

ubani 1.				
s a m u S a o T a m o c u l o b e b i				
№	samuSaos dasaxe leba	ganz.	raod.	gaangar iSeba
1	2	3	4	5
1	Riad gamavali foladis gazsadenis montaJi da misi gamocda	grZ.m.	164.6 50.5 74.8 3.4	d=89*3.5 d=76*3.5 d=40*3.0 d=20*2.8(gaz Semyvanebi)
	su l		293.30	
2	miwisqveSa polietilenis gazsadenis montaJi da misi gamocda	grZ.m.	671.8 424.0 923.0 90.0 303.3 143.5	d=90 d=63 d=40 d=32 d=20 d=20(gaz Semyvanebi)
	su l		2555.6	
	su l		2848.9	
3	ormoebis amotxra III kategoriis gruntsi xeliT sayrdenebisTvis	m ³	10.5	9.5*1.1
4	betonis fundamentebis mowyoba markiT m-200	m ³	9.5	(2*0.4)+(44+43)*0.1=9.5
5	Riad gamavali gazsadenis da sayrdenebis SeRebva zeTovani saRebaviT 2-er	m ²	122.3	(164.6+9.4+3.2)*0.28=49.6 (50.5+86.3)*0.24=32.8 (35.1+73.9+1.1)*0.18=19.8 74.8*0.15=11.3 3.4*0.08=0.3 (41*0.2)+(2*0.15)=8.5
6	foladis garmis milis montaJi	c/grZ.m	3/3.0	d=150
7	garmis milis normaluri izolacia da boloebis amoqolva bitumiTa da ZenZiT	c/grZ.m.	6/3.0	d=150
8	foladis damxSobis montaJi	c	1	60*60*4
9	foladis muxlebis montaJi	c	14 3 8 6	d=80 d=70 d=40 d=20
10	foladis gadamyvanebis montaJi	c	2	80*70
11	burTulovani gamomrTveli urdulebis montaJi	c	2	DN80- PN16(FAF1000)
12	foladis milTuCebis montaJi	c	3	DN80PN16)
13	burTul. gamomrTv. onkanebis montaJi DN20	c	43	TS EN 331 DN20; PN16(FAF4000)
14	regulatoris damcavi yuTis montaJi	c	43	ASR-s-2200
15	gazis wnevis regulatorebis montaJi	c	43	ASR-6(6m ³ /sT)
16	H=2.2m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	29 13	d=70 d=50
17	H=3.5m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	2	d=70
18	H=4.0m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	2	d=80
19	H=1.2m. simaRlis foladis milebisgan regulatoris yuTisTvis sayrdenebis mowyoba(1700mm)	c	41	d=50
20	H=1.6m. simaRlis foladis milebisgan regulatoris yuTisTvis sayrdenebis mowyoba(2100mm)	c	2	d=50
21	polietilenis fasonuri nawilebis montaJi	c	125	
22	pirapirebis gasugeba y sxivebiT	c	4	70*5%=4
23	tranSeis amotxra III kategoriis gruntsi xeliT ganStoebebis da miwisqveSa komunikaciebis gadakveTis da regulatorebis adgilebze. (gazsadenisTvis)	m ³	28.3	61.5*0.5*0.92=28.3
24	tranSeis amotxra III kategoriis gruntsi meqanizmebiT (gazsadenisTvis)	m ³	1152.0	671.8*0.5*0.99=332.5 424.0*0.5*0.963=204.2 923.0*0.5*0.94=433.8 90.0*0.5*0.932=42.0 303.3*0.5*0.92=139.5

25	gruntis ukuCayra xeliT tranSeaSi misi morwyviTa da TandaTanobiT datkepvniT.	m ³	12.3	61.5*0.5*0.4=12.3
26	tranSeis Sevseba adgi l obrivi amoTxrili rbi li gruntiT, meqanizmebiT, misi morwyviTa da TandaTanobiT datkepvniT	m ³	482.4	(671.8+424.0+923.0+90.0+303.3)* *0.5*0.4=482.4
27	zedmeti gruntis datvirTva avtoTviTmc lel ze meqanizmebiT.	m ³	696.1	(1152.0-482.4)+(28.3-12.3)+10.5=696.1
28	tranSeis Zirze qviSis safuZvl is mowyoba gabsade- nisaTvis 0.1m sisqit da tranSeis Sevseba xeliT milis zedapiridan 0.2m-is simaRlemd qviSiT, misi TandaTanobiT datkepvniT, qviS. zidvis manZi lia-10km	m ³	431.2	671.8*0.1886=126.7 424.0*0.1784=75.6 923.0*0.1687=155.7 90.0*0.1652=14.9 (303.3+61.5)*0.1597=58.3
29	tranSeis Zir is moSandakeba III kategoriis grunTSi	m ²	1236.8	(671.8+424.0+923.0+90.0+303.3+61.5)*0.5
30	pol ietilenis mil is mimaniSnebel i lentis Cadeba tranSeiSi 0.2m simaRleze, mil is zeda msaxvelidan	grZm.	2473.6	671.8+424.0+923.0+90.0+303.3+61.5=2473.6
31	xreSis safaris aRdgena sisqit 20 sm	m ²	1236.8	(671.8+424.0+923.0+90.0+303.3+61.5)*0.5
32	xreSis Semozidva 10km manZi lidan da Cayra tran- SeaSi meqanizmebiT, misi TandaTanobiTi datkepvniT	m ³	247.4	1236.8*0.2=247.4
33	avtoTviTmc lel ze datvirTuli zedmeti gruntis gatana 5 km manZi l ze	m ³	696.1	

