

KİRİŞ VE KOLON KAPASİTELERİNE GÖRE YAPI GÖÇME YÜKÜ

KOLON TABAN KAPASİTE MOMENTLERİ TOPLAMI : Mrx=4226.23 (tm) Mry=4018.08 (tm)

KOLONLARA BAĞLI KİRİŞ KAPASİTE MOMENTLERİ TOPLAMI : Mrx=1081.98 (tm) Mry=871.47 (tm)

 $\sum Mc < \sum Mb > Mb = Mc$ KİRİŞ KAPASİTE MOMENTLERİ TOPLAMI : Mrx=1081.98 (tm) Mry=960.05 (tm)

X YÖNÜ GÖÇME KAPASİTESİ : Px=252.43 x (4226.23 + 1081.98) / 2869.62 = 466.95 (t)

Y YÖNÜ GÖÇME KAPASİTESİ : Py=253.79 x (4018.08 + 960.05) / 2894.44 = 436.48 (t)

ZAYIF KAT GÖÇME KAPASİTESİ: Px=2817.48 (t), Py=4262.77 (t)

Güçlendirme Projesi: E1: Yeni donatılar, E2-E9: Mevcut donatılara göre kapasite kontrol

Vtx= λ .Ao.I.S(t).W=858.27 (t) ($\lambda=0.85$)Vty= λ .Ao.I.S(t).W=862.87 (t) ($\lambda=0.85$)

Kat no	X YÖNÜ			Y YÖNÜ		
	Kolon $\sum Mc$	Kiriş (Mci \geq Mbi) $\sum Mbi$	Kapasite Vr	Kolon $\sum Mc$	Kiriş (Mci \geq Mbi) $\sum Mbi$	Kapasite Vr
5	1023.52	164.40	395.97	1817.38	117.28	644.89
4	1095.78	391.73	309.96	1918.06	292.03	460.31
3	1152.22	620.24	263.36	1984.48	477.62	365.24
2	4102.55	878.73	563.67	3790.66	740.52	511.49
1	4226.23	1081.98	466.95	4018.08	960.05	436.48

(Mci \geq Mbi) >> $\sum Mbi$ Kiriş Plastik Mafsallık Kontrolü**MEVCUT ve GÜÇLENDİRİLMİŞ DURUMDAKİ GÖÇME YÜKÜ MUKAYESE TABLOSU**

Kat no	X YÖNÜ			Y YÖNÜ		
	Deprem yükü Ve	Mevcut Yapı Vr	Güçlendirilmiş Yapı Vr	Deprem yükü Ve	Mevcut Yapı Vr	Güçlendirilmiş Yapı Vr
5	96.57	107.89 ✓	395.97 ✓	97.91	94.25 ✗	644.89 ✓
4	161.07	120.74 ✗	309.96 ✓	163.06	100.85 ✗	460.31 ✓
3	207.10	124.02 ✗	263.36 ✓	209.27	103.99 ✗	365.24 ✓
2	238.75	126.45 ✗	563.67 ✓	240.79	106.25 ✗	511.49 ✓
1	252.16	121.64 ✗	466.95 ✓	253.83	103.03 ✗	436.48 ✓

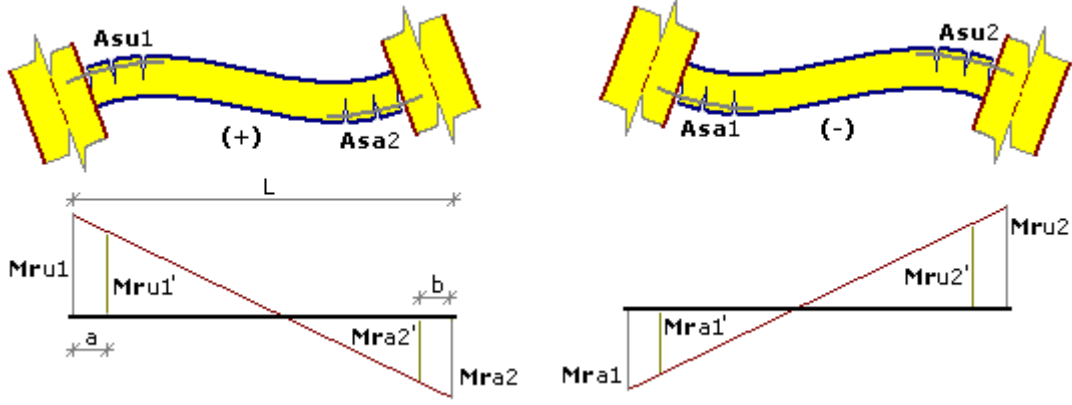
GÜÇLENDİRME PROJESİ: MEVCUT DONATILARA GÖRE KOLONLARIN KAPASİTE TABLOSU

KOLON min. BOYUNA DONATI ORANI : 0.01

DONATI KOROZYON ORANI % : 0

KOLON NO	BOYUT	KOLON DONATISI	As cm ²	-X		+X		-Y		+Y	
				Nd	Mr	Nd	Mr	Nd	Mr	Nd	Mr
S401	25x50	2x4ø14+2x1ø14 g.	15.39	11.21	4.15	8.32	3.89	10.97	9.12	7.67	8.45
S301	25x50	2x4ø14+2x1ø14 g.	15.39	22.98	4.87	16.46	4.56	22.53	11.28	15.37	10.01
S201	25x50	2x4ø14+2x1ø14 g.	15.39	34.66	5.41	24.48	4.94	34.74	12.61	22.29	11.25
S101	25x50	2x4ø14+2x1ø14 g.	15.39	46.26	5.68	32.14	5.30	46.20	13.13	29.67	12.10
SZ01	25x60	2x3ø14+2x2ø14 g.	15.39	58.20	6.82	40.13	6.30	58.00	17.02	37.21	15.23
S402	25x50	2x4ø14+2x1ø14 g.	15.39	9.20	3.97	8.83	3.93	12.83	9.50	8.57	8.63
S302	25x50	2x4ø14+2x1ø14 g.	15.39	19.55	4.70	16.91	4.58	26.25	11.71	16.30	10.20
S202	25x50	2x4ø14+2x1ø14 g.	15.39	30.05	5.20	25.13	4.97	39.80	12.84	23.93	11.44
S102	25x60	2x3ø14+2x2ø14 g.	15.39	41.20	6.36	33.89	5.96	53.83	16.71	31.61	14.53
SZ02	25x60	2x3ø14+2x2ø14 g.	15.39	52.22	6.68	42.53	6.43	67.60	17.38	39.28	15.48
S403	50x25	2x4ø14+2x1ø14 g.	15.39	7.88	8.49	5.07	7.92	6.56	3.73	6.56	3.73
S303	50x25	2x4ø14+2x1ø14 g.	15.39	14.53	9.84	11.17	9.16	13.29	4.35	13.29	4.35
S203	50x25	2x4ø14+2x1ø14 g.	15.39	21.18	11.12	17.34	10.41	19.91	4.72	19.91	4.72
S103	50x25	2x4ø14+2x1ø14 g.	15.39	27.46	11.85	23.51	11.39	26.44	5.03	26.44	5.03
SZ03	60x25	2x3ø14+2x2ø14 g.	15.39	35.11	14.96	31.60	14.53	37.35	6.15	33.04	5.92
S404	25x50	2x4ø14+2x1ø14 g.	15.39	5.06	3.59	5.06	3.59	1.05	7.10	0.07	6.90
S304	25x50	2x4ø14+2x1ø14 g.	15.39	9.68	4.01	9.68	4.01	3.19	7.54	-1.02	6.68
S204	25x50	2x4ø14+2x1ø14 g.	15.39	16.81	4.57	16.81	4.57	8.91	8.70	1.30	7.15
S104	25x60	2x3ø14+2x2ø14 g.	15.39	2.38	3.33	2.38	3.33	-5.90	6.87	-16.18	4.34
SZ04	25x60	2x3ø14+2x2ø14 g.	15.39	4.76	3.55	4.76	3.55	-3.56	7.44	-16.77	4.20
S405	50x25	2x4ø14+2x1ø14 g.	15.39	6.76	8.26	1.98	7.29	7.82	3.84	0.11	3.13
S305	50x25	2x4ø14+2x1ø14 g.	15.39	14.31	9.80	4.75	7.85	17.89	4.62	-1.86	2.95
S205	50x25	2x4ø14+2x1ø14 g.	15.39	24.94	11.56	10.61	9.04	29.96	5.20	0.66	3.18
S105	50x30	2x4ø14+2x1ø14 g.	15.39	11.52	9.20	-7.58	5.33	19.00	6.05	-21.43	1.42
SZ05	60x30	2x4ø14+2x2ø14 g.	18.46	15.46	13.81	-7.93	8.05	21.46	7.10	-26.58	1.61
S406	50x25	2x4ø14+2x1ø14 g.	15.39	15.45	10.03	10.63	9.05	11.74	4.20	12.73	4.29
S306	50x25	2x4ø14+2x1ø14 g.	15.39	30.74	12.23	20.23	11.00	24.96	4.96	24.79	4.95
S206	50x25	2x4ø14+2x1ø14 g.	15.39	46.25	13.14	30.07	12.15	37.27	5.47	37.52	5.47
S106	60x30	2x4ø14+2x2ø14 g.	18.46	62.54	20.38	40.51	18.15	51.60	9.20	50.08	9.11
SZ06	60x30	2x4ø14+2x2ø14 g.	18.46	78.37	21.37	50.51	19.42	65.82	9.66	62.70	9.56
S407	50x25	2x4ø14+2x1ø14 g.	15.39	11.09	9.14	10.42	9.01	14.79	4.48	17.03	4.58
S307	50x25	2x4ø14+2x1ø14 g.	15.39	23.66	11.41	21.34	11.14	28.30	5.12	33.26	5.35
S207	50x25	2x4ø14+2x1ø14 g.	15.39	36.62	12.70	32.64	12.45	41.95	5.58	49.64	5.75
S107	60x30	2x4ø14+2x2ø14 g.	18.46	51.56	19.54	46.15	18.87	55.43	9.33	65.70	9.66
SZ07	60x30	2x4ø14+2x2ø14 g.	18.46	66.21	20.66	59.22	20.13	68.57	9.75	81.03	10.04
S408	25x50	2x4ø14+2x1ø14 g.	15.39	2.00	3.30	7.49	3.81	0.71	7.03	8.42	8.60
S308	25x50	2x4ø14+2x1ø14 g.	15.39	3.79	3.47	16.62	4.56	1.46	7.18	21.21	11.12
S208	25x50	2x4ø14+2x1ø14 g.	15.39	12.98	4.32	33.14	5.35	10.39	9.00	39.70	12.84

