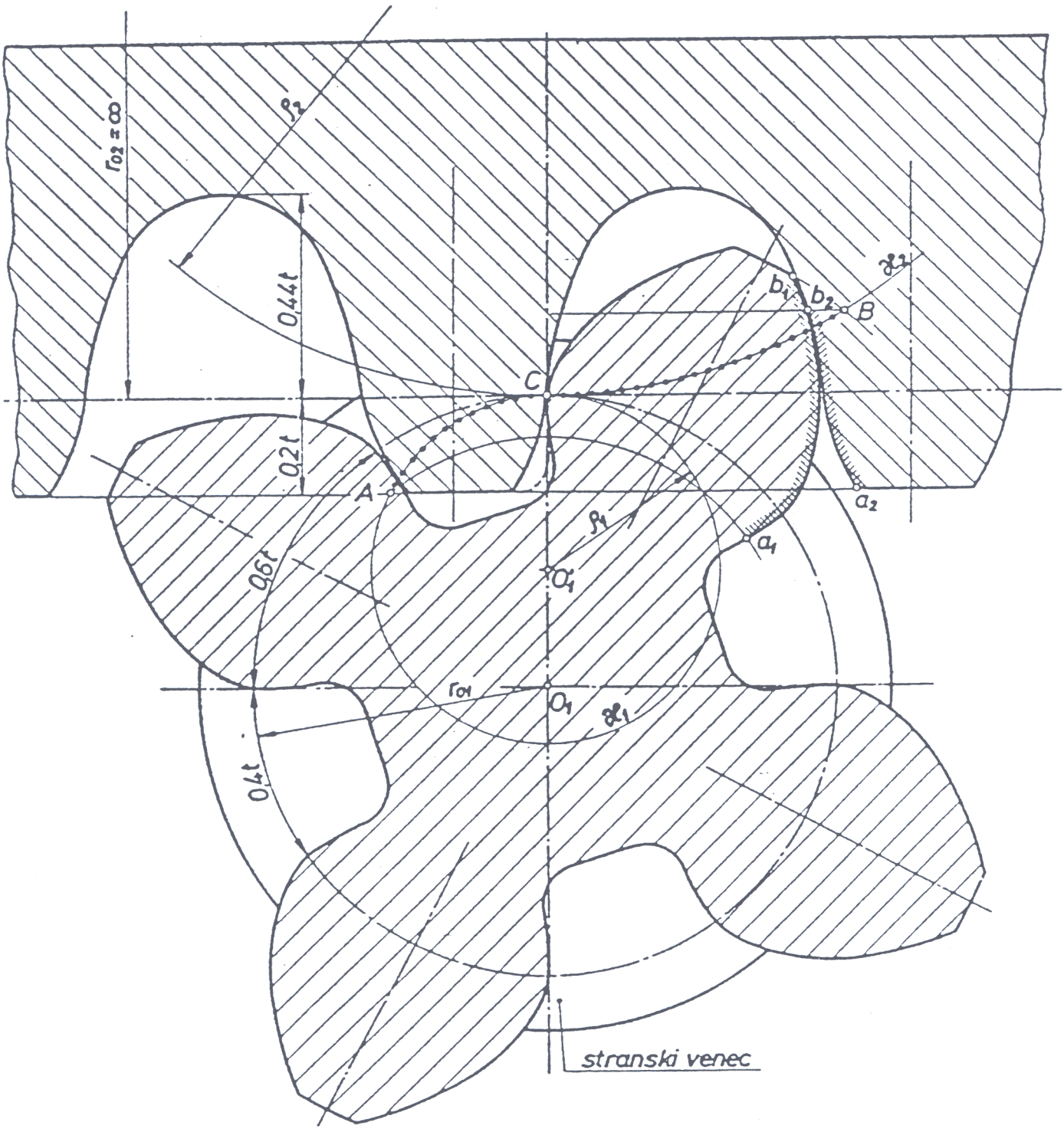
Slika 24.1



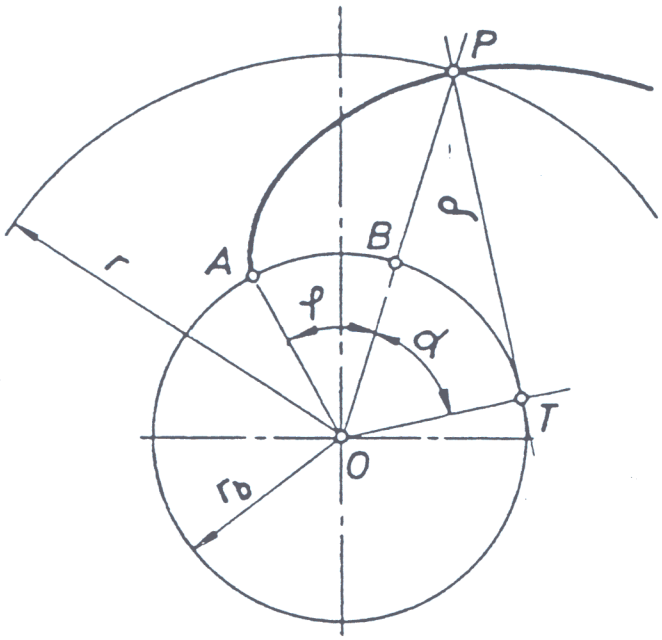
Slika 51.1


Tk
Ty
T
dk
rkmax
ra
dy
do
λ
O
G
F
E
D
C
A
sr/2
so/2
so/2
ρk
ρy
ρo
eo
to
so
tb
ro
rf
rb

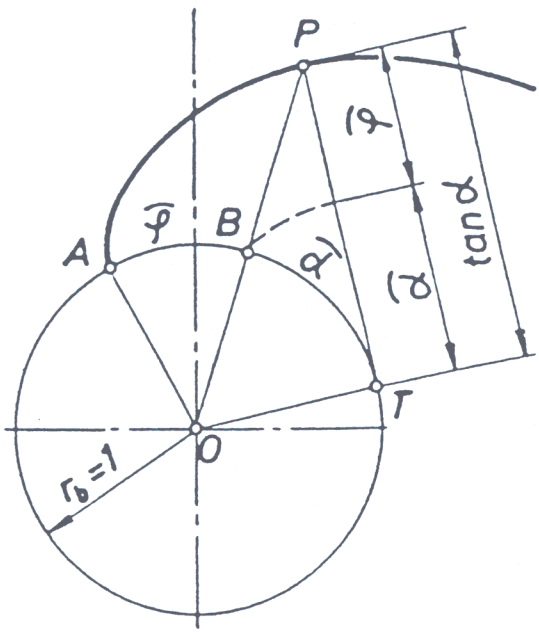
Slika 53.1


$r_{02} = 8$
ρ_2
0,44t
0,2t
0,6t
0,4t
C
A
B
b_1
b_2
γ_2
a_2
a_1
ρ_1
O_1
r_{01}
γ_1
stranski venec