ubani 2.				
s a m u S a o T a m o c u l o b e b i				
№	SamuSaos dasaxe l eba	ganZ.	raod.	gaangar iSeba
1	2	3	4	5
1	Riad gamavali foladis gabsadenis montaJi da misi gamocda	grZm.	118.0 448.9 328.9 34.2	d=76*3.5 d=57*3.5 d=40*3.0 d=20*2.8(gaz Semyvanebi)
	su l		930.00	
2	miwisqveSa pol ietilenis gabsadenis montaJi da misi gamocda	grZm.	362.1 167.8 865.4 30.0 77.9 70.0	d=90 d=63 d=40 d=32 d=20 d=20(gaz Semyvanebi)
	su l		1573.2	
	su l		2503.2	
3	ormoebis amoTxra III kategoriis grunTSi xeliT sayrdenebisaTvis	m ³	25.2	22.9*1.1
4	betonis fundamentebis mowyoba markiT m-200	m ³	22.9	(12*0.4)+(147+34)*0.1=22.9
5	Riad gamavali gabsadenis da sayrdenebis SeRebva zeTovani saRebaviT 2-jer	m ²	283.5	(60.4+1.8)*0.28=17.4 (118.0+52.5)*0.24=41.0 (448.9+405.5+63.4+9.8)*0.18=167.0 328.9*0.15=49.3 34.2*0.08=2.7 (20*0.2)+(14*0.15)=6.1
6	foladis garcmis mil is montaJi	c/grZm	2/2.0 2/2.0 2/2.0	d=150 d=120 d=100
7	garcmis mil is normaluri izolacia da boloebis amoqolva bitumiTa da ZenZiT	c/grZm.	4/2.0 4/2.0 4/2.0	d=150 d=120 d=100
8	foladis damxSobis montaJi	c	6	60*60*4
9	foladis muxlebis montaJi	c	12 51 40 42	d=70 d=50 d=40 d=20
10	foladis gadamyvanebis montaJi	c	2	40*32
11	burTu lovani gamomrTveli urdulebis montaJi	c	1	DN80- PN16(FAF1000)
12	foladis mil tucebis montaJi	c	2	DN80PN16)

13	burTu l . gamom rTv. onkanebis montaJi DN20	c	34	TS EN 331 DN20; PN16(FAF4000)
14	regu latoris damcavi yuTis montaJi	c	34	ASR-s-2200
15	gazis wnevis regu latorebis montaJi	c	33 1	ASR-6(6m³/sT) ASR-10(10m³/sT)
16	H=2.2m. simaR l is foladis milebisgan sayrdenebis mowyoba	c	15 85	d=70 d=50
17	H=3.5m. simaR l is foladis milebisgan sayrdenebis mowyoba	c	3 44	d=70 d=50
18	H=4.0m. simaR l is foladis milebisgan sayrdenebis mowyoba	c	8	d=80
19	H=5.0m. simaR l is foladis milebisgan sayrdenebis mowyoba	c	4	d=80
20	H=1.2m. simaR l is foladis milebisgan regu latoris yuTisTvis sayrdenebis mowyoba(1700mm)	c	20	d=50
21	H=1.6m. simaR l is foladis milebisgan regu latoris yuTisTvis sayrdenebis mowyoba(2100mm)	c	14	d=50
22	pol i eTil enis fasonuri nawilebis montaJi	c	84	
23	pirapirebis gaSugeba y sxivebiT	c	3	44*5%=3
24	tranSeis amoTxra III kategoriis grunTSi xeliT ganStoebebis da miwisqveSa komunikaciebis gadakveTis da regu latorebis adgil ebze. (gazsadenebisTvis)	m³	13.8	30.0*0.5*0.92=13.8
25	tranSeis amoTxra III kategoriis grunTSi meqanizmebiT (gazsadenebisTvis)	m³	716.5	362.1*0.5*0.99=179.2 167.8*0.5*0.963=80.8 865.4*0.5*0.94=406.7 30.0*0.5*0.932=14.0 77.9*0.5*0.92=35.8
26	grunTSi ukuCayra xeliT tranSeaSi misi morwyviTa da TandaTanobiT datkepnit.	m³	6.0	30.0*0.5*0.4=6.0
27	tranSeis Sevseba adgil obrivi amoTxrili rbi li grunTSi, meqanizmebiT, misi morwyviTa da TandaTanobiT datkepnit	m³	300.6	(362.1+167.8+865.4+30.0+77.9)* *0.5*0.4=300.6
28	zedmeti grunTSi datvirTva avtoTviTmc lel ze meqanizmebiT.	m³	448.9	(716.5-300.6)+(13.8-6.0)+25.2=448.9
29	tranSeis Zirze qviSiS safuZvl is mowyoba gazedenisTvis 0.1m sisqit da tranSeis Sevseba xeliT mil is zedapiridan 0.2m-is simaR leme qviSiT, misi TandaTanobiT datkepnit, qviS. zidvis manZi lia-10km	m³	266.5	362.1*0.1886=68.3 167.8*0.1784=30.0 865.4*0.1687=146.0 30.0*0.1652=5.0 (77.9+30.0)*0.1597=17.2
30	tranSeis Zir is moSandakeba III kategoriis grunTSi	m²	766.6	(362.1+167.8+865.4+30.0+77.9+30.0)*0.5
31	pol i eTil enis mil is mimaniSnebel i lentis Cadeba tranSeiSi 0.2m simaR leze, mil is zeda msaxvelidan	grZm.	1533.2	362.1+167.8+865.4+30.0+77.9+30.0=1533.2
32	xreSiS safaris aRdgena sisqit 20 sm	m²	766.6	(362.1+167.8+865.4+30.0+77.9+30.0)*0.5
33	xreSiS Semozidva 10km manZi lidan da Cayra tranSeaSi meqanizmebiT, misi TandaTanobiTi datkepnit	m³	153.3	766.6*0.2=153.3
34	avtoTviTmc lel ze datvirTuli zedmeti grunTSi gatana 5 km manZi l ze	m³	448.9	

ubani 3.				
s a m u S a o T a m o c u l o b e b i				
№	samuSaos dasaxe l eba	ganz.	raod.	gaangar iSeba
1	2	3	4	5
1	Riad gamavali foladis gazedenis montaJi da misi gamocda	grZm.	2.0 219.7 12.4	d=76*3.5 d=40*3.0 d=20*2.8(gaz Semyvanebi)
	su l		234.10	
2	miwisqveSa pol i eTil enis gazedenis montaJi da misi gamocda	grZm.	600.8 400.0 552.9 135.0 156.6	d=90 d=63 d=40 d=32 d=20