KOLON NO	BOYUT	KOLON DONATISI	As cm ²	-X		+X		-Y		+Y	
				Nd	Mr	Nd	Mr	Nd	Mr	Nd	Mr
SZ24	60x30	2x4ø14+2x2ø14 g.	18.46	88.13	21.42	62.29	20.36	72.44	9.88	67.71	9.72
S425	25x50	2x4ø14+2x1ø14 g.	15.39	4.42	3.53	7.26	3.79	4.04	7.71	7.03	8.32
S325	25x50	2x4ø14+2x1ø14 g.	15.39	8.23	3.88	15.16	4.49	7.95	8.50	14.99	9.94
SZ25	30x60	2x4ø14+2x2ø14 g.	18.46	12.52	6.08	23.55	7.34	12.11	12.99	23.43	15.77
S125	30x60	2x4ø14+2x2ø14 g.	18.46	16.64	6.55	32.08	8.01	16.20	13.99	31.82	17.05
SZ25	30x60	2x4ø14+2x2ø14 g.	18.46	20.69	7.01	40.26	8.51	20.12	14.96	40.05	18.10
S426	25x50	2x4ø14+2x1ø14 g.	15.39	11.78	4.21	10.71	4.11	8.91	8.70	13.10	9.55
S326	25x50	2x4ø14+2x1ø14 g.	15.39	23.69	4.90	22.34	4.84	16.74	10.29	27.05	11.80
SZ26	25x50	2x4ø14+2x1ø14 g.	15.39	35.26	5.42	33.71	5.38	23.64	11.40	41.43	12.92
S126	25x60	2x3ø14+2x2ø14 g.	15.39	47.46	6.57	45.41	6.53	31.10	14.46	56.85	16.93
SZ26	30x60	2x4ø14+2x2ø14 g.	18.46	59.41	9.46	57.12	9.38	38.85	17.94	72.22	21.12
S427	25x40	2x2ø14+2x2ø14 g.	12.31	4.88	5.19	4.64	5.16	4.01	8.45	4.01	8.45
S327	25x40	2x2ø14+2x2ø14 g.	12.31	16.49	6.25	10.05	5.66	8.27	9.09	8.27	9.09
SZ27	25x40	2x3ø14+2x1ø14 g.	12.31	34.12	7.56	21.53	6.78	17.53	10.96	17.53	10.96
S127	25x40	2x4ø14+2x1ø14 g.	15.39	82.65	9.76	62.39	9.32	56.41	17.10	56.41	17.10
SZ27	25x40	2x3ø14+2x1ø14 g.	12.31	59.33	8.81	29.75	7.35	28.51	12.70	28.51	12.70
S428	25x40	2x2ø14+2x2ø14 g.	12.31	4.71	5.17	4.58	5.16	3.95	8.44	3.95	8.44
S328	25x40	2x2ø14+2x2ø14 g.	12.31	10.32	5.69	15.86	6.19	8.18	9.08	8.18	9.08
SZ28	25x40	2x2ø14+2x2ø14 g.	12.31	22.01	6.76	33.20	7.78	17.36	10.47	17.36	10.47
S128	25x40	2x4ø14+2x1ø14 g.	15.39	63.10	9.34	81.46	9.74	56.32	17.09	56.32	17.09
SZ28	25x40	2x3ø14+2x1ø14 g.	12.31	30.83	7.40	57.99	8.75	28.54	12.71	28.54	12.71
S129	Polygon	12ø14+13ø16	44.59	54.97	33.84	54.97	33.84	54.97	85.42	54.97	85.42
SZ29	Polygon	14ø14+9ø16	39.63	36.47	30.16	36.47	30.16	36.47	75.41	36.47	75.41
S130	Polygon	17ø14+10ø16	46.25	63.21	68.70	63.21	68.70	63.21	57.80	63.21	57.80
SZ30	Polygon	23ø14	35.39	47.15	50.53	47.15	50.53	47.15	45.99	47.15	45.99
S131	Polygon	17ø14+10ø16	46.25	62.83	75.06	62.83	75.06	62.83	56.54	62.83	56.54
SZ31	Polygon	23ø14	35.39	46.89	56.91	46.89	56.91	46.89	46.05	46.89	46.05
S132	Polygon	12ø14+13ø16	44.59	55.43	30.47	55.43	30.47	55.43	87.63	55.43	87.63
SZ32	Polygon	15ø14+8ø16	39.16	36.86	25.15	36.86	25.15	36.86	65.16	36.86	65.16
S133	Polygon	17ø14+10ø16	46.25	78.23	61.17	78.23	61.17	78.23	78.44	78.23	78.44
SZ33	Polygon	23ø14	35.39	53.76	47.54	53.76	47.54	53.76	58.35	53.76	58.35
S134	Polygon	17ø14+10ø16	46.25	78.54	61.24	78.54	61.24	78.54	78.50	78.54	78.50
SZ34	Polygon	23ø14	35.39	53.82	47.56	53.82	47.56	53.82	58.36	53.82	58.36
PZ03	234x20	2x8ø12 g.	18.09	635.00	1637.52	798.14	1972.50	635.00	185.61	798.14	110.40
PZ19	20x370	2x17ø12 g.	38.43	971.86	20.54	144.64	20.54	971.86	2712.23	144.64	1519.36
PZ24	234x20	2x8ø12 g.	18.09	798.33	1972.69	635.19	1637.72	798.33	105.60	635.19	184.44
PZ40	20x370	2x17ø12 g.	38.43	971.98	20.64	144.76	20.64	971.98	2712.40	144.76	1519.52
P103	244x20	2x11ø12 g.	24.87	575.57	1630.06	694.57	1864.13	575.57	182.67	694.57	105.77
P119	20x370	2x17ø12 g.	38.43	882.49	14.48	55.27	14.48	882.49	2586.44	55.27	1393.56
P124	234x20	2x10ø12 g.	22.61	731.94	1930.24	568.80	1595.27	731.94	102.22	568.80	181.05
P140	20x370	2x17ø12 g.	38.43	858.03	14.48	49.10	14.48	858.03	2479.60	49.10	1352.51
P203	244x20	2x11ø12 g.	24.87	184.53	434.86	184.53	450.80	184.53	38.51	184.53	23.21
P219	20x375	2x17ø12 g.	38.43	158.02	18.75	304.57	18.75	158.02	839.31	304.57	1009.31
P224	244x20	2x11ø12 g.	24.87	184.87	451.09	184.87	435.16	184.87	22.47	184.87	38.40
P240	20x375	2x17ø12 g.	38.43	158.06	18.75	304.60	18.75	158.06	839.35	304.60	1009.35
P303	244x20	2x11ø12 g.	24.87	170.03	422.04	170.03	437.97	170.03	37.56	170.03	22.26
P319	20x375	2x17ø12 g.	38.43	147.33	17.92	293.87	17.92	147.33	824.31	293.87	994.31
P324	244x20	2x11ø12 g.	24.87	170.25	438.15	170.25	422.22	170.25	21.45	170.25	37.39
P340	20x375	2x17ø12 g.	38.43	147.38	18.03	293.92	18.03	147.38	824.39	293.92	994.39
P403	244x20	2x11ø12 g.	24.87	149.14	402.60	149.14	418.54	149.14	36.13	149.14	20.83
P419	20x375	2x17ø12 g.	38.43	123.33	16.30	269.88	16.30	123.33	789.44	269.88	959.44
P424	244x20	2x11ø12 g.	24.87	149.24	418.70	149.24	402.76	149.24	20.02	149.24	35.96
P440	20x375	2x17ø12 g.	38.43	123.36	16.30	269.90	16.30	123.36	789.44	269.90	959.44