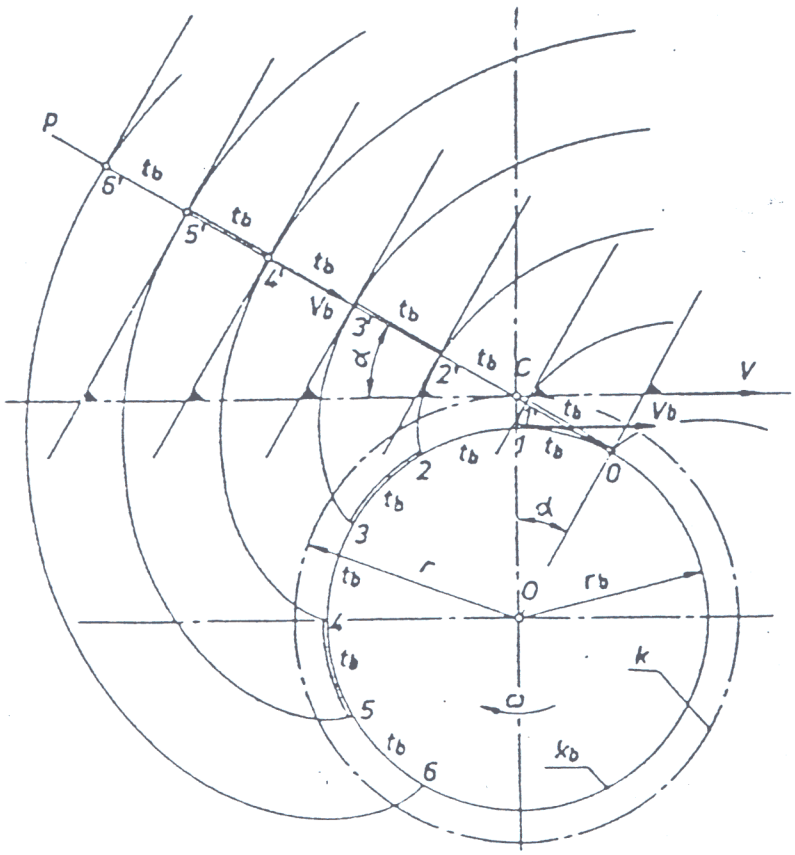
Slika 42.1



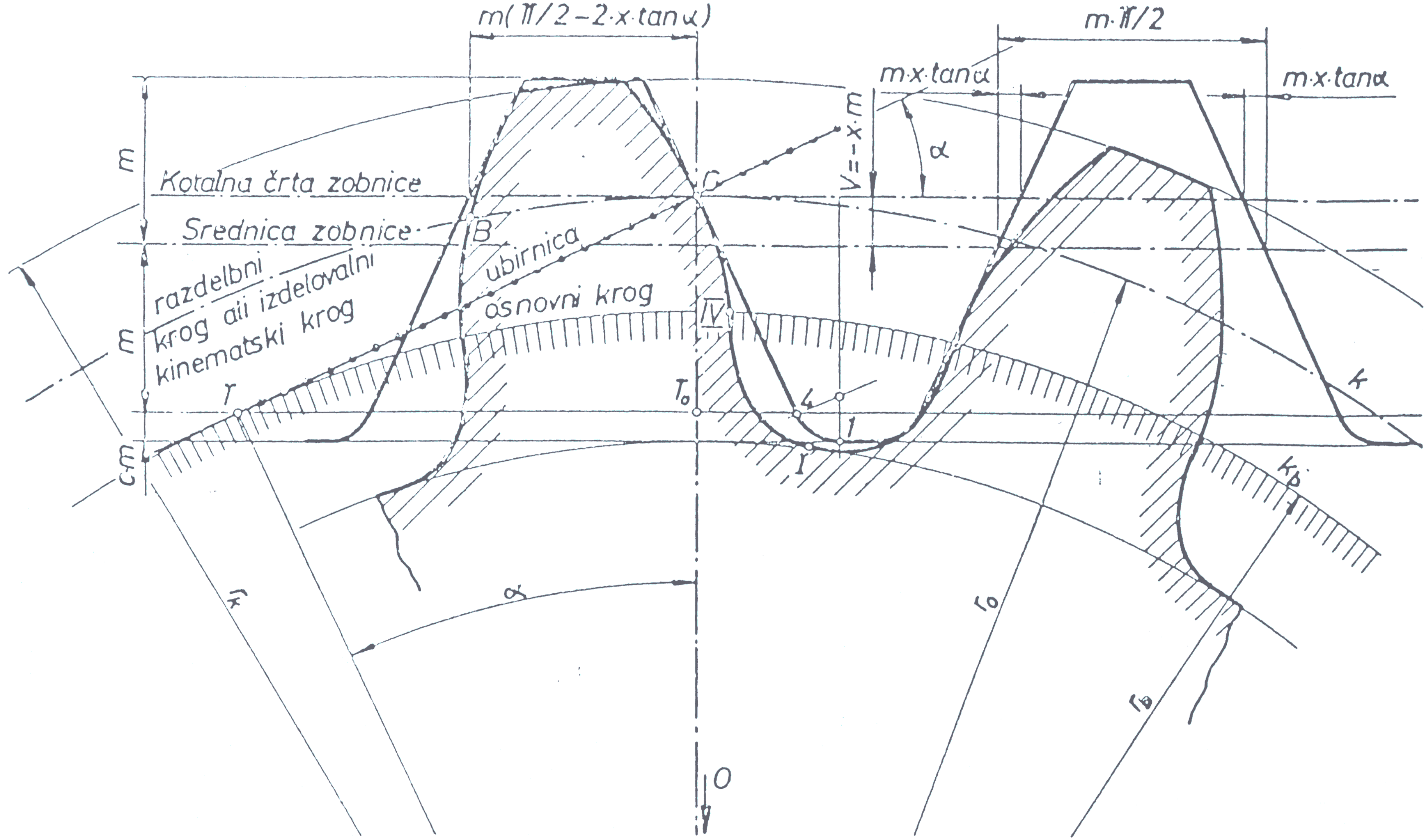
Slika 52.1



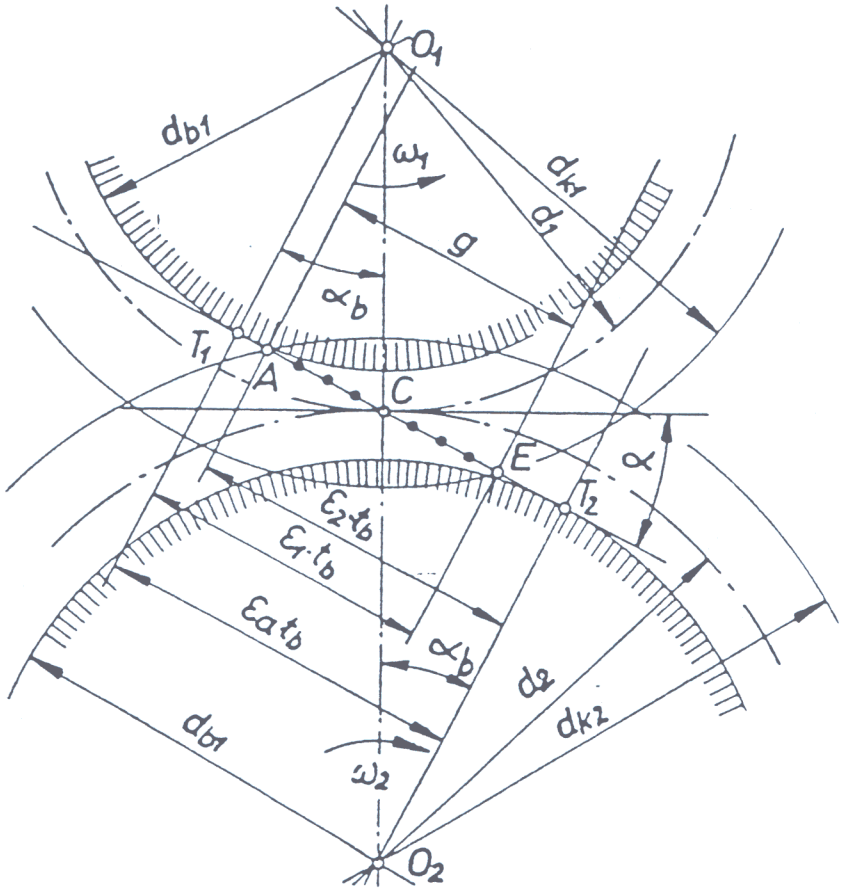
Slika 52.2



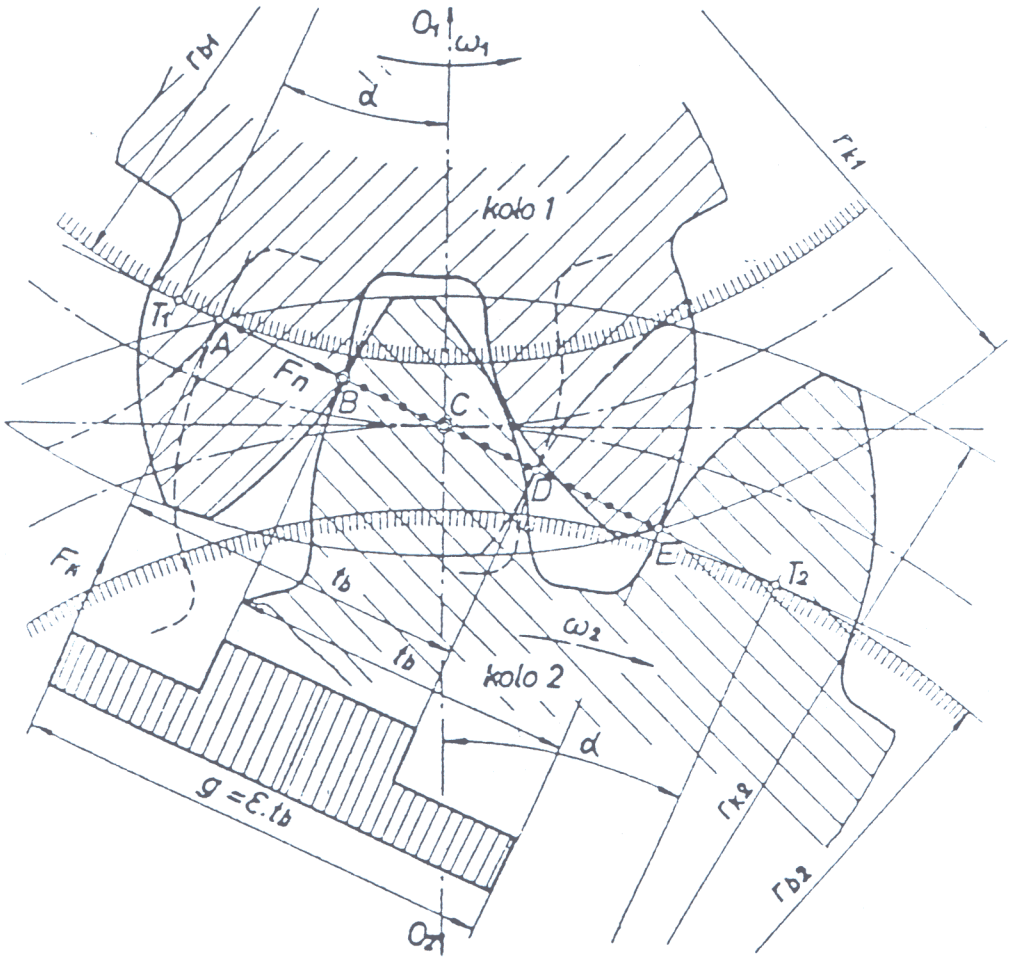
Slika 48.1


m(π/2−2·x·tanα)
m·π/2
m·x·tanα
m·x·tanα
V=−x·m
α
m
m
c·m
Kotalna črta zobnice
Srednica zobnice
B
C
razdelbni
krog ali izdelovalni
kinematski krog
ubirnica
osnovni krog
IV
T
T_o
4
1
I
k
k_b
r_k
α
r_o
r_b
O