			119.0	d=20(gaz Semyvanebi)
	su l		1964.3	
	su l		2198.4	
3	ormoebis amoTxra III kategoriis grunTSi xeliT sayrdenebisaTvis	m ³	11.0	10,0*1,1
4	betonis fundamentebis mowyoba markiT m-200	m ³	10.0	(6*0,4)+(37+39)*0,1=10,0
5	Riad gamavali gazsadenis da sayrdenebis SeRebva zeTovani saRebaviT 2-jer	m ²	85.0	28,2*0.28=7,9 2,0*0.24=0,5 (123,3+68,3+2,9)*0.18=35,0 219,7*0.15=33,0 12,4*0.08=1,0 (34*0.2)+(5*0.15)=7,6
6	foladis garmis milis montaJi	c/grZm	1/1,0 3/3,0	d=150 d=100
7	garmis milis normaluri izolacia da boloebis amoqolva bitumiTa da ZenZiT	c/grZm.	2/1,0 6/3,0	d=150 d=100
8	foladis damXSobis montaJi	c	3	60*60*4
9	foladis muxlebis montaJi	c	31 15	d=40 d=20
10	foladis gadamyvanebis montaJi	c	3	40*32
11	foladis milTuCebis montaJi	c	1	DN80PN16)
12	burTuli gamomrTv. onkanebis montaJi DN20	c	39	TS EN 331 DN20; PN16(FAF4000)
13	regulatoris damcaviyuTis montaJi	c	39	ASR-s-2200
14	gazis wnevis regulatorebis montaJi	c	39	ASR-6(6m ³ /sT)
15	H=2.2m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	19	d=50
16	H=3.5m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	18	d=50
17	H=4.0m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	6	d=80
18	H=1.2m. simaRlis foladis milebisgan regulatoris yuTisTvis sayrdenebis mowyoba(1700mm)	c	34	d=50
19	H=1.6m. simaRlis foladis milebisgan regulatoris yuTisTvis sayrdenebis mowyoba(2100mm)	c	5	d=50
20	polietilenis fasonuri nawilebis montaJi	c	105	
21	pirapirebis gasuqeba y xsvibiT	c	1	2*5%=1
22	tranSeis amoTxra III kategoriis grunTSi xeliT ganStoebebis da miwiskveSa komunikaciebis gadakvetis da regulatorebis adgilbez. (gazsadenebisTvis)	m ³	23.5	51,0*0.5*0.92=23,5
23	tranSeis amoTxra III kategoriis grunTSi meqanizmebiT (gazsadenebisTvis)	m ³	884.8	600,8*0.5*0.99=297,4 400,0*0.5*0.963=192,6 552,9*0.5*0.94=259,9 135,0*0.5*0.932=62,9 156,6*0.5*0.92=72,0
24	grunTSi ukuCayra xeliT tranSeaSi misi morwyviTa da TandaTanobiT datkepvniT.	m ³	10.2	51,0*0.5*0.4=10,2
25	tranSeis Sevseba adgilobrivi amoxrili rbili grunTSi, meqanizmebiT, misi morwyviTa da TandaTanobiT datkepvniT	m ³	369.1	(600,8+400,0+552,9+135,0+156,6)* *0.5*0.4=369,1
26	zedmeti grunTSi datvirTva avtoTviTmclelze meqanizmebiT.	m ³	540.0	(884,8-369,1)+(23,5-10,2)+11,0=540,0
27	tranSeis Zirze qvisis safuzvis mowyoba gazsadenisaTvis 0.1m sisqit da tranSeis Sevseba xeliT milis zedapiridan 0.2m-ის simaRlemde qvisiT, misi TandaTanobiT datkepvniT, qvis. zidvis manZilia-10km	m ³	333.5	600,8*0.1886=113,3 400,0*0.1784=71,4 552,9*0.1687=93,3 135,0*0.1652=22,3 (156,6+51,0)*0.1597=33,2
28	tranSeis Ziris moSandakeba III kategoriis grunTSi	m ²	948.2	(600,8+400,0+552,9+135,0+156,6+51,0)*0.5
29	polietilenis milis mimaniSnebeli lentis Cadeba tranSeiSi 0.2m simaRleze, milis zeda msaxvelidan	grZm.	1896.3	600,8+400,0+552,9+135,0+156,6+51,0=1896,3
30	xreSis safaris aRdgena sisqit 20 sm	m ²	948.2	(600,8+400,0+552,9+135,0+156,6+51,0)*0.5
31	xreSis Semozidva 10km manZilidan da Cayra tranSeaSi meqanizmebiT, misi TandaTanobiTi datkepvniT	m ³	189.6	948,2*0,2=189,6
32	avtoTviTmclelze datvirTuli zedmeti grunTSi	m ³	540.0	