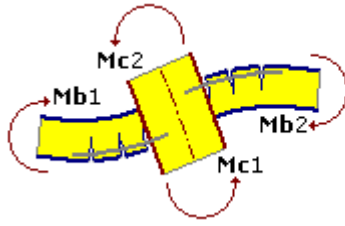


KİRİŞLERİN KAPASİTE TABLOSU

Vlim = 0.22 Aw fcd

KİRİŞ NO	Bw D	Ln	a b	Sol Sag	Asu (cm ²)	Asa (cm ²)	Mra'	Mru'	Mg+Mq	Mra	Mru	Vd	Vr
KZ01	20	4.000	0.000	Sol	3.80	3.08	3.31	4.01 >	1.51 ✓	3.31	4.01	4.97 <	14.32 ✓
	50	0.000	0.000	Sag	4.93	3.08	3.31	5.16 >	-1.08 ✓	3.31	5.16	3.38 <	14.32 ✓
KZ02	20	2.975	0.000	Sol	4.93	4.62	4.84	5.16 >	1.47 ✓	4.84	5.16	5.01 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	4.62	4.84	4.01 >	-1.24 ✓	4.84	4.01	5.05 <	14.32 ✓
KZ04	20	3.600	0.000	Sol	5.40	4.62	4.88	5.63 >	3.41 ✓	4.88	5.63	7.18 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	4.62	4.88	5.63 >	2.79 ✓	4.88	5.63	5.45 <	14.32 ✓
KZ05	20	3.050	0.000	Sol	5.40	6.03	6.27	5.63 >	-2.77 ✓	6.27	5.63	6.29 <	14.32 ✓
	50	0.000	0.000	Sag	4.27	6.03	6.27	4.49 >	-3.96 ✓	6.27	4.49	8.47 <	14.32 ✓
KZ06	20	3.605	0.000	Sol	5.40	4.62	4.84	5.63 >	3.67 ✓	4.84	5.63	7.04 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	4.62	4.84	5.63 >	-2.35 ✓	4.84	5.63	6.31 <	14.32 ✓
KZ07	20	3.000	0.000	Sol	12.57	6.28	6.52	12.80 >	-3.99 ✓	6.52	12.80	11.10 <	17.25 ✓
	50	0.000	0.000	Sag	18.85	6.28	6.52	18.31 >	0.02 ✓	6.52	18.31	9.21 <	17.25 ✓
KZ07	20	1.500	0.000	Sol	18.85	6.28	6.52	18.31 >	2.68 ✓	6.52	18.31	17.13 <	17.25 ✓
	50	0.000	0.000	Sag	18.85	6.28	6.52	18.31 >	-2.68 ✓	6.52	18.31	17.12 <	17.25 ✓
KZ08	20	3.900	0.000	Sol	3.80	3.08	3.28	4.01 >	1.59 ✓	3.28	4.01	4.49 <	14.32 ✓
	50	0.000	0.000	Sag	5.34	3.08	3.28	5.57 >	-2.51 ✓	3.28	5.57	4.98 <	14.32 ✓
KZ09	20	4.550	0.000	Sol	5.34	3.08	3.28	5.57 >	2.12 ✓	3.28	5.57	4.45 <	14.32 ✓
	50	0.000	0.000	Sag	5.34	3.08	3.28	5.57 >	-2.36 ✓	3.28	5.57	4.51 <	14.32 ✓
KZ10	20	5.850	0.000	Sol	9.36	3.08	3.31	9.56 >	7.06 ✓	3.31	9.56	7.98 <	14.32 ✓
	50	0.000	0.000	Sag	8.48	3.08	3.31	8.71 >	-1.01 ✓	3.31	8.71	3.35 <	14.32 ✓
KZ11	20	3.005	0.000	Sol	8.48	2.26	2.45	8.67 >	2.04 ✓	2.45	8.67	5.58 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	2.26	2.45	4.01 >	-2.38 ✓	2.45	4.01	6.21 <	14.32 ✓
KZ12	20	3.745	0.000	Sol	3.80	3.08	3.28	4.01 >	1.07 ✓	3.28	4.01	4.22 <	14.32 ✓
	50	0.000	0.000	Sag	5.34	3.08	3.28	5.57 >	-1.01 ✓	3.28	5.57	3.51 <	14.32 ✓
KZ13	20	3.595	0.000	Sol	5.40	4.62	4.88	5.63 >	2.07 ✓	4.88	5.63	6.78 <	14.32 ✓
	50	0.000	0.000	Sag	6.28	4.62	4.88	6.52 >	-0.05 ✓	4.88	6.52	3.97 <	14.32 ✓
KZ14	20	2.250	0.000	Sol	6.28	4.62	4.88	6.52 >	2.70 ✓	4.88	6.52	8.17 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	4.62	4.88	4.01 >	-2.76 ✓	4.88	4.01	8.41 <	14.32 ✓
KZ15	20	3.000	0.000	Sol	3.80	4.62	4.84	4.01 >	0.53 ✓	4.84	4.01	5.72 <	19.77 ✓
	50	0.000	0.000	Sag	6.54	4.62	4.84	6.78 >	3.10 ✓	4.84	6.78	8.12 <	19.77 ✓
KZ16	20	3.455	0.000	Sol	6.54	6.28	6.52	6.78 >	-2.56 ✓	6.52	6.78	4.11 <	14.32 ✓
	50	0.000	0.000	Sag	7.42	6.28	6.52	7.67 >	-2.76 ✓	6.52	7.67	7.45 <	14.32 ✓
KZ17	20	4.030	0.000	Sol	4.62	3.08	3.28	4.84 >	1.36 ✓	3.28	4.84	6.08 <	14.32 ✓
	50	0.000	0.000	Sag	5.75	3.08	3.28	5.98 >	-0.16 ✓	3.28	5.98	3.31 <	14.32 ✓
KZ18	20	1.945	0.000	Sol	5.75	2.26	2.45	5.98 >	1.46 ✓	2.45	5.98	10.20 <	14.32 ✓
	50	0.000	0.000	Sag	12.51	2.26	2.45	12.31 >	7.56 ✓	2.45	12.31	55.23 >	14.32 ✗
KZ21	20	2.255	0.000	Sol	3.80	4.62	4.84	4.01 >	1.05 ✓	4.84	4.01	6.27 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	4.62	4.84	5.63 >	-1.31 ✓	4.84	5.63	6.55 <	14.32 ✓
KZ22	20	4.000	0.000	Sol	4.93	3.08	3.31	5.16 >	2.35 ✓	3.31	5.16	5.33 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	3.08	3.31	4.01 >	-1.49 ✓	3.31	4.01	3.78 <	14.32 ✓
KZ23	20	2.975	0.000	Sol	3.80	4.62	4.84	4.01 >	1.05 ✓	4.84	4.01	4.60 <	14.32 ✓
	50	0.000	0.000	Sag	4.93	4.62	4.84	5.16 >	-1.60 ✓	4.84	5.16	6.24 <	14.32 ✓
KZ25	20	3.600	0.000	Sol	5.40	4.62	4.88	5.63 >	4.35 ✓	4.88	5.63	7.82 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	4.62	4.88	5.63 >	-3.02 ✓	4.88	5.63	7.53 <	14.32 ✓
KZ26	20	2.900	0.000	Sol	3.80	6.03	6.27	4.01 >	-2.76 ✓	6.27	4.01	6.71 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	6.03	6.27	5.63 >	-2.58 ✓	6.27	5.63	8.03 <	14.32 ✓
KZ27	20	3.605	0.000	Sol	5.40	4.62	4.84	5.63 >	2.39 ✓	4.84	5.63	6.35 <	14.32 ✓
	50	0.000	0.000	Sag	5.40	4.62	4.84	5.63 >	-3.56 ✓	4.84	5.63	7.01 <	14.32 ✓
KZ28	20	1.500	0.000	Sol	18.85	6.28	6.52	18.31 >	-0.02 ✓	6.52	18.31	15.10 <	17.25 ✓
	50	0.000	0.000	Sag	18.85	6.28	6.52	18.31 >	3.98 ✓	6.52	18.31	16.99 <	17.25 ✓
KZ28	20	2.900	0.000	Sol	18.85	6.28	6.52	18.31 >	-3.96 ✓	6.52	18.31	10.67 <	17.25 ✓
	50	0.000	0.000	Sag	12.57	6.28	6.52	12.80 >	-2.68 ✓	6.52	12.80	11.52 <	17.25 ✓
KZ29	20	3.900	0.000	Sol	5.34	3.08	3.28	5.57 >	1.74 ✓	3.28	5.57	4.63 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	3.08	3.28	4.01 >	-2.36 ✓	3.28	4.01	4.83 <	14.32 ✓
KZ30	20	4.550	0.000	Sol	5.34	3.08	3.28	5.57 >	2.47 ✓	3.28	5.57	4.60 <	14.32 ✓
	50	0.000	0.000	Sag	5.34	3.08	3.28	5.57 >	-1.57 ✓	3.28	5.57	4.21 <	14.32 ✓
KZ31	20	5.850	0.000	Sol	9.36	3.08	3.31	9.56 >	6.85 ✓	3.31	9.56	7.95 <	14.32 ✓
	50	0.000	0.000	Sag	8.48	3.08	3.31	8.71 >	-0.91 ✓	3.31	8.71	3.23 <	14.32 ✓
KZ32	20	3.005	0.000	Sol	8.48	2.26	2.45	8.67 >	2.31 ✓	2.45	8.67	5.70 <	14.32 ✓
	50	0.000	0.000	Sag	3.80	2.26	2.45	4.01 >	-2.48 ✓	2.45	4.01	6.27 <	14.32 ✓