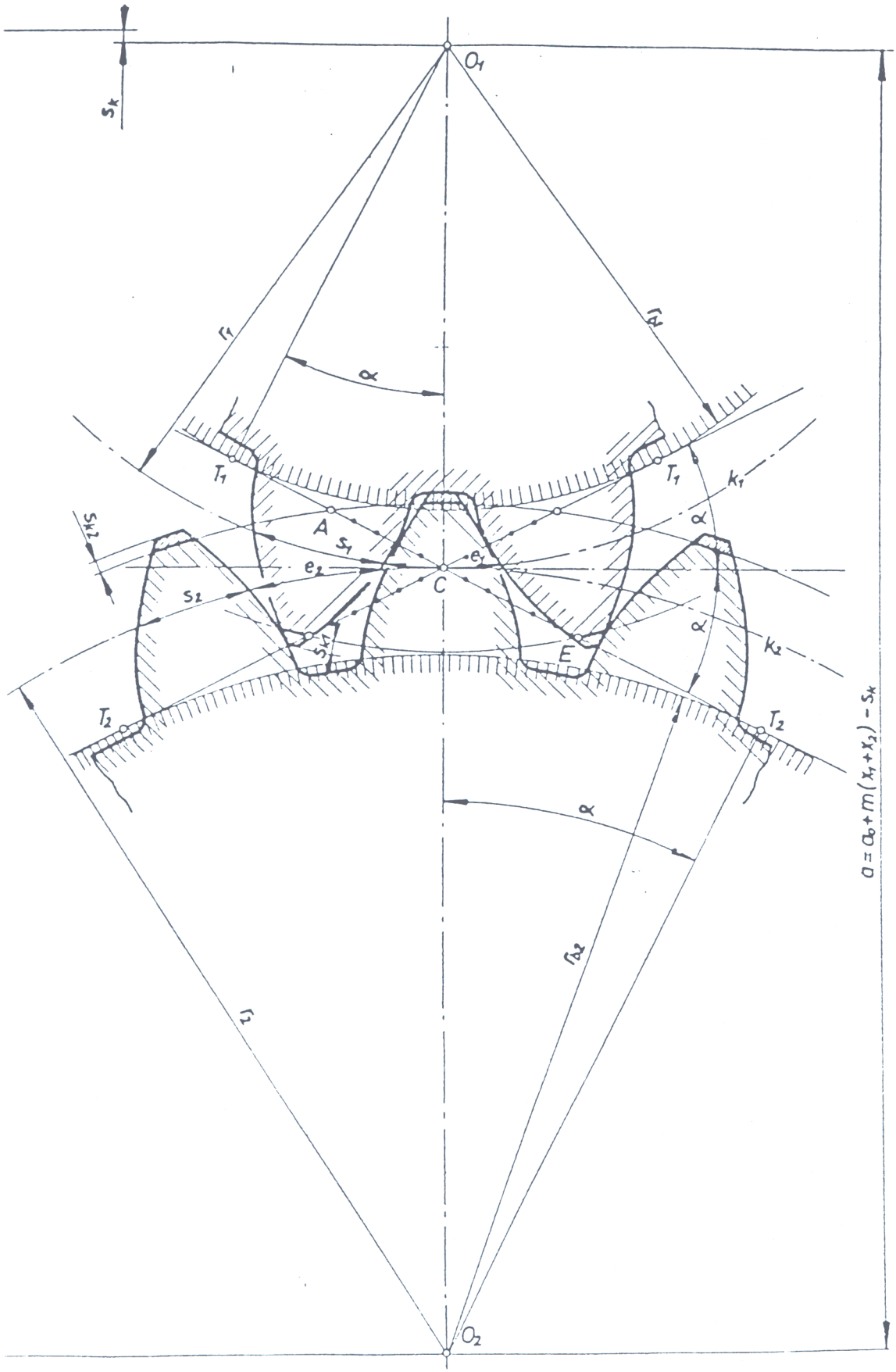
Slika 64.1



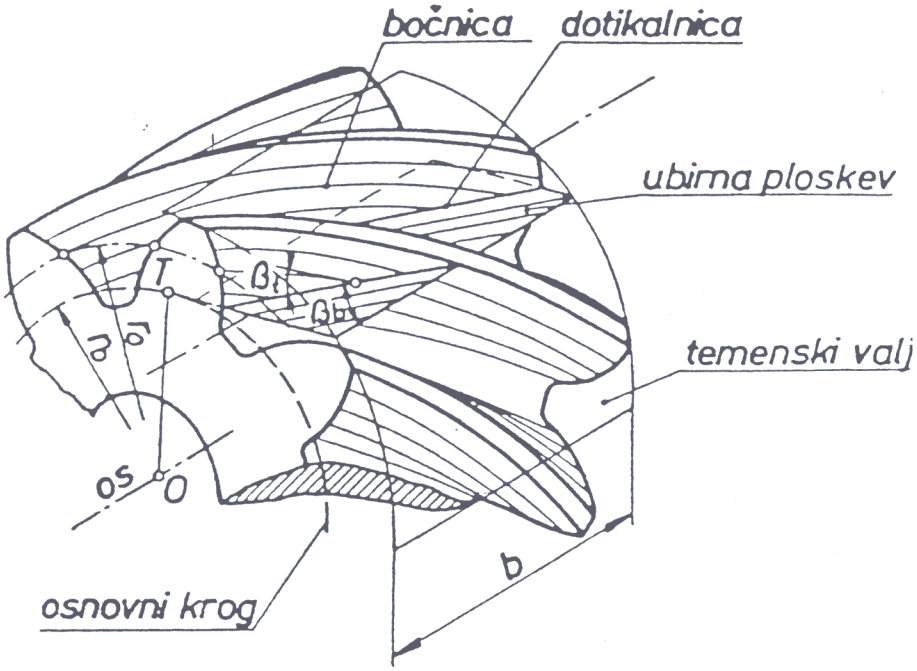
Slika 69.1



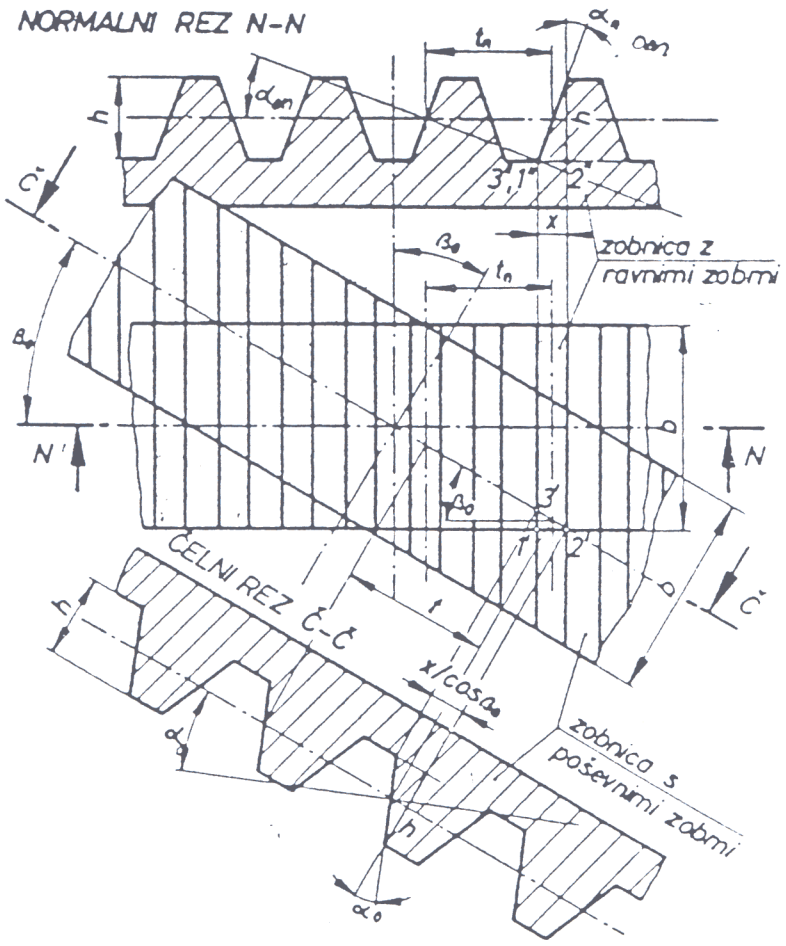
Slika 72.1


O_1
s_k
r_1
r_{a1}
α
T_1
T_1
k_1
s_{k1}
A
s_1
e_2
e_1
C
s_2
s_{k2}
E
k_2
T_2
T_2
α
r_{a2}
r_2
$a = a_0 + m(x_1 + x_2) - s_k$
O_2