	gatana 5 km manZi l ze			
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mkvebavi gazsadeni.				
s a m u S a o T a m o c u l o b e b i				
№	samuSaos dasaxe leba	ganz.	raod.	gaangariSeba
1	2	3	4	5
1	Riad gamavali foladis gazsadenis montaJi da misi gamocda	grZm.	11.3	d=89*3.5
	su l		11.30	
2	miwisqveSa polieTilenis gazsadenis montaJi da misi gamocda	grZm.	2129.0 100.0 17.3 7.0	d=90 d=40 d=20 d=20(gaz Semyvanebi)
	su l		2253.3	
	su l		2264.6	
3	SeWra arsebul miwizeda s/w foladis gazsadenSi	c	1	80*80
4	ormoebis amOTxra III kategoriis grunTSi xeliT sayrdenebisTvis	m³	0.5	0.4*1.1
5	betonis fundamentebis mowyoba markiT m-200	m³	0.4	(2+2)*0.1=0.4
6	Riad gamavali gazsadenis da sayrdenebis SeRebva zeTovani saRebaviT 2-jer	m²	5.5	(11.3+0.2)*0.28=3.2 5.4*0.24=1.3 3.4*0.18=0.6 2*0.2=0.4
7	foladis garcmis milis montaJi	c/grZm	2/3.0	d=150
8	garcmis milis normaluri izolacia da boloebis amoqolva bitumiTa da ZenZiT	c/grZm.	4/3.0	d=150
9	foladis muxlebis montaJi	c	1	d=80
10	foladis gadamyvanebis montaJi	c	1	80*70
11	burTul. gamomrTv. onkanebis montaJi DN20	c	2	TS EN 331
12	regulatoris damcavi yuTis montaJi	c	2	ASR-s-2200
13	gazis wnevis regulatorebis montaJi	c	2	ASR-6(6m³/sT)
14	H=2.2m. simaRlis foladis milebisgan sayrdenebis mowyoba	c	2	d=50
15	H=1.2m. simaRlis foladis milebisgan regulatoris yuTisTvis sayrdenebis mowyoba(1700mm)	c	2	d=50
16	polieTilenis fasonuri nawilebis montaJi	c	35	
17	pirapirebis gaSuqeba y. sxivebiT	c	1	5*5%=1
18	gazs-is trasis zolis gasuftaveba buCqnarisgan	grZm.	1200.0	ПК6+00.0+ПК18+00.0
19	tranSeis amOTxra III kategoriis grunTSi xeliT ganStoebebis da miwisqveSa komunikaciebis gadakveTis da regulatorebis adgilebze. (gazsadenebisTvis)	m³	1.4	3.0*0.5*0.92=1.4
20	tranSeis amOTxra III kategoriis grunTSi meqanizmebiT (gazsadenebisTvis)	m³	1135.9	grZivi profil iT - 1080.9 100.0*0.5*0.94=47.0 17.3*0.5*0.92=8.0
21	grunTis ukuCayra xeliT tranSeaSi misi morwyviTa da TandaTanobiT datkepvniT.	m³	0.6	3.0*0.5*0.4=0.6
22	tranSeis Sevseba adgilobrivi amOTxri l i r b i l i grunTiT, meqanizmebiT, misi morwyviTa da TandaTanobiT datkepvniT	m³	629.1	0.39*0.5*2128.8=415.1 1080.9-415.1=665.8 602.0*0.5*0.2=60.2 (100.0+17.3)*0.5*0.4=23.5 665.8-60.2+23.5=629.1
23	zedmeti grunTis datvirTva avtoTviTmc le l ze meqanizmebiT.	m³	508.1	(1135.9-629.1)+(1.4-0.6)+0.5=508.1
24	tranSeis Zirze qviSis safuZvlis mowyoba gazsadenisaTvis 0.1m sisqit da tranSeis Sevseba xeliT milis zedapiridan 0.2m-is simaRl emde qviSiT, misi TandaTanobiT datkepvniT, qviS. zidvis manZi lia-10km	m³	421.7	2129.0*0.1886=401.5 100*0.1687=16.9 (17.3+3.0)*0.1597=3.3
25	tranSeis Ziris moSandakeba III kategoriis grunTSi	m²	1124.6	(2128.8+100.0+17.3+3.0)*0.5=1124.6
26	polieTilenis milis mimaniSnebeli lentis Cadeba tranSeiSi 0.2m simaRleze, milis zeda msaxvelidan	grZm.	2249.1	2128.8+100.0+17.3+3.0=2249.1
27	xreSis safaris aRdgena sisqit 20 sm	m²	361.2	(602.0+100.0+17.3+3.0)*0.5=361.2

28	xreSis Semozidva 10km manZilidan da Cayra tran-SeaSi meqanizmebiT, misi TandaTanobiTi datkepvniT	m ³	72.3	361.2*0,2=72.3
29	avtoTviTmc lelze datvirTuli zedmeti gruntis gatana 5 km manZilze	m ³	508.1	