KİRİŞ NO	Bw D	Ln	a b	Sol Sag	Asu (cm ²)	Asa (cm ²)	Mra'	Mru'	Mg+Mq	Mra	Mru	Vd	Vr
K405	20	3.025	0.000	Sol	5.40	6.03	6.27	5.63 >	-3.54 ✓	6.27	5.63	4.15 <	14.32 ✓
	50		0.000	Sag	3.80	6.03	6.27	4.01 <	-4.40 ✗	6.27	4.01	7.91 <	14.32 ✓
K406	20	3.705	0.000	Sol	5.34	3.08	3.28	5.57 >	3.72 ✓	3.28	5.57	6.96 <	14.32 ✓
	50		0.000	Sag	3.80	3.08	3.28	4.01 >	-1.34 ✓	3.28	4.01	5.68 <	14.32 ✓
K407	20	3.000	0.000	Sol	12.57	6.28	6.52	12.80 >	-4.32 ✓	6.52	12.80	8.08 <	17.25 ✓
	50		0.000	Sag	18.85	6.28	6.52	18.31 >	-2.59 ✓	6.52	18.31	6.68 <	17.25 ✓
K407	20	1.500	0.000	Sol	18.85	6.28	6.52	18.31 >	2.08 ✓	6.52	18.31	7.95 <	17.25 ✓
	50		0.000	Sag	18.85	6.28	6.52	18.31 >	-2.09 ✓	6.52	18.31	7.97 <	17.25 ✓
K408	20	3.950	0.000	Sol	3.80	3.08	3.28	4.01 >	1.16 ✓	3.28	4.01	3.73 <	14.32 ✓
	50		0.000	Sag	5.34	3.08	3.28	5.57 >	-2.96 ✓	3.28	5.57	4.40 <	14.32 ✓
K409	20	4.525	0.000	Sol	5.34	3.08	3.28	5.57 >	1.64 ✓	3.28	5.57	3.20 <	14.32 ✓
	50		0.000	Sag	5.34	3.08	3.28	5.57 >	-1.59 ✓	3.28	5.57	3.19 <	14.32 ✓
K410	20	5.875	0.000	Sol	7.42	6.28	6.56	7.67 >	5.75 ✓	6.56	7.67	7.33 <	14.32 ✓
	50		0.000	Sag	7.42	6.28	6.56	7.67 >	-1.14 ✓	6.56	7.67	2.59 <	14.32 ✓
K411	20	3.005	0.000	Sol	7.42	2.26	2.45	7.64 >	2.94 ✓	2.45	7.64	3.38 <	14.32 ✓
	50		0.000	Sag	3.80	2.26	2.45	4.01 >	-2.32 ✓	2.45	4.01	3.83 <	14.32 ✓
K412	20	3.820	0.000	Sol	3.80	3.08	3.28	4.01 >	0.97 ✓	3.28	4.01	3.42 <	14.32 ✓
	50		0.000	Sag	3.80	3.08	3.28	4.01 >	-1.14 ✓	3.28	4.01	2.43 <	14.32 ✓
K413	20	3.695	0.000	Sol	3.80	4.62	4.88	4.01 >	1.08 ✓	4.88	4.01	5.58 <	14.32 ✓
	50		0.000	Sag	5.40	4.62	4.88	5.63 >	1.46 ✓	4.88	5.63	3.57 <	14.32 ✓
K414	20	2.175	0.000	Sol	5.40	4.62	4.88	5.63 <	5.68 ✗	4.88	5.63	8.35 <	14.32 ✓
	50		0.000	Sag	3.80	4.62	4.88	4.01 >	-3.14 ✓	4.88	4.01	6.80 <	14.32 ✓
K415	20	3.000	0.000	Sol	3.80	4.62	4.84	4.01 >	-0.71 ✓	4.84	4.01	3.03 <	19.77 ✓
	50		0.000	Sag	6.28	4.62	4.84	6.52 >	3.70 ✓	4.84	6.52	6.19 <	19.77 ✓
K416	20	3.580	0.000	Sol	6.28	4.02	4.23	6.52 >	-3.18 ✓	4.23	6.52	2.35 <	14.32 ✓
	50		0.000	Sag	6.28	4.02	4.23	6.52 >	-3.14 ✓	4.23	6.52	6.23 <	14.32 ✓
K418	20	1.970	0.000	Sol	4.21	2.26	2.45	4.42 >	0.64 ✓	2.45	4.42	6.55 <	14.32 ✓
	50		0.000	Sag	6.22	2.26	2.45	6.45 <	7.42 ✗	2.45	6.45	18.06 >	14.32 ✗
K421	20	2.405	0.000	Sol	3.80	4.62	4.84	4.01 >	1.37 ✓	4.84	4.01	6.71 <	14.32 ✓
	50		0.000	Sag	5.40	4.62	4.84	5.63 >	-0.53 ✓	4.84	5.63	6.01 <	14.32 ✓
K422	20	4.000	0.000	Sol	3.80	3.08	3.31	4.01 >	2.15 ✓	3.31	4.01	4.74 <	14.32 ✓
	50		0.000	Sag	3.80	3.08	3.31	4.01 >	-1.46 ✓	3.31	4.01	2.98 <	14.32 ✓
K423	20	2.975	0.000	Sol	3.80	2.26	2.45	4.01 >	1.96 ✓	2.45	4.01	3.88 <	14.32 ✓
	50		0.000	Sag	3.80	2.26	2.45	4.01 >	-1.13 ✓	2.45	4.01	4.52 <	14.32 ✓
K425	20	3.700	0.000	Sol	5.40	4.62	4.88	5.63 >	4.18 ✓	4.88	5.63	7.61 <	14.32 ✓
	50		0.000	Sag	5.40	4.62	4.88	5.63 >	-3.31 ✓	4.88	5.63	8.21 <	14.32 ✓
K426	20	2.900	0.000	Sol	3.80	6.03	6.27	4.01 >	-3.60 ✓	6.27	4.01	6.48 <	14.32 ✓
	50		0.000	Sag	5.40	6.03	6.27	5.63 >	-2.82 ✓	6.27	5.63	7.15 <	14.32 ✓
K427	20	3.705	0.000	Sol	3.80	3.08	3.28	4.01 >	1.33 ✓	3.28	4.01	5.67 <	14.32 ✓
	50		0.000	Sag	5.34	3.08	3.28	5.57 >	-3.73 ✓	3.28	5.57	6.96 <	14.32 ✓
K428	20	1.500	0.000	Sol	18.85	6.28	6.52	18.31 >	2.56 ✓	6.52	18.31	8.33 <	17.25 ✓
	50		0.000	Sag	18.85	6.28	6.52	18.31 >	4.33 ✓	6.52	18.31	9.75 <	17.25 ✓
K428	20	2.900	0.000	Sol	18.85	6.28	6.52	18.31 >	-4.31 ✓	6.52	18.31	7.94 <	17.25 ✓
	50		0.000	Sag	12.57	6.28	6.52	12.80 >	-2.09 ✓	6.52	12.80	6.46 <	17.25 ✓
K429	20	3.950	0.000	Sol	5.34	3.08	3.28	5.57 >	1.49 ✓	3.28	5.57	3.90 <	14.32 ✓
	50		0.000	Sag	3.80	3.08	3.28	4.01 >	-1.59 ✓	3.28	4.01	3.80 <	14.32 ✓
K430	20	4.525	0.000	Sol	5.34	3.08	3.28	5.57 >	2.95 ✓	3.28	5.57	3.80 <	14.32 ✓
	50		0.000	Sag	5.34	3.08	3.28	5.57 >	-1.26 ✓	3.28	5.57	3.18 <	14.32 ✓
K431	20	5.900	0.000	Sol	7.42	6.28	6.56	7.67 >	5.70 ✓	6.56	7.67	7.44 <	14.32 ✓
	50		0.000	Sag	8.55	6.28	6.56	8.81 >	-1.15 ✓	6.56	8.81	2.83 <	14.32 ✓
K432	20	2.980	0.000	Sol	8.55	2.26	2.45	8.73 >	2.65 ✓	2.45	8.73	3.52 <	14.32 ✓
	50		0.000	Sag	3.80	2.26	2.45	4.01 >	-2.29 ✓	2.45	4.01	4.07 <	14.32 ✓
K433	20	3.820	0.000	Sol	3.80	3.08	3.28	4.01 >	1.00 ✓	3.28	4.01	3.44 <	14.32 ✓
	50		0.000	Sag	3.80	3.08	3.28	4.01 >	-1.15 ✓	3.28	4.01	2.52 <	14.32 ✓
K434	20	3.695	0.000	Sol	3.80	4.62	4.88	4.01 >	1.14 ✓	4.88	4.01	5.60 <	14.32 ✓
	50		0.000	Sag	5.40	4.62	4.88	5.63 >	1.64 ✓	4.88	5.63	3.71 <	14.32 ✓
K435	20	2.175	0.000	Sol	5.40	4.62	4.88	5.63 <	5.81 ✗	4.88	5.63	8.48 <	14.32 ✓
	50		0.000	Sag	3.80	4.62	4.88	4.01 >	-3.36 ✓	4.88	4.01	6.93 <	14.32 ✓
K436	20	3.000	0.000	Sol	3.80	4.62	4.84	4.01 >	-0.90 ✓	4.84	4.01	2.90 <	19.77 ✓
	50		0.000	Sag	6.28	4.62	4.84	6.52 >	3.62 ✓	4.84	6.52	6.32 <	19.77 ✓
K437	20	3.580	0.000	Sol	6.28	4.02	4.23	6.52 >	-3.09 ✓	4.23	6.52	2.46 <	14.32 ✓
	50		0.000	Sag	6.28	4.02	4.23	6.52 >	-3.36 ✓	4.23	6.52	6.36 <	14.32 ✓
K439	20	1.975	0.000	Sol	4.21	2.26	2.45	4.42 >	0.64 ✓	2.45	4.42	6.56 <	14.32 ✓
	50		0.000	Sag	6.22	2.26	2.45	6.45 <	7.42 ✗	2.45	6.45	18.12 >	14.32 ✗
K442	20	3.050	0.000	Sol	2.26	4.62	4.84	2.45 >	-1.96 ✓	4.84	2.45	4.22 <	14.32 ✓
	50		0.000	Sag	2.26	4.62	4.84	2.45 >	1.97 ✓	4.84	2.45	16.20 >	14.32 ✗
K443	20	2.750	0.000	Sol	3.80	4.62	4.84	4.01 >	-1.60 ✓	4.84	4.01	4.78 <	14.32 ✓
	50		0.000	Sag	3.80	4.62	4.84	4.01 >	-1.46 ✓	4.84	4.01	4.56 <	14.32 ✓