Slika 81.1

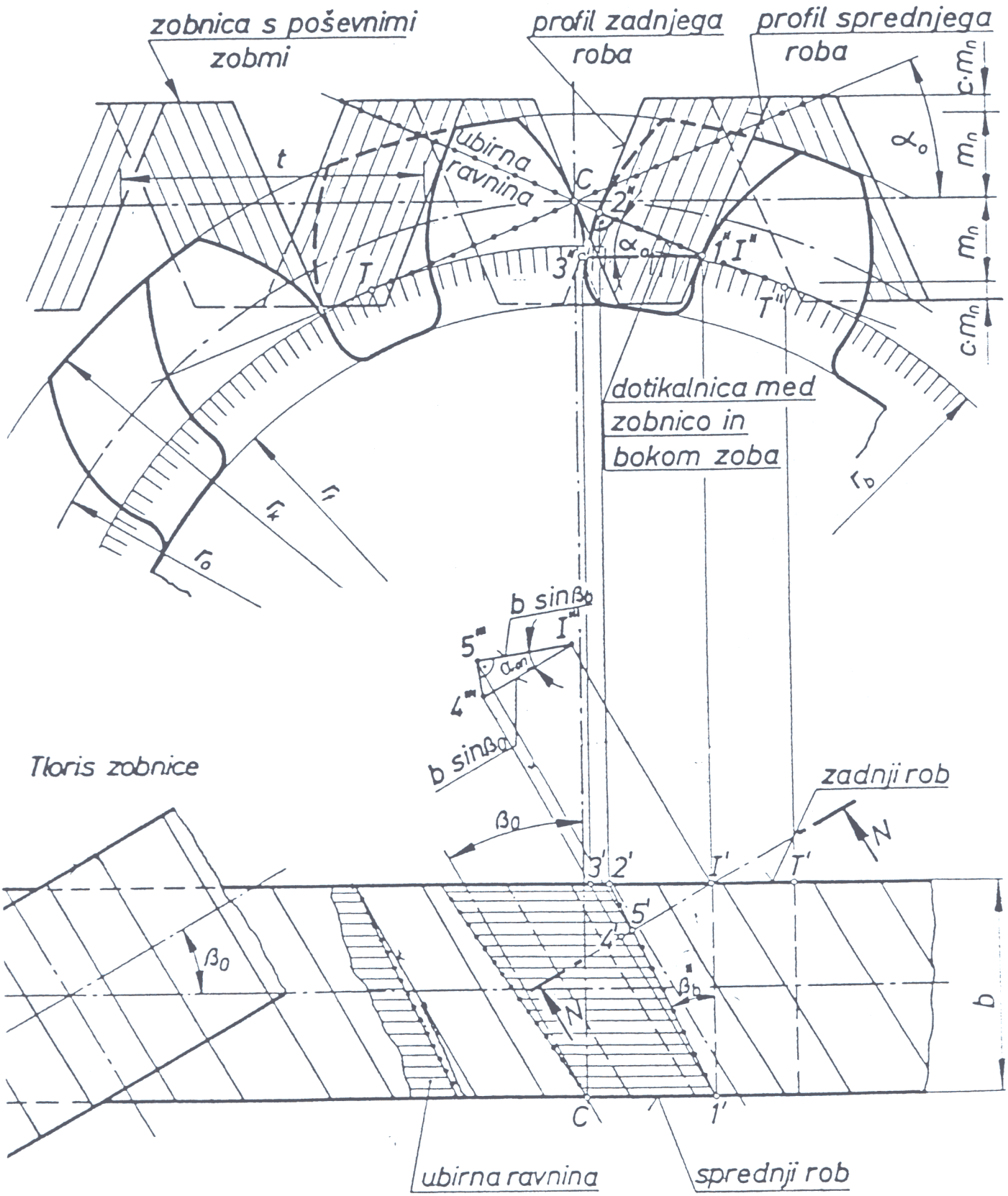


Slika 92.1

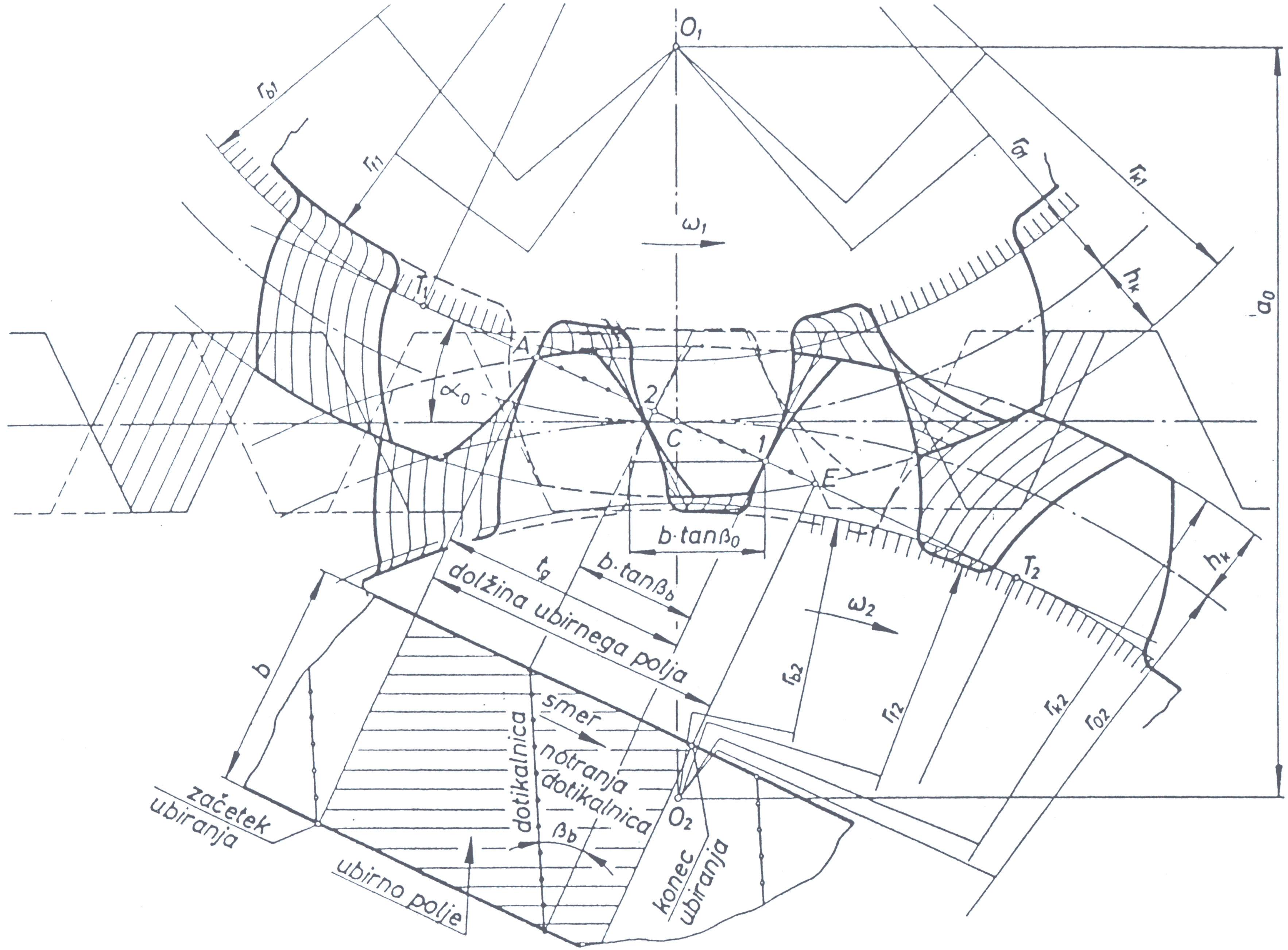


Slika 93.1

ZOBNIK V ČELNEM REZU

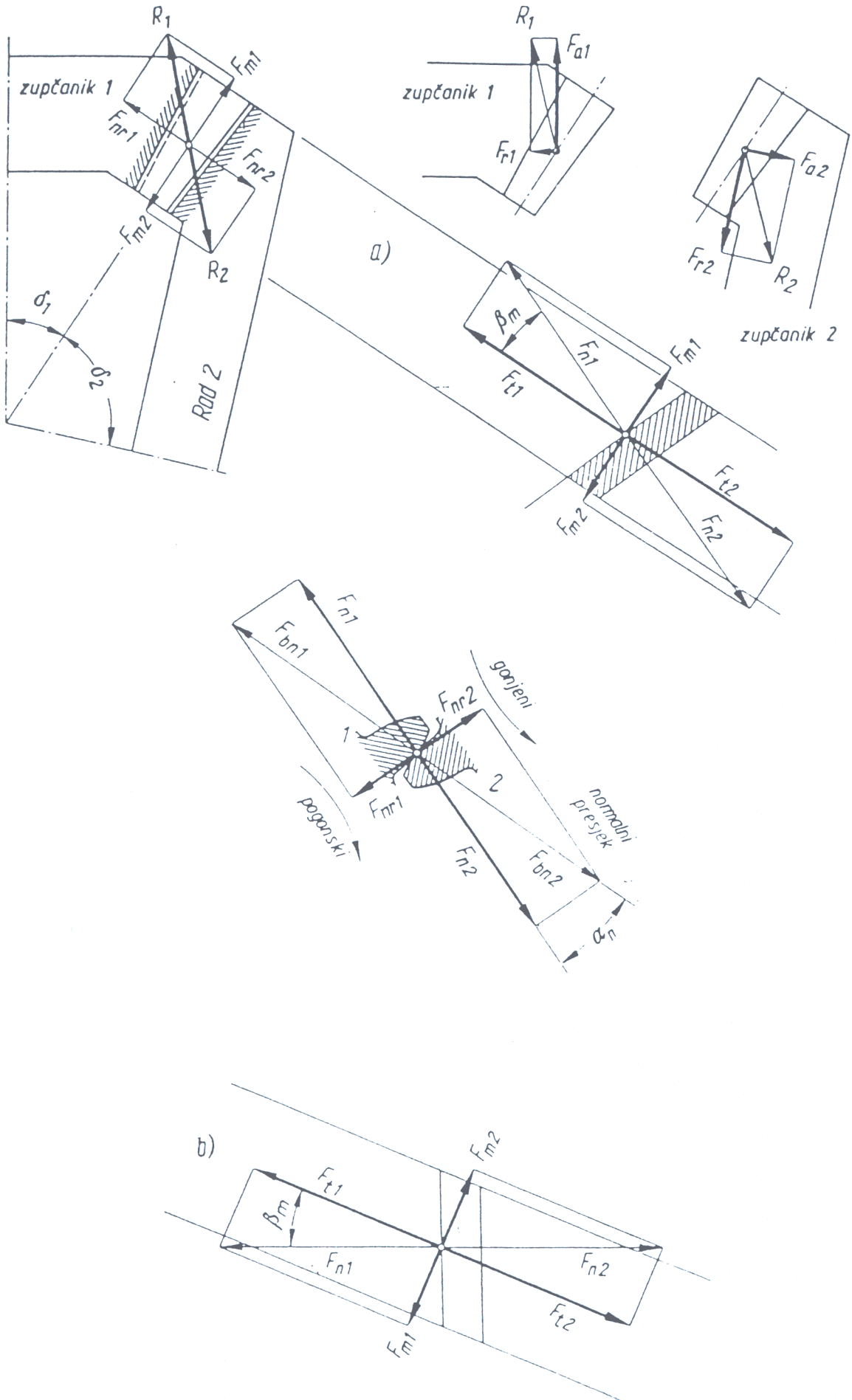


Slika 99.1

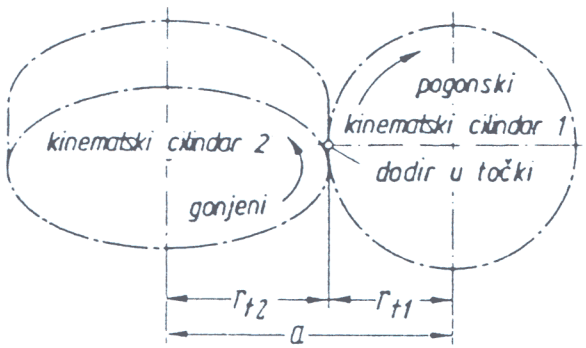


O_1
O_2
r_{b1}
r_{f1}
r_{01}
r_{k1}
h_k
a_0
ω_1
ω_2
T_1
T_2
A
C
E
1
2
α_0
$b \cdot \tan\beta_0$
$b \cdot \tan\beta_b$
t_g
dolžina ubirnega polja
b
r_{b2}
r_{f2}
r_{k2}
r_{02}
smer
notranja dotikalnica
dotikalnica
β_b
začetek ubiranja
ubirno polje
konec ubiranja