kaspi, guda leTi

ubani 1.							
s p e c i f i k a c i a							
№	d a s a x e l e b a	masa l a	ganz.	raod.	wona kg-Si		marka "g.o.s.t."
					er T.	saer To	
1	fo l adis swornakeriani eleqtro						
	SenaduRi mili uizolaci od						
	d=89*3.5	f	grZm	164.6	7.38	1214.7	10704-76
	d=76*3.5	f	grZm	50.5	6.26	316.1	10704-76
	d=40*3,0	f	grZm	74.8	2.74	205.0	10704-76
	d=20*2.8(gaz Semyvanebi)	f	grZm	3.4	1.66	5.6	10704-76
	su l			293.3			
2	po lieTi lenis mili						
	d=90	po l.	grZm	671.8	1.45	974.1	PE80-SDR17
	d=63	po l.	grZm	424.0	0.71	301.0	PE80-SDR17
	d=40	po l.	grZm	923.0	0.295	272.3	PE80-SDR17
	d=32	po l.	grZm	90.0	0.27	24.3	PE80-SDR11
	d=20	po l.	grZm	303.3	0.162	49.1	PE80-SDR11
	d=20(gaz Semyvanebi)	po l.	grZm	143.5	0.162	23.2	PE80-SDR11
	su l			2555.6			
	su l			2848.9			
3	fo l adis mili sayrdenebisTvis						
	d=80	f	grZ/m	9.4	7.38	69.4	10704-76
	d=70		grZ/m	86.3	6.26	540.2	10704-76
	d=50	f	grZ/m	35.1	4.46	156.5	10704-76
	d=50(regu lator ebis sayrdenebisTvis)	f	grZ/m	73.9	4.46	329.6	10704-76
4	fo l adis garcmis mili						
	d=150	f	grZ/m	3.0	17.81	53.4	10704-76
5	fo l adis mux lebi						
	d=80-90°	f	c	10	1.6	16.0	17375-77
	d=80-45°	f	c	4	0.8	3.2	17375-77
	d=70-90°	f	c	2	1.2	2.4	17375-77
	d=70-45°	f	c	1	0.6	0.6	17375-77
	d=40-90°	f	c	2	0.4	0.8	17375-77
	d=40-45°	f	c	6	0.2	1.2	17375-77
	d=20-90°	f	c	6	0.1	0.6	17375-77
6	fo l adis gadamyvanebi						
	80*70	f	c	2	1.2	2.4	
7	gamomrTveli urdu lebi (burTu lovani)						
	DN80	T	c	2	17.53	35.1	PN16(FAF1000)
8	fo l adis mil tuCebi urdu lebisTvis						
	D=80	T.	c.	3	3.2	9.6	DN80(PN16)
9	dasamagrebeli deta lebi	f	kg			99.2	
	sayrdenebisTvis (46cl.)						
	maT Soris:						
	kuTxovani rkina 75*50*5	f	grZ/m	0.8	5.59	4.5	8510-72
	furc lovani fo ladi 4mm sisqis	f	m ²	1.7	31.4	53.4	103-76
	fo l adis mili d=80	f	grZ/m	3.2	7.38	23.6	3262-75
	fo l adis mili d=50	f	grZ/m	1.1	4.46	4.9	3262-75
	zo lovani fo ladi- 50*4	f	grZ/m	8.2	1.57	12.9	3262-75
10	paraniti		m ²	1.5			481-80
11	betoni		m ³	9.5	2400	22800.0	m-200
12	zeTovani saRebavi		kg	34.3	1	34.3	
13	furc lovani fo ladi damxSobisTvis	f	m ²	0.010	31.4	0.3	103-76
14	po lieTi lenis quro						
	d=90	po l.	c	11	0.65	7.2	SDR11-PE100-EF-10BAR
	d=63	po l.	c	4	2.00	8.0	SDR11-PE100-EF-10BAR
	d=40	po l.	c	11	0.09	1.0	SDR11-PE100-EF-10BAR

	d=32 d=20	po l. po l.	c c	1 39	0.08 0.03	0.1 1.2	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
15	po lieT-is unagira sarini d1-d2=90-20 d1-d2=63-40 d1-d2=63-32 d1-d2=63-20 d1-d2=40-20	po l. po l. po l. po l. po l.	c c c c c	10 2 1 12 16	0.98 0.59 0.59 0.56 0.29	9.80 1.2 0.6 6.7 4.6	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
16	po lieTilenis samkapi d=90 d=63 d=32	po l. po l. po l.	c c c	1 1 1	1.48 0.571 0.131	1.5 0.6 0.1	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
17	po lieTilenis gadamyvani d1-d2=90-63 d1-d2=63-40 d1-d2=40-20 d1-d2=32-20	po l. po l. po l. po l.	c c c c	1 2 1 2	0.588 0.246 0.04 0.049	0.6 0.5 0.0 0.1	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-SPIGOT-10BAR SDR11-PE100-EF-10BAR
18	po lieT-is foladis mi l ze gadamyvani d1-d2=90-3"	p/f.	c	3	4.5	13.5	SPIGOT
19	po lieTilenis muxlebi d=90-90°	po l.	c	3	1.11	3.3	SDR11-PE100-EF-10BAR
20	po lieTilenis damxSobi d=40	po l.	c	3	0.12	0.4	SDR11-PE100-EF-10BAR
21	po lieTilenis mimaniSnebeli lenta	po l.	grZ/m	2473.6		0.0	
22	gazis wnevis regulatorebi: ASR-6	f.	c.	43	3.0	129.0	ASR-6 (6m³/sT)
23	po lieTilenis garcmis mili d=40	po l.	grZ/m	102.5	0.295	30.2	PN8-SDR21-PE80
24	gamomrTv. onkani (burTu l.kompl.) DN20	f.	c	41	0.20	8.2	TS EN 331
25	burTu lovani gamomrTveli Onkani NDN20	f.	c	2	0.28	0.6	PN16(FAF4000)
26	d=20mm fol-is gazs-is naxevarxraxni(gare)	f.	c.	2	0.2	0.4	d=20, L=10sm.
27	fol-is damxSobi gare xraxniT d=20	f.	c	43	0.05	2.2	d=20
28	regulatoris damcavi yuTi	p l.s.	c.	43	2.2	94.6	ASR-s-2200
29	furclovani foladi sisqit 3mm regula- toris yuTis sayrdenebis mosawyobad	f.	m²	4.3	23.5	101.1	103-76
30	foladis WanWiki qanCiT Φ12	f.	c	172	0.11	18.9	Φ12
31	qviSa	qv.	m³	431.2	1500	646800.0	8736-67
32	xreSi	xr.	m³	247.4	1900	470060.0	8267-75