$$M_{c1} + M_{c2} \geq M_{b1} + M_{b2} \rightarrow R_b = 1$$

$$M_{c1} + M_{c2} < M_{b1} + M_{b2} \rightarrow R_b = \frac{M_{b1} + M_{b2}}{M_{c1} + M_{c2}}$$

$$M_{rb1} = R_b \times M_{b1}$$

$$M_{rb2} = R_b \times M_{b2}$$

KOLON UÇLARINDA KİRİŞ-KOLON MOMENT KAPASİTE KONTROLÜ

KOLON NO	(-X)			(+X)			(-Y)			(+Y)						
	ΣMc	ΣMb >	ΣMb	ΣMc	ΣMb >	ΣMb	ΣMc	ΣMb >	ΣMb	ΣMc	ΣMb >	ΣMb				
S101	12.49	>	4.01	4.01	11.60	>	3.31	3.31	30.16	>	9.56	9.56	27.33	>	3.31	3.31
S201	11.08	>	4.01	4.01	10.24	>	3.31	3.31	25.75	>	8.71	8.71	23.35	>	3.31	3.31
S102	13.04	>	8.47	8.47	12.39	>	9.99	9.99	34.09	>	5.63	5.63	30.01	>	4.88	4.88
S106	41.76	>	5.63	5.63	37.58	>	4.88	4.88	18.86	>	11.99	11.99	18.67	>	11.16	11.16
S301	10.27	>	4.01	4.01	9.49	>	3.31	3.31	23.89	>	11.96	11.96	21.26	>	6.56	6.56
S202	11.56	>	8.47	8.47	10.93	>	9.99	9.99	29.55	>	6.52	6.52	25.97	>	4.88	4.88
S206	33.52	>	5.63	5.63	30.30	>	4.88	4.88	14.67	>	11.99	11.99	14.58	>	11.16	11.16
S103	26.81	>	8.85	8.85	25.92	>	8.85	8.85	11.18	>	4.84	4.84	10.95	>	3.28	3.28
S129	64.00	>	0.00	0.00	64.00	>	0.00	0.00	160.84	>	11.40	11.40	160.84	>	11.40	11.40
S107	40.21	>	16.14	10.51	39.00	>	18.17	11.90	19.08	>	8.88	8.88	19.70	>	8.85	8.85
S109	38.09	>	5.63	5.63	32.43	>	4.84	4.84	16.80	>	6.46	6.46	17.19	>	7.29	7.29
S401	9.02	>	4.01	4.01	8.44	>	3.31	3.31	20.40	>	9.56	9.56	18.46	>	3.31	3.31
S302	9.91	>	7.32	7.32	9.55	>	8.85	8.85	24.55	>	5.63	5.63	21.64	>	4.88	4.88
S306	25.36	>	5.63	5.63	23.15	>	4.88	4.88	10.43	<	15.30	10.43	10.43	<	11.26	10.41
S203	22.97	>	12.85	8.85	21.80	>	13.68	8.85	9.75	>	0.00	0.00	9.75	>	0.00	0.00
S229	38.41	>	0.00	0.00	38.41	>	0.00	0.00	94.12	>	11.40	11.40	92.57	>	11.40	11.40
S207	32.24	>	16.14	10.51	31.32	>	18.17	11.90	14.91	>	8.88	8.88	15.41	>	8.85	8.85
S209	30.72	>	5.63	5.63	26.32	>	4.84	4.84	13.22	>	6.46	6.46	13.41	>	7.29	7.29
S130	119.24	>	2.45	2.45	119.24	>	4.84	4.84	103.79	>	9.26	9.26	103.79	>	8.43	8.43
S117	25.92	>	8.85	8.85	26.90	>	8.85	8.85	11.18	>	4.84	4.84	10.95	>	3.28	3.28
S110	39.63	>	4.84	4.84	42.26	>	5.63	5.63	19.25	>	18.39	11.61	19.05	<	19.82	13.30
S111	16.44	>	4.01	4.01	13.47	>	3.28	3.28	28.52	>	3.28	3.28	34.93	>	5.57	5.57
S501	4.15	>	4.01	4.01	3.89	>	3.31	3.31	9.12	>	7.67	7.67	8.45	>	6.56	6.56
S402	8.67	>	7.32	7.32	8.51	<	8.85	8.50	21.20	>	5.63	5.63	18.83	>	4.88	4.88
S406	22.26	>	5.63	5.63	20.05	>	4.88	4.88	9.16	<	10.90	9.17	9.25	<	10.04	9.20
S303	20.96	>	12.85	8.85	19.57	>	13.68	8.85	9.07	>	0.00	0.00	9.07	>	0.00	0.00
S304	8.59	>	0.00	0.00	8.59	>	0.00	0.00	16.23	>	11.40	11.40	13.83	>	11.40	11.40
S307	24.10	>	16.14	10.51	23.59	>	18.17	11.90	10.69	>	8.88	8.88	11.11	>	8.85	8.85
S309	23.44	>	6.04	6.04	19.87	>	3.28	3.28	9.69	>	6.46	6.46	9.75	>	7.29	7.29
S210	32.06	>	4.84	4.84	34.22	>	4.01	4.01	14.96	<	16.10	10.47	14.85	<	18.68	12.16
S211	12.85	>	4.01	4.01	10.75	>	3.28	3.28	22.99	>	3.28	3.28	28.24	>	5.57	5.57
S230	80.26	>	4.89	2.45	77.75	>	9.68	4.84	62.99	>	4.42	4.42	60.98	>	2.45	2.45
S133	108.71	>	12.54	12.54	108.71	>	8.97	8.97	136.78	>	2.45	2.45	136.78	>	12.31	12.31
S131	131.97	>	4.84	4.84	131.97	>	2.45	2.45	102.59	>	9.26	9.26	102.59	>	8.43	8.43
S116	12.37	>	9.99	9.99	13.01	>	8.47	8.47	34.07	>	5.63	5.63	29.95	>	4.88	4.88
S217	21.81	>	13.68	13.68	23.01	>	12.85	12.85	9.75	>	0.00	0.00	9.75	>	0.00	0.00
S112	18.31	>	8.84	8.84	18.48	>	8.84	8.84	35.27	>	13.05	13.05	41.17	>	15.33	15.33
S502	3.97	<	7.32	3.97	3.93	<	6.46	3.93	9.50	>	4.01	4.01	8.63	>	4.88	4.88
S506	10.03	>	4.49	4.49	9.05	>	4.88	4.88	4.20	<	14.21	4.20	4.29	<	10.11	4.26
S403	18.33	>	12.85	8.85	17.08	>	13.68	8.85	8.07	>	0.00	0.00	8.07	>	0.00	0.00
S404	7.60	>	0.00	0.00	7.60	>	0.00	0.00	14.64	>	10.51	10.51	13.58	>	10.51	10.51
S407	20.55	>	16.14	10.51	20.15	>	18.17	11.90	9.60	>	8.88	8.88	9.94	>	8.85	8.85
S409	20.07	>	7.18	7.18	17.39	>	3.28	3.28	8.65	>	6.46	6.46	8.60	>	7.29	7.29
S310	24.31	>	3.28	3.28	25.96	>	4.01	4.01	10.68	<	17.88	10.65	10.59	<	14.99	10.59
S311	9.37	>	4.01	4.01	8.12	>	3.28	3.28	17.67	>	3.28	3.28	21.21	>	5.57	5.57
S233	65.49	>	12.54	12.54	66.52	>	8.02	8.02	87.44	>	2.45	2.45	91.27	>	12.31	12.31
S212	14.29	>	8.84	8.84	14.43	>	8.84	8.84	28.71	>	13.05	13.05	32.92	>	17.62	17.62
S305	21.35	>	4.89	2.45	16.90	>	9.68	4.84	9.82	>	4.42	4.42	6.13	>	2.45	2.45
S231	84.16	>	9.68	9.68	86.64	>	4.89	4.89	61.81	>	4.42	4.42	59.63	>	2.45	2.45
S134	108.79	>	8.02	4.01	108.79	>	12.54	6.27	136.86	>	2.45	2.45	136.86	>	12.31	12.31
S115	12.21	>	3.31	3.31	13.37	>	4.01	4.01	33.20	>	9.56	9.56	29.63	>	3.31	3.31
S216	10.92	>	8.85	8.85	11.54	>	7.32	7.32	29.52	>	6.52	6.52	25.92	>	4.88	4.88
S132	55.62	>	0.00	0.00	55.62	>	0.00	0.00	152.80	>	11.40	11.40	152.80	>	11.40	11.40
S317	19.58	>	13.68	13.68	20.97	>	12.85	12.85	9.07	>	0.00	0.00	9.07	>	0.00	0.00
S127	36.09	>	31.35	31.35	34.18	<	43.14	43.14	2679.14	>	0.00	0.00	1486.26	>	0.00	0.00
S114	11.51	>	8.84	8.84	11.51	>	8.84	8.84	24.57	>	4.84	4.84	30.84	>	5.63	5.63
S503	8.49	<	10.46	6.45	7.92	<	13.68	7.92	3.73	>	0.00	0.00	3.73	>	0.00	0.00
S504	3.59	>	0.00	0.00	3.59	>	0.00	0.00	7.10	<	10.51	7.10	6.90	<	10.51	6.67
S507	9.14	<	16.14	9.15	9.01	<	18.17	8.97	4.48	<	8.88	4.46	4.58	<	8.85	4.57
S509	8.96	>	5.57	5.57	8.07	>	3.28	3.28	4.01	<	6.46	3.85	3.95	<	7.29	3.95
S410	21.13	>	3.28	3.28	23.03	>	4.01	4.01	9.56	<	17.88	9.49	9.38	<	14.99	9.38
S411	8.29	>	4.01	4.01	7.42	>	3.28	3.28	16.16	>	3.28	3.28	18.21	>	5.16	5.16
S308	7.79	<	12.54	12.54	9.91	>	8.02	8.02	16.19	>	2.45	2.45	23.96	>	9.50	9.50
S312	10.25	>	8.84	8.84	10.35	>	8.84	8.84	21.86	>	8.46	8.46	24.78	>	15.33	15.33
S104	6.88	>	0.00	0.00	6.88	>	0.00	0.00	14.31	>	0.00	0.00	8.54	>	0.00	0.00
S105	23.02	>	0.00	0.00	13.38	>	0.00	0.00	13.15	>	0.00	0.00	3.03	>	0.00	0.00
S227	33.94	>	31.35	31.35	32.71	<	43.14	43.14	1740.94	>	0.00	0.00	1229.50	>	0.00	0.00
S214	10.13	>	8.84	8.84	10.13	>	8.84	8.84	20.94	>	4.84	4.84	26.36	>	5.63	5.63
S405	18.06	>	4.89	2.45	15.14	>	9.68	4.84	8.47	>	4.42	4.42	6.08	>	4.84	4.84
S319	16.99	>	9.68	9.68	21.42	>	4.89	4.89	9.89	>	4.42	4.42	6.05	>	4.84	4.84