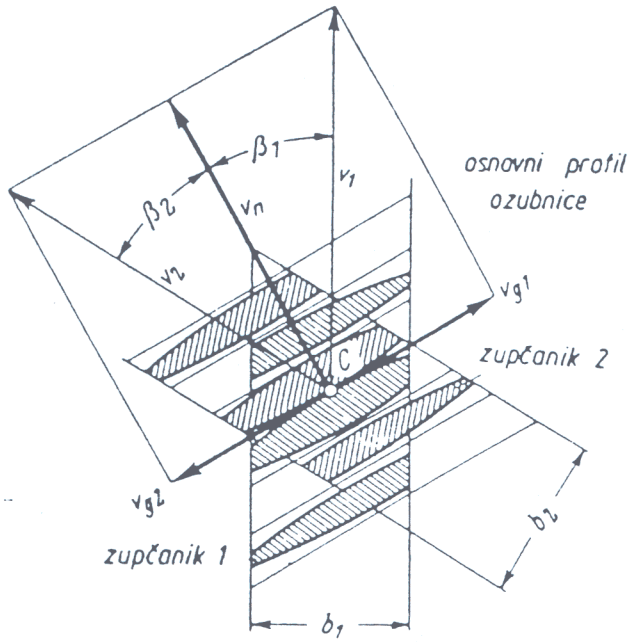
Slika 103.1



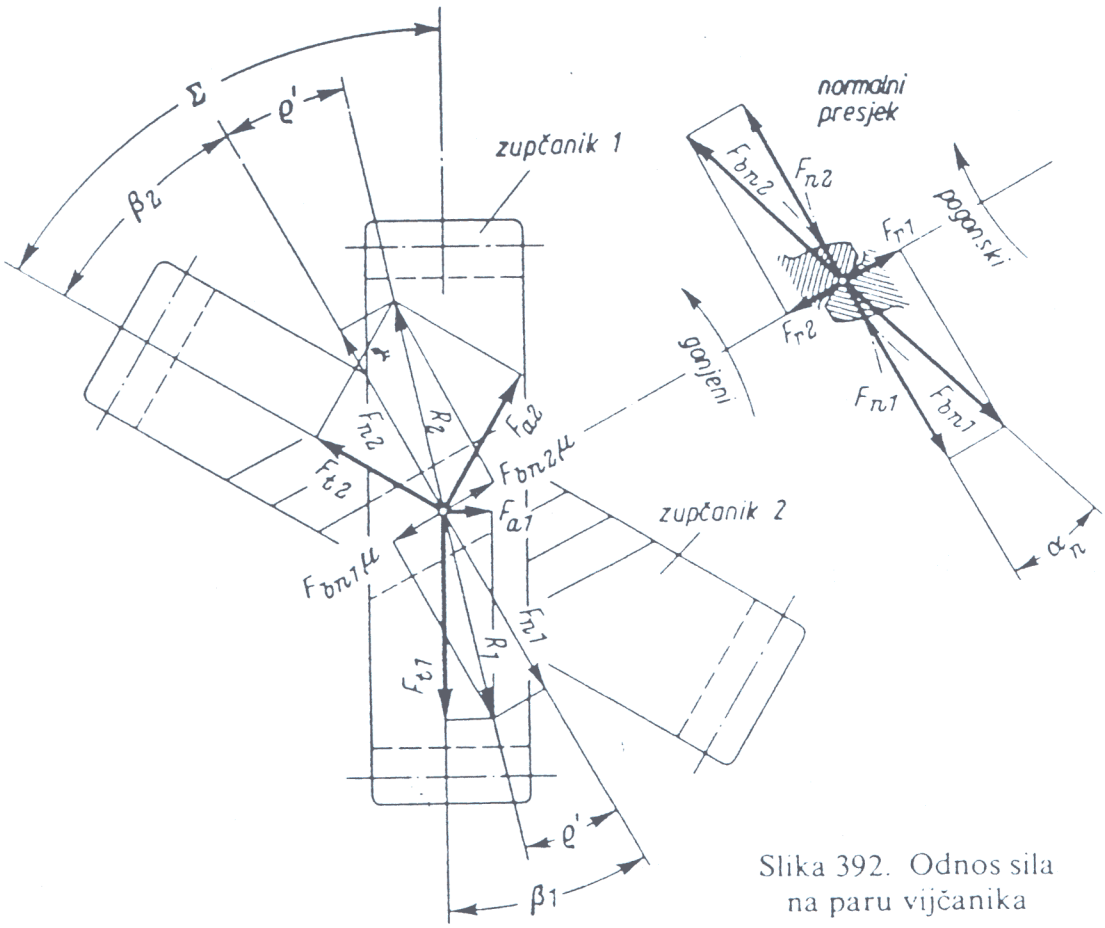
Slika 388. Odnosi sila na paru stožnika s kosim zubima



Slika 390. Dodir u točki kinematskih cilindara



Slika 391. Odnosi obodnih brzina i brzina klizanja



Slika 392. Odnos sila na paru vijčanika

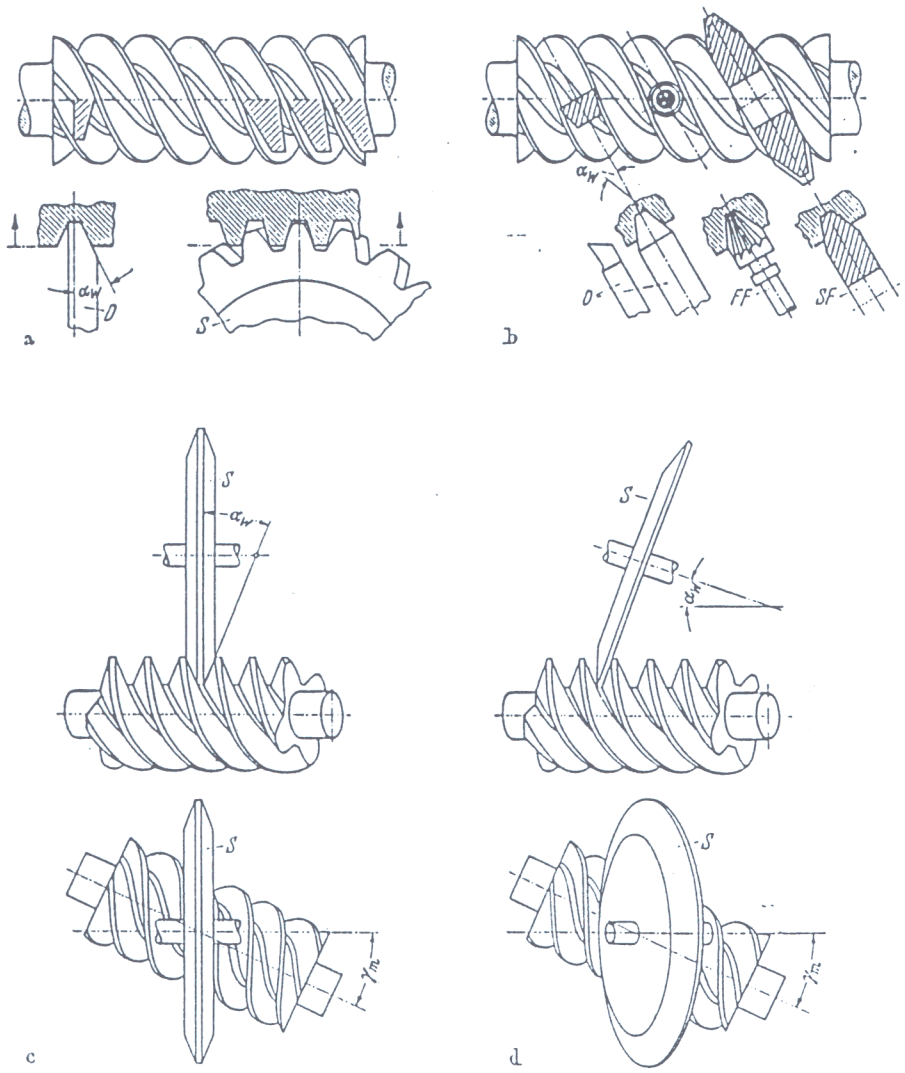
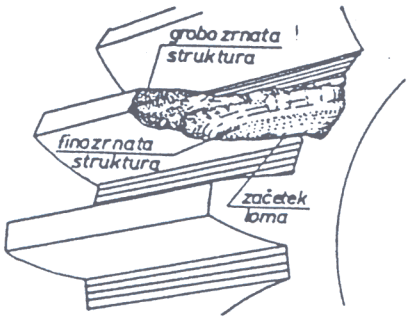
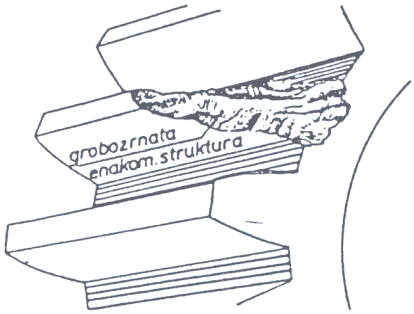