ubani 2.							
s p e c i f i k a c i a							
№	d a s a x e l e b a	masa la	ganz.	raod.	wona kg-Si		marka "g.o.s.t."
					er T.	saer To	
1	foladis swornakeriani eleqtro SenaduRi mili uizolaci od d=76*3.5 d=57*3.5 d=40*3.0 d=20*2.8(gaz Semyvanebi)	f f f f	grZm grZm grZm grZm	118.0 448.9 328.9 34.2	6.26 4.46 2.74 1.66	738.7 2002.1 901.2 56.8	10704-76 10704-76 10704-76 10704-76
	su l			930.0			
2	po lieTilenis mili d=90 d=63 d=40 d=32 d=20 d=20(gaz Semyvanebi)	po l. po l. po l. po l. po l. po l.	grZm grZm grZm grZm grZm grZm	362.1 167.8 865.4 30.0 77.9 70.0	1.45 0.71 0.295 0.27 0.162 0.162	525.0 119.1 255.3 8.1 12.6 11.3	PE80-SDR17 PE80-SDR17 PE80-SDR17 PE80-SDR11 PE80-SDR11 PE80-SDR11
	su l			1573.2			
	su l			2503.2			
3	foladis mili sayrdenebisTvis d=80	f	grZ/m	60.4	7.38	445.8	10704-76

	d=70 d=50 d=50(regulatoribis sayrdenebisTvis)	f f	grZ/m grZ/m grZ/m	52.5 405.5 63.4	6.26 4.46 4.46	328.7 1808.5 282.8	10704-76 10704-76 10704-76
4	foladis garcmis mili d=150 d=120 d=100	f f f	grZ/m grZ/m grZ/m	2.0 2.0 2.0	17.81 13.42 10.85	35.6 26.8 21.7	10704-76 10704-76 10704-76
5	foladis muxlebi d=70-90° d=70-45° d=50-90° d=50-45° d=40-90° d=40-45° d=20-90°	f f f f f f f	c c c c c c c	6 6 32 19 20 20 42	1.2 0.6 0.6 0.3 0.4 0.2 0.1	7.2 3.6 19.2 5.7 8.0 4.0 4.2	17375-77 17375-77 17375-77 17375-77 17375-77 17375-77 17375-77
6	foladis gadamyvanebi 40*32	f	c	2	0.3	0.6	
7	gamomrtveli urdulebi (burTulovani) DN80	T	c	1	17.53	17.5	PN16(FAF1000)
8	foladis milTucbi urdulebisTvis D=80	T.	c.	2	3.2	6.4	DN80(PN16)
9	dasagrebili detaLebi sayrdenebisTvis (159cl.) maT Soris: kuTxovani rkina 75*50*5 furclovani foladi 4mm sisqis foladis mili d=80 foladis mili d=50 zolvani foladi- 50*4	f f f f f	kg grZ/m m² grZ/m grZ/m	 4.8 4.7 1.8 9.8 23.0	 5.59 31.4 7.38 4.46 1.57	267.5 26.8 147.6 13.3 43.7 36.1	 8510-72 103-76 3262-75 3262-75 3262-75
10	paraniti		m²	4			481-80
11	betoni		m³	22.9	2400	54960.0	m-200
12	zeTovani saRebavi		kg	79.4	1	79.4	
13	furclovani foladi damxSobisTvis	f	m²	0.02	31.4	0.7	103-76
14	polietilenis quro d=90 d=63 d=40 d=32 d=20	pol. pol. pol. pol. pol.	c c c c c	6 4 12 1 18	0.65 2.00 0.09 0.08 0.03	3.9 8.0 1.1 0.1 0.5	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
15	poliet-is unagira sarini d1-d2=90-63 d1-d2=90-40 d1-d2=90-32 d1-d2=90-20 d1-d2=63-20 d1-d2=40-20	pol. pol. pol. pol. pol. pol.	c c c c c c	1 2 1 6 1 10	1.49 1.01 1.00 0.98 0.56 0.29	1.49 2.02 1.00 5.88 0.6 2.9	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
16	polietilenis samkapi d=63 d=32	pol. pol.	c c	1 1	0.571 0.131	0.6 0.1	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
17	polietilenis gadamyvani d1-d2=63-40 d1-d2=40-20 d1-d2=32-20	pol. pol. pol.	c c c	2 1 2	0.246 0.04 0.049	0.5 0.0 0.1	SDR11-PE100-EF-10BAR SDR11-PE100-SPIGOT-10BAR SDR11-PE100-EF-10BAR
18	poliet-is foladis milze gadamyvani d1-d2=90-3" d1-d2=63-2" d1-d2=40-1 1/4"	p/f. p/f. p/f.	c c c	2 2 2	4.5 2.4 1.3	9.0 4.8 2.6	SPIGOT SPIGOT SPIGOT
19	polietilenis muxlebi d=90-90° d=63-90° d=40-90°	pol. pol. pol.	c c c	2 2 2	1.11 0.5 0.18	2.2 1.0 0.4	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
20	polietilenis damxSobi d=40	pol.	c	3	0.12	0.4	SDR11-PE100-EF-10BAR
21	polietilenis mimaniSnebeli lenta	pol.	grZ/m	1533.2		0.0	
22	gazis wnevis regulatorebi:						