KOLON NO	(-X)			(X)			(-Y)			(Y)		
	$\sum Mc$	$\sum Mb$	$> \sum Mb$	$\sum Mc$	$\sum Mb$	$> \sum Mb$	$\sum Mc$	$\sum Mb$	$> \sum Mb$	$\sum Mc$	$\sum Mb$	$> \sum Mb$
S524	10.50	4.01	4.01	9.61	3.28	3.28	4.45	17.88	4.40	4.34	14.99	4.34
	$\sum Mb= 1081.98$			$\sum Mb= 1117.22$			$\sum Mb= 871.47$			$\sum Mb= 960.05$		

KOLONLARIN r KAPASİTE ORANI

KOLON	yön	N	V	N/ (Ac.fc)	V/ (Ac.fct)	Md	Mr	r	Hasar sınırı
SZ01 Sargı✓	-X	58.20	2.76	0.32	0.15	2.12	6.82	0.31	Minimum Hasar
	+X	40.13	2.54	0.22	0.14	2.12	6.30	0.34	Minimum Hasar
	-Y	58.00	8.23	0.32	0.45	15.31	17.02	0.90	Minimum Hasar
	+Y	37.21	6.58	0.21	0.36	15.31	15.23	1.01	Minimum Hasar
SZ02 Sargı✓	-X	52.22	2.86	0.29	0.16	2.74	6.68	0.41	Minimum Hasar
	+X	42.53	2.79	0.24	0.15	2.74	6.43	0.43	Minimum Hasar
	-Y	67.60	7.41	0.38	0.41	11.66	17.38	0.67	Minimum Hasar
	+Y	39.28	6.59	0.22	0.36	11.66	15.48	0.75	Minimum Hasar
SZ03 Sargı✓	-X	35.11	6.57	0.20	0.36	9.90	14.96	0.66	Minimum Hasar
	+X	31.60	6.40	0.18	0.35	9.90	14.53	0.68	Minimum Hasar
	-Y	37.35	3.12	0.21	0.17	3.33	6.15	0.54	Minimum Hasar
	+Y	33.04	2.81	0.18	0.15	3.33	5.92	0.56	Minimum Hasar
SZ04 Sargı✓	-X	4.76	1.18	0.03	0.07	0.00	3.55	0.00	Minimum Hasar
	+X	4.76	1.18	0.03	0.07	0.00	3.55	0.00	Minimum Hasar
	-Y	-3.56	2.48	-0.02	0.14	0.00	7.44	0.00	Minimum Hasar
	+Y	-16.77	1.40	-0.09	0.08	0.00	4.20	0.00	Minimum Hasar
SZ05 Sargı✓	-X	15.46	4.60	0.07	0.21	0.00	13.81	0.00	Minimum Hasar
	+X	-7.93	2.68	-0.04	0.12	0.00	8.05	0.00	Minimum Hasar
	-Y	21.46	2.37	0.10	0.11	0.00	7.10	0.00	Minimum Hasar
	+Y	-26.58	0.54	-0.12	0.02	0.00	1.61	0.00	Minimum Hasar
SZ06 Sargı✓	-X	78.37	8.63	0.36	0.40	22.68	21.37	1.06	Minimum Hasar
	+X	50.51	7.84	0.23	0.36	22.68	19.42	1.17	Minimum Hasar
	-Y	65.82	4.28	0.30	0.20	7.17	9.66	0.74	Minimum Hasar
	+Y	62.70	4.21	0.29	0.19	7.17	9.56	0.75	Minimum Hasar
SZ07 Sargı✓	-X	66.21	9.11	0.31	0.42	26.92	20.66	1.30	Minimum Hasar
	+X	59.22	9.00	0.27	0.41	26.92	20.13	1.34	Minimum Hasar
	-Y	68.57	4.25	0.32	0.19	6.50	9.75	0.67	Minimum Hasar
	+Y	81.03	4.36	0.38	0.20	6.50	10.04	0.65	Minimum Hasar
SZ08 Sargı✓	-X	-13.63	1.03	-0.06	0.05	0.00	3.09	0.00	Minimum Hasar
	+X	21.23	2.36	0.10	0.11	0.00	7.07	0.00	Minimum Hasar
	-Y	-16.23	2.00	-0.08	0.09	0.00	6.01	0.00	Minimum Hasar
	+Y	36.11	5.87	0.17	0.27	0.00	17.60	0.00	Minimum Hasar
SZ09 Sargı✓	-X	53.58	8.02	0.25	0.37	34.23	19.70	1.74	Minimum Hasar
	+X	28.79	6.79	0.13	0.31	34.23	16.67	2.05	Minimum Hasar
	-Y	42.27	3.59	0.20	0.16	7.57	8.63	0.88	Minimum Hasar
	+Y	46.22	3.70	0.21	0.17	7.57	8.87	0.85	Minimum Hasar
SZ10 Sargı✓	-X	61.66	8.27	0.29	0.38	34.57	20.32	1.70	Minimum Hasar
	+X	86.46	8.74	0.40	0.40	34.57	21.41	1.61	Minimum Hasar
	-Y	72.12	7.89	0.33	0.36	6.00	9.87	0.61	Minimum Hasar
	+Y	68.45	7.80	0.32	0.36	6.00	9.75	0.62	Minimum Hasar
SZ11 Sargı✓	-X	39.58	3.79	0.18	0.17	15.08	8.47	1.78	Minimum Hasar
	+X	20.30	3.12	0.09	0.14	15.08	6.97	2.16	Minimum Hasar
	-Y	19.21	6.39	0.09	0.29	16.15	14.73	1.10	Minimum Hasar
	+Y	39.16	8.03	0.18	0.37	16.15	17.98	0.90	Minimum Hasar
SZ12 Sargı✓	-X	58.17	4.78	0.27	0.22	17.59	9.42	1.87	Minimum Hasar
	+X	60.19	4.81	0.28	0.22	17.59	9.48	1.85	Minimum Hasar
	-Y	40.13	8.76	0.19	0.40	12.27	18.11	0.68	Minimum Hasar
	+Y	72.86	10.26	0.34	0.47	12.27	21.17	0.58	Minimum Hasar
SZ13 Sargı✓	-X	2.75	4.52	0.01	0.18	18.66	5.65	3.30	Belirgin Hasar
	+X	2.77	4.52	0.01	0.18	18.66	5.65	3.30	Belirgin Hasar
	-Y	55.39	10.99	0.22	0.43	11.72	26.55	0.44	Minimum Hasar
	+Y	12.48	7.41	0.05	0.29	11.72	17.42	0.67	Minimum Hasar
SZ14 Sargı✓	-X	39.49	3.75	0.22	0.21	11.50	6.26	1.84	Minimum Hasar
	+X	39.47	3.75	0.22	0.21	11.50	6.26	1.84	Minimum Hasar
	-Y	24.42	5.59	0.14	0.31	9.55	13.63	0.70	Minimum Hasar
	+Y	67.33	7.11	0.37	0.39	9.55	17.38	0.55	Minimum Hasar