Abb. 6.87. Flankenformen der Zylinderschnecken nach DIN 3975

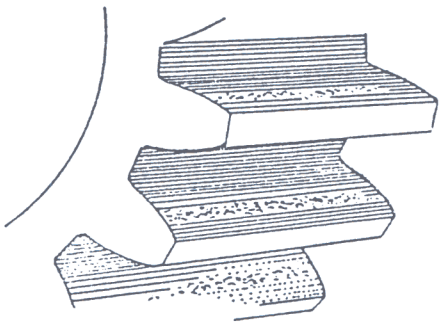
a) Flankenform A (ZA-Schnecke); *D* Drehmeißel; *S* Schneidrad; b) Flankenform N (ZN-Schnecke); *D* Drehmeißel; *FF* Fingerfräser; *SF* Scheibenfräser; c) Flankenform K (ZK-Schnecke); *S* Schleifscheibe; d) Flankenform E (ZE-Schnecke); *S* Schleifscheibe

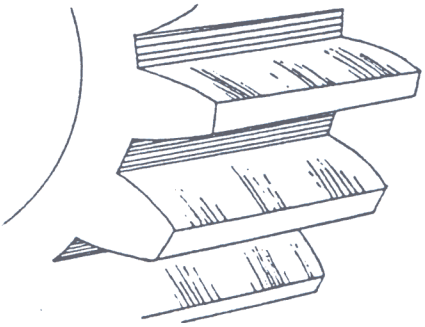


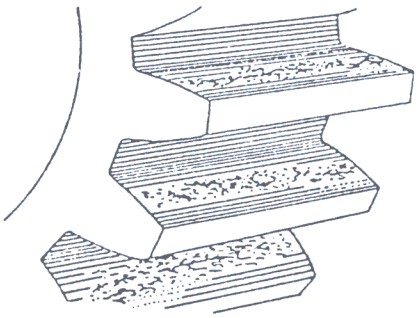
Slika 186.1

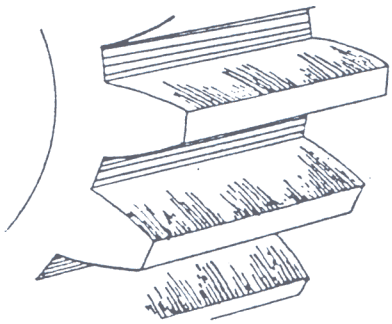


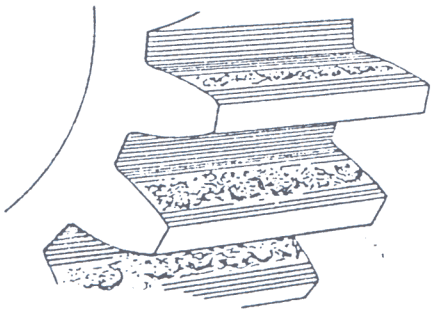
Slika 187.1



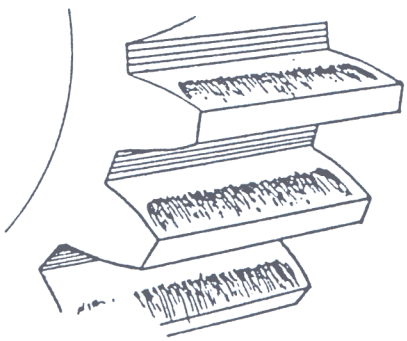




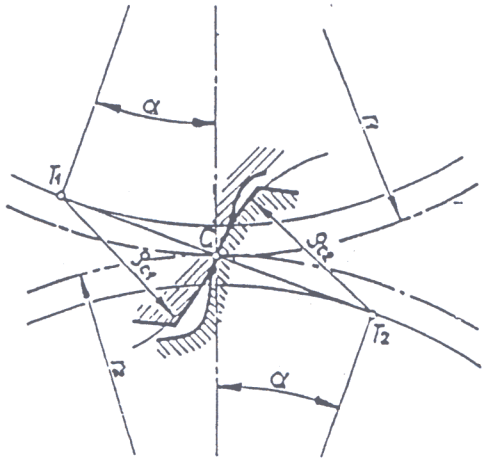




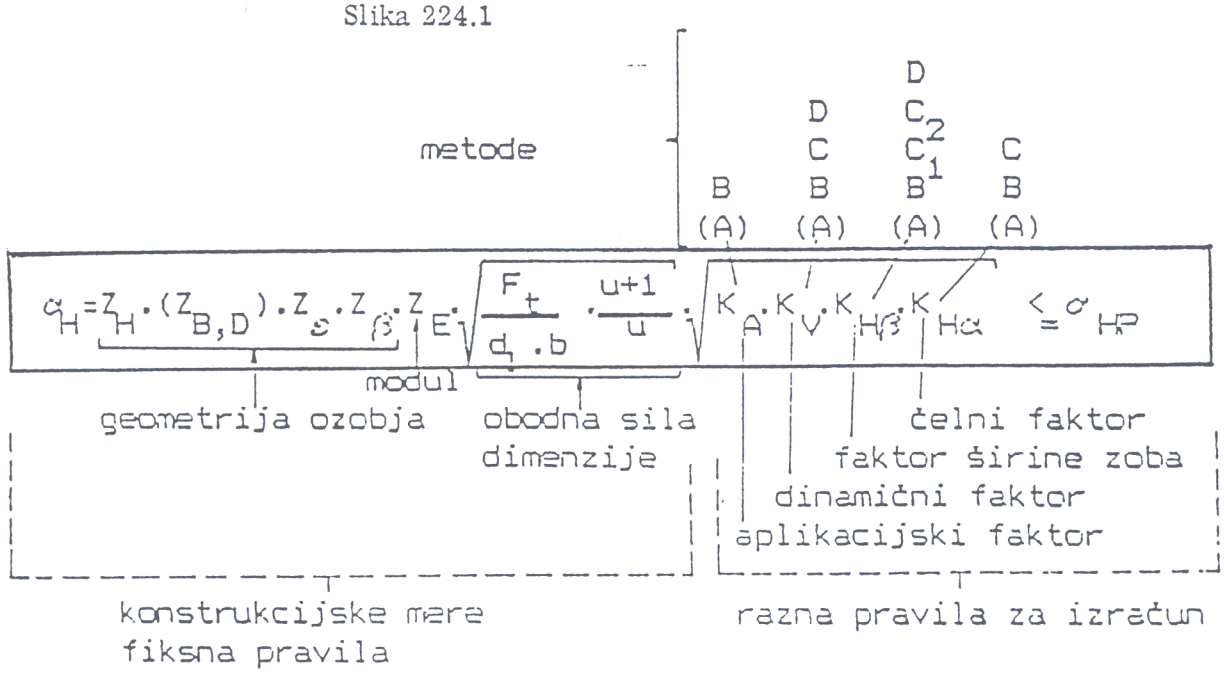
Slika 193.1 do 193.3



Slike 195.1 do 195.3



Slika 224.1



faktorji $Z_{NT}, (Z_L \cdot Z_V \cdot Z_R), Z_X$ za trajno trdnost