	ASR-6 ASR-10	f.	c.	33 1	3.0 3.2	99.0 3.2	ASR-6 (6m³/sT) ASR-10(10m³/sT)
23	polietilenis garmis mili d=40	pol.	grZ/m	50.0	0.295	14.8	PN8-SDR21-PE80
24	gamomrtv. onkani (burtul.kompl.) DN20	f.	c	20	0.20	4.0	TS EN 331
25	burtulovani gamomrtveli onkani NDN20	f.	c	14	0.28	3.9	PN16(FAF4000)
26	d=20mm fol-is gazs-is naxevarxraxni(gare)	f.	c.	14	0.2	2.8	d=20, L=10sm.
27	fol-is damxSobi gare xraxniT d=20	f.	c	34	0.05	1.7	d=20
28	regulatoris damcavi yuTi	pl.s.	c.	34	2.2	74.8	ASR-s-2200
29	furclovani foladi sisqit 3mm regula- toris yuTis sayrdenebis mosawyobad	f.	m²	3.4	23.5	79.9	103-76
30	foladis WanWiki qanCiT Φ12	f.	c	136	0.11	15.0	Φ12
31	qviSa	qv.	m³	266.5	1500	399750.0	8736-67
32	xreSi	xr.	m³	153.3	1900	291270.0	8267-75

ubani 3.							
s p e c i f i k a c i a							
№	d a s a x e l e b a	masala	ganz.	raod.	wona kg-Si		marka "g.o.s.t."
					erT.	saerTo	
1	foladis swornakeriani elektro SenaduRi mili uizolaci od d=76*3.5 d=40*3.0 d=20*2.8(gaz Semyvanebi)	f	grZ/m	2.0	6.26	12.5	10704-76
		f	grZ/m	219.7	2.74	602.0	10704-76
		f	grZ/m	12.4	1.66	20.6	10704-76
				234.1			
	su l						
2	polietilenis mili d=90 d=63 d=40 d=32 d=20 d=20(gaz Semyvanebi)	pol.	grZ/m	600.8	1.45	871.2	PE80-SDR17
		pol.	grZ/m	400.0	0.71	284.0	PE80-SDR17
		pol.	grZ/m	552.9	0.295	163.1	PE80-SDR17
		pol.	grZ/m	135.0	0.27	36.5	PE80-SDR11
		pol.	grZ/m	156.6	0.162	25.4	PE80-SDR11
		pol.	grZ/m	119.0	0.162	19.3	PE80-SDR11
	su l			1964.3			
	su l			2198.4			
3	foladis mili sayrdenebisTvis d=80 d=50 d=50(regulatoris sayrdenebisTvis)	f	grZ/m	28.2	7.38	208.1	10704-76
		f	grZ/m	123.3	4.46	549.9	10704-76
		f	grZ/m	68.3	4.46	304.6	10704-76
4	foladis garmis mili d=150 d=100	f	grZ/m	1.0	17.81	17.8	10704-76
		f	grZ/m	3.0	10.85	32.6	10704-76
5	foladis muxlebi d=40-90° d=40-45° d=20-90°	f	c	16	0.4	6.4	17375-77
		f	c	15	0.2	3.0	17375-77
		f	c	15	0.1	1.5	17375-77
6	foladis gadamyvanebi 40*32	f	c	3	0.3	0.9	
7	foladis mil tuCebi urdulebisTvis D=80	T.	c.	1	3.2	3.2	DN80(PN16)
8	dasamagrebeli deta lebi sayrdenebisTvis (43cl.) maT Soris: kuTxovani rkina 75*50*5 furclovani foladi 4mm sisqis foladis mili d=50 zolovani foladi- 50*4	f	kg			79.1	
		f	grZ/m	2.4	5.59	13.4	8510-72
		f	m²	1.4	31.4	44.0	103-76
		f	grZ/m	2.9	4.46	12.9	3262-75
		f	grZ/m	5.6	1.57	8.8	3262-75
9	paraniti		m²	1.0			481-80
10	betoni	b.	m³	10.0	2400	24000.0	m-200
11	zeTovani saRebavi		kg	23.8	1	23.8	
12	furclovani foladi damxSobisTvis	f	m²	0.01	31.4	0.3	103-76
13	polietilenis quro d=90 d=63	pol.	c	7	0.65	4.6	SDR11-PE100-EF-10BAR
		pol.	c	4	2.00	8.0	SDR11-PE100-EF-10BAR