KOLON	yön	N	V	N/(Ac.fc)	V/(Ac.fct)	Md	Mr	r	Hasar sınırı	
S105	-X	11.52	0.00	0.06	0.00	9.35	9.20	1.02	Minimum Hasar	
	+X	-7.58	0.00	-0.04	0.00	9.35	5.33	1.75	Minimum Hasar	
	Sargı✓	-Y	19.00	0.00	0.11	0.00	2.73	6.05	0.45	Minimum Hasar
	+Y	-21.43	0.00	-0.12	0.00	2.73	1.42	1.92	Minimum Hasar	
S106	-X	62.54	3.62	0.29	0.17	34.38	20.38	1.69	Minimum Hasar	
	+X	40.51	3.14	0.19	0.14	34.38	18.15	1.89	Minimum Hasar	
	Sargı✓	-Y	51.60	6.85	0.24	0.31	19.88	9.20	2.16	Minimum Hasar
	+Y	50.08	6.59	0.23	0.30	19.88	9.11	2.18	Minimum Hasar	
S107	-X	51.56	9.80	0.24	0.45	51.99	19.54	2.66	Belirgin Hasar	
	+X	46.15	11.03	0.21	0.51	51.99	18.87	2.76	Belirgin Hasar	
	Sargı✓	-Y	55.43	5.58	0.26	0.26	20.21	9.33	2.17	Minimum Hasar
	+Y	65.70	5.56	0.30	0.25	20.21	9.66	2.09	Minimum Hasar	
S108	-X	-11.48	0.00	-0.05	0.00	3.14	3.33	0.94	Minimum Hasar	
	+X	15.95	0.00	0.07	0.00	3.14	6.47	0.49	Minimum Hasar	
	Sargı✓	-Y	-14.81	0.00	-0.07	0.00	12.03	6.36	1.89	Minimum Hasar
	+Y	25.62	0.00	0.12	0.00	12.03	16.26	0.74	Minimum Hasar	
S109	-X	42.38	3.53	0.20	0.16	40.05	18.39	2.18	Minimum Hasar	
	+X	23.40	3.03	0.11	0.14	40.05	15.77	2.54	Minimum Hasar	
	Sargı✓	-Y	34.67	4.16	0.16	0.19	21.29	8.17	2.61	Minimum Hasar
	+Y	37.08	4.69	0.17	0.22	21.29	8.32	2.56	Minimum Hasar	
S110	-X	49.61	3.00	0.23	0.14	41.49	19.31	2.15	Minimum Hasar	
	+X	68.59	3.09	0.32	0.14	41.49	20.85	1.99	Minimum Hasar	
	Sargı✓	-Y	57.02	7.51	0.26	0.34	18.18	9.38	1.94	Minimum Hasar
	+Y	54.49	7.44	0.25	0.34	18.18	9.30	1.96	Minimum Hasar	
S111	-X	31.45	2.21	0.15	0.10	21.39	7.98	2.68	Minimum Hasar	
	+X	16.30	1.80	0.08	0.08	21.39	6.51	3.29	Belirgin Hasar	
	Sargı✓	-Y	15.34	1.81	0.07	0.08	27.90	13.78	2.02	Minimum Hasar
	+Y	30.98	3.08	0.14	0.14	27.90	16.94	1.65	Minimum Hasar	
S112	-X	46.49	4.77	0.22	0.22	30.80	8.89	3.47	Belirgin Hasar	
	+X	48.27	4.77	0.22	0.22	30.80	9.00	3.42	Belirgin Hasar	
	Sargı✓	-Y	32.72	7.29	0.15	0.33	27.46	17.17	1.60	Minimum Hasar
	+Y	57.49	9.20	0.27	0.42	27.46	20.00	1.37	Minimum Hasar	
S113	-X	1.89	4.44	0.01	0.17	39.47	5.55	7.11	İleri Hasar	
	+X	1.90	4.44	0.01	0.17	39.47	5.55	7.11	İleri Hasar	
	Sargı✓	-Y	49.77	2.24	0.20	0.09	36.58	25.70	1.42	Minimum Hasar
	+Y	15.43	2.71	0.06	0.11	36.58	18.27	2.00	Minimum Hasar	
S114	-X	31.04	4.20	0.21	0.28	17.95	5.25	3.42	Belirgin Hasar	
	+X	31.02	4.20	0.21	0.28	17.95	5.25	3.42	Belirgin Hasar	
	Sargı✓	-Y	19.91	2.79	0.13	0.18	19.72	10.94	1.80	Minimum Hasar
	+Y	54.25	3.25	0.36	0.21	19.72	13.45	1.47	Minimum Hasar	
S115	-X	32.60	2.02	0.18	0.11	8.13	5.89	1.38	Minimum Hasar	
	+X	46.43	2.45	0.26	0.13	8.13	6.55	1.24	Minimum Hasar	
	Sargı✓	-Y	46.48	5.74	0.26	0.32	22.50	16.15	1.39	Minimum Hasar
	+Y	30.12	2.13	0.17	0.12	22.50	14.34	1.57	Minimum Hasar	
S116	-X	33.69	4.37	0.19	0.24	11.27	5.95	1.89	Minimum Hasar	
	+X	40.90	4.18	0.23	0.23	11.27	6.34	1.78	Minimum Hasar	
	Sargı✓	-Y	53.59	3.76	0.30	0.21	28.66	16.69	1.72	Minimum Hasar
	+Y	31.38	3.05	0.17	0.17	28.66	14.50	1.98	Minimum Hasar	
S117	-X	23.53	6.15	0.16	0.41	23.25	11.39	2.04	Minimum Hasar	
	+X	27.85	5.96	0.19	0.39	23.25	11.89	1.96	Minimum Hasar	
	Sargı✓	-Y	26.47	0.99	0.18	0.07	4.95	5.03	0.98	Minimum Hasar
	+Y	26.47	0.67	0.18	0.04	4.95	5.03	0.98	Minimum Hasar	
S118	-X	2.38	0.00	0.01	0.00	1.84	3.33	0.55	Minimum Hasar	
	+X	2.38	0.00	0.01	0.00	1.84	3.33	0.55	Minimum Hasar	
	Sargı✓	-Y	-6.27	0.00	-0.03	0.00	10.44	6.78	1.54	Minimum Hasar
	+Y	-16.64	0.00	-0.09	0.00	10.44	4.23	2.47	Minimum Hasar	
S119	-X	-7.27	0.00	-0.03	0.00	13.15	8.21	1.60	Minimum Hasar	
	+X	11.84	0.00	0.05	0.00	13.15	12.92	1.02	Minimum Hasar	
	Sargı✓	-Y	20.45	0.00	0.09	0.00	3.05	6.98	0.44	Minimum Hasar
	+Y	-22.35	0.00	-0.10	0.00	3.05	2.09	1.46	Minimum Hasar	
S120	-X	39.86	2.66	0.22	0.15	24.86	13.73	1.81	Minimum Hasar	
	+X	62.09	3.08	0.34	0.17	24.86	14.92	1.67	Minimum Hasar	
	Sargı✓	-Y	56.60	5.75	0.31	0.32	17.27	7.92	2.18	Minimum Hasar
	+Y	48.26	6.13	0.27	0.34	17.27	7.67	2.25	Minimum Hasar	