	d=40	po l.	c	10	0.09	0.9	SDR11-PE100-EF-10BAR
	d=32	po l.	c	2	0.08	0.2	SDR11-PE100-EF-10BAR
	d=20	po l.	c	31	0.03	0.9	SDR11-PE100-EF-10BAR
14	pol i eT-is unagira sarini						
	d1-d2=90-40	po l.	c	1	1.01	1.01	SDR11-PE100-EF-10BAR
	d1-d2=90-32	po l.	c	2	1.00	2.00	SDR11-PE100-EF-10BAR
	d1-d2=90-20	po l.	c	12	0.98	11.76	SDR11-PE100-EF-10BAR
	d1-d2=63-20	po l.	c	9	0.56	5.0	SDR11-PE100-EF-10BAR
	d1-d2=40-20	po l.	c	10	0.29	2.9	SDR11-PE100-EF-10BAR
15	pol i eTilenis samkapi						
	d=40	po l.	c	1	0.168	0.2	SDR11-PE100-EF-10BAR
	d=32	po l.	c	1	0.131	0.1	SDR11-PE100-EF-10BAR
16	pol i eTilenis gadamyvani						
	d1-d2=90-63	po l.	c	1	0.588	0.6	SDR11-PE100-EF-10BAR
	d1-d2=63-40	po l.	c	1	0.246	0.2	SDR11-PE100-EF-10BAR
	d1-d2=32-20	po l.	c	3	0.049	0.1	SDR11-PE100-EF-10BAR
17	pol i eT-is foladis mi l ze gadamyvani						
	d1-d2=90-3"	p/f.	c	1	4.5	4.5	SPIGOT
	d1-d2=40-1 1/4"	p/f.	c	3	1.3	3.9	SPIGOT
18	pol i eTilenis mux lebi						
	d=90-90°	po l.	c	1	1.11	1.1	SDR11-PE100-EF-10BAR
	d=40-90°	po l.	c	3	0.18	0.5	SDR11-PE100-EF-10BAR
19	pol i eTilenis damxSobi						
	d=40	po l.	c	2	0.12	0.2	SDR11-PE100-EF-10BAR
20	pol i eTilenis mimaniSnebel i lenta	po l.	gr Z/m	1896.3		0.0	
21	gazis wnevis regulatorebi:						
	ASR-6	f.	c.	39	3.0	117.0	ASR-6 (6m³/sT)
22	pol i eTilenis garcmis mili d=40	po l.	gr Z/m	85.0	0.295	25.1	PN8-SDR21-PE80
23	gamomrTv. onkani (burTu l.kompl.) DN20	f.	c	34	0.20	6.8	TS EN 331
24	burTu lovani gamomrTveli Onkani NDN20	f.	c	5	0.28	1.4	PN16(FAF4000)
25	d=20mm fol-is gazs-is naxevarxraxni(gare)	f.	c.	5	0.2	1.0	d=20, L=10sm.
26	fol-is damxSobi gare xraxniT d=20	f.	c	39	0.05	2.0	d=20
27	regulatoris damcavi yuTi	p l s.	c.	39	2.2	85.8	ASR-s-2200
28	furclovani foladi sisqit 3mm regula- toris yuTis sayrdenebis mosawyobad	f.	m²	3.9	23.5	91.7	103-76
29	foladis WanWiki qanCiT Φ12	f.	c	156	0.11	17.2	Φ12
30	qviSa	qv.	m³	333.5	1500	500250.0	8736-67
31	xreSi	xr.	m³	189.6	1900	360240.0	8267-75

mkvebavi gazsadeni.							
s p e c i f i k a c i a							
№	d a s a x e l e b a	masa la	ganz.	raod.	wona kg-Si		marka "g.o.s.t."
					er T.	saer To	
1	foladis swornakeriani eleqtro SenaduRi mili uizolaci od d=89*3.5	f	gr Z/m	11.3	7.38	83.4	10704-76
	su l			11.3			
2	pol i eTilenis mili						
	d=90	po l.	gr Z/m	2129.0	1.45	3087.1	PE80-SDR17
	d=40	po l.	gr Z/m	100.0	0.295	29.5	PE80-SDR17
	d=20	po l.	gr Z/m	17.3	0.162	2.8	PE80-SDR11
	d=20(gaz Semyvanebi)	po l.	gr Z/m	7.0	0.162	1.1	PE80-SDR11
	su l			2253.3			
	su l			2264.6			
3	foladis mili sayrdenebisTvis						
	d=70	f	gr Z/m	5.4	6.26	33.8	10704-76
	d=50(regulatorebis sayrdenebisTvis)	f	gr Z/m	3.4	4.46	15.2	10704-76
4	foladis garcmis mili						
	d=150	f	gr Z/m	3.0	17.81	53.4	10704-76
5	foladis mux lebi						
	d=80-90°	f	c	1	1.6	1.6	17375-77
6	foladis gadamyvanebi						
	80*70	f	c	1	1.2	1.2	

7	dasamagrebeli deta lebi sayrdenebisaTvis (2cl.) maT Soris: furclovani foladi 4mm sisqis foladis mili d=80 zolvani foladi- 50*4	f f f f	kg m ² grZ/m grZ/m	0.1 0.2 0.4	31.4 7.38 1.57	5.2 3.1 1.5 0.6	103-76 3262-75 3262-75
8	paraniti		m ²	0.1			481-80
9	betoni	b.	m ³	0.4	2400	960.0	m-200
10	zeTovani saRebavi		kg	1.5	1	1.5	
11	polieTilenis quro d=90 d=40 d=20	pol. pol. pol.	c c c	25 3 2	0.65 0.09 0.03	16.3 0.3 0.1	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
12	polieT-is unagira sarini d1-d2=90-40 d1-d2=40-20	pol. pol.	c c	1 1	1.01 0.29	1.01 0.3	SDR11-PE100-EF-10BAR SDR11-PE100-EF-10BAR
13	polieTilenis gadamyvani d1-d2=40-20	pol.	c	1	0.04	0.0	SDR11-PE100-SPIGOT-10BAR
14	polieT-is foladis mil ze gadamyvani d1-d2=90-3"	p/f.	c	1	4.5	4.5	SPIGOT
15	polieTilenis muxlebi d=90-90°	pol.	c	1	1.11	1.1	SDR11-PE100-EF-10BAR
16	polieTilenis mimaniSnebeli lenta	pol.	grZ/m	2249.1		0.0	
17	gazis wnevis regulatorebi: ASR-6	f.	c.	2	3.0	6.0	ASR-6 (6m³/sT)
18	polieTilenis garcmis mili d=40	pol.	grZ/m	5.0	0.295	1.5	PN8-SDR21-PE80
19	gamomrTv. onkani (burTul.kompl.) DN20	f.	c	2	0.20	0.4	TS EN 331
20	fol-is damxSobi gare xraxniT d=20	f.	c	2	0.05	0.1	d=20
21	regulatoris damcavi yuTi	p/s.	c.	2	2.2	4.4	ASR-s-2200
22	furclovani foladi sisqit 3mm regula- toris yuTis sayrdenebis mosawyobad	f.	m ²	0.2	23.5	4.7	103-76
23	foladis WanWiki qanCiT Φ12	f.	c	8	0.11	0.9	Φ12
24	qviSa	qv.	m ³	421.7	1500	632550.0	8736-67
25	xreSi	xr.	m ³	72.3	1900	137370.0	8267-75