KOLON	yön	N	V	N/(Ac.fc)	V/(Ac.fct)	Md	Mr	r	Hasar sınırı	
S301	-X	22.98	1.59	0.15	0.11	6.77	4.87	1.39	Minimum Hasar	
	+X	16.46	1.32	0.11	0.09	6.77	4.56	1.49	Minimum Hasar	
	Sargı✓	-Y	22.53	4.15	0.15	0.27	9.84	11.28	0.87	Minimum Hasar
	+Y	15.37	1.99	0.10	0.13	9.84	10.01	0.98	Minimum Hasar	
S302	-X	19.55	3.47	0.13	0.23	9.94	4.70	2.11	Minimum Hasar	
	+X	16.91	3.66	0.11	0.24	9.94	4.58	2.17	Minimum Hasar	
	Sargı✓	-Y	26.25	2.20	0.17	0.15	13.86	11.71	1.18	Minimum Hasar
	+Y	16.30	1.90	0.11	0.13	13.86	10.20	1.36	Minimum Hasar	
S303	-X	14.53	5.13	0.10	0.34	18.34	9.84	1.86	Minimum Hasar	
	+X	11.17	5.46	0.07	0.36	18.34	9.16	2.00	Minimum Hasar	
	Sargı✓	-Y	13.29	0.00	0.09	0.00	0.94	4.35	0.22	Minimum Hasar
	+Y	13.29	0.00	0.09	0.00	0.94	4.35	0.22	Minimum Hasar	
S304	-X	9.68	0.00	0.06	0.00	1.06	4.01	0.26	Minimum Hasar	
	+X	9.68	0.00	0.06	0.00	1.06	4.01	0.26	Minimum Hasar	
	Sargı✓	-Y	3.19	4.58	0.02	0.30	23.48	7.54	3.12	Belirgin Hasar
	+Y	-1.02	4.58	-0.01	0.30	23.48	6.68	3.52	Belirgin Hasar	
S305	-X	14.31	2.20	0.10	0.15	6.52	9.80	0.67	Minimum Hasar	
	+X	4.75	4.36	0.03	0.29	6.52	7.85	0.83	Minimum Hasar	
	Sargı✓	-Y	17.89	1.89	0.12	0.12	14.52	4.62	3.14	Belirgin Hasar
	+Y	-1.86	1.51	-0.01	0.10	14.52	2.95	4.92	Belirgin Hasar	
S306	-X	30.74	2.34	0.20	0.15	17.73	12.23	1.45	Minimum Hasar	
	+X	20.23	2.03	0.13	0.13	17.73	11.00	1.61	Minimum Hasar	
	Sargı✓	-Y	24.96	3.97	0.17	0.26	11.53	4.96	2.32	Minimum Hasar
	+Y	24.79	3.96	0.17	0.26	11.53	4.95	2.33	Minimum Hasar	
S307	-X	23.66	6.62	0.16	0.44	27.11	11.41	2.38	Minimum Hasar	
	+X	21.34	8.08	0.14	0.53	27.11	11.14	2.43	Minimum Hasar	
	Sargı✓	-Y	28.30	3.85	0.19	0.25	10.09	5.12	1.97	Minimum Hasar
	+Y	33.26	3.94	0.22	0.26	10.09	5.35	1.88	Minimum Hasar	
S308	-X	3.79	2.78	0.03	0.18	9.99	3.47	2.88	Minimum Hasar	
	+X	16.62	3.63	0.11	0.24	9.99	4.56	2.19	Minimum Hasar	
	Sargı✓	-Y	1.46	1.59	0.01	0.10	6.90	7.18	0.96	Minimum Hasar
	+Y	21.21	3.96	0.14	0.26	6.90	11.12	0.62	Minimum Hasar	
S309	-X	21.09	2.84	0.14	0.19	20.32	11.11	1.83	Minimum Hasar	
	+X	11.95	1.40	0.08	0.09	20.32	9.32	2.18	Minimum Hasar	
	Sargı✓	-Y	18.30	2.57	0.12	0.17	11.82	4.64	2.54	Minimum Hasar
	+Y	18.51	3.40	0.12	0.22	11.82	4.65	2.54	Minimum Hasar	
S310	-X	25.05	1.39	0.17	0.09	21.39	11.57	1.85	Minimum Hasar	
	+X	34.19	1.70	0.23	0.11	21.39	12.59	1.70	Minimum Hasar	
	Sargı✓	-Y	28.03	4.09	0.19	0.27	9.57	5.11	1.87	Minimum Hasar
	+Y	26.61	4.03	0.18	0.27	9.57	5.04	1.90	Minimum Hasar	
S311	-X	15.23	1.68	0.10	0.11	11.84	4.50	2.63	Minimum Hasar	
	+X	8.31	1.38	0.06	0.09	11.84	3.89	3.05	Belirgin Hasar	
	Sargı✓	-Y	7.75	1.29	0.05	0.08	11.68	8.46	1.38	Minimum Hasar
	+Y	14.86	2.12	0.10	0.14	11.68	9.91	1.18	Minimum Hasar	
S312	-X	22.59	3.88	0.15	0.26	17.54	4.85	3.62	Belirgin Hasar	
	+X	23.95	3.93	0.16	0.26	17.54	4.91	3.57	Belirgin Hasar	
	Sargı✓	-Y	16.86	3.35	0.11	0.22	12.48	10.32	1.21	Minimum Hasar
	+Y	27.49	8.04	0.18	0.53	12.48	11.85	1.05	Minimum Hasar	
S313	-X	1.41	2.60	0.01	0.17	20.04	3.25	6.17	İleri Hasar	
	+X	1.42	2.60	0.01	0.17	20.04	3.25	6.16	İleri Hasar	
	Sargı✓	-Y	20.94	1.45	0.14	0.10	15.85	11.09	1.43	Minimum Hasar
	+Y	3.56	1.76	0.02	0.12	15.85	7.61	2.08	Minimum Hasar	
S314	-X	15.68	3.62	0.10	0.24	17.15	4.52	3.79	Belirgin Hasar	
	+X	15.68	3.62	0.10	0.24	17.15	4.52	3.79	Belirgin Hasar	
	Sargı✓	-Y	10.38	1.88	0.07	0.12	16.66	9.00	1.85	Minimum Hasar
	+Y	27.76	2.97	0.19	0.20	16.66	11.88	1.40	Minimum Hasar	
S315	-X	16.35	1.32	0.11	0.09	6.80	4.55	1.49	Minimum Hasar	
	+X	22.86	1.60	0.15	0.11	6.80	4.86	1.40	Minimum Hasar	
	Sargı✓	-Y	22.74	3.84	0.15	0.25	10.61	11.30	0.94	Minimum Hasar
	+Y	15.22	1.39	0.10	0.09	10.61	9.98	1.06	Minimum Hasar	
S316	-X	16.96	3.66	0.11	0.24	9.95	4.58	2.17	Minimum Hasar	
	+X	19.60	3.47	0.13	0.23	9.95	4.71	2.11	Minimum Hasar	
	Sargı✓	-Y	26.14	2.26	0.17	0.15	13.69	11.69	1.17	Minimum Hasar
	+Y	16.19	1.96	0.11	0.13	13.69	10.18	1.35	Minimum Hasar	

KOLON	yön	N	V	N/(Ac.fc)	V/(Ac.fct)	Md	Mr	r	Hasar sınırı	
S407	-X	11.09	6.72	0.07	0.44	28.03	9.14	3.07	Belirgin Hasar	
	+X	10.42	7.21	0.07	0.48	28.03	9.01	3.11	Belirgin Hasar	
	Sargı✓	-Y	14.79	3.58	0.10	0.24	9.48	4.48	2.12	Minimum Hasar
	+Y	17.03	3.67	0.11	0.24	9.48	4.58	2.07	Minimum Hasar	
S408	-X	2.00	2.64	0.01	0.17	8.87	3.30	2.68	Minimum Hasar	
	+X	7.49	3.05	0.05	0.20	8.87	3.81	2.33	Minimum Hasar	
	Sargı✓	-Y	0.71	1.75	0.00	0.12	3.58	7.03	0.51	Minimum Hasar
	+Y	8.42	4.11	0.06	0.27	3.58	8.60	0.42	Minimum Hasar	
S409	-X	10.19	3.43	0.07	0.23	19.17	8.96	2.14	Minimum Hasar	
	+X	5.84	1.86	0.04	0.12	19.17	8.07	2.37	Minimum Hasar	
	Sargı✓	-Y	9.65	2.98	0.06	0.20	11.24	4.01	2.80	Minimum Hasar
	+Y	8.95	3.16	0.06	0.21	11.24	3.95	2.85	Minimum Hasar	
S410	-X	13.14	1.86	0.09	0.12	20.39	9.56	2.13	Minimum Hasar	
	+X	17.49	2.28	0.12	0.15	20.39	10.45	1.95	Minimum Hasar	
	Sargı✓	-Y	14.44	3.56	0.10	0.24	9.09	4.45	2.04	Minimum Hasar
	+Y	13.26	3.47	0.09	0.23	9.09	4.34	2.09	Minimum Hasar	
S411	-X	7.27	2.20	0.05	0.15	10.16	3.79	2.68	Minimum Hasar	
	+X	4.43	1.97	0.03	0.13	10.16	3.53	2.88	Minimum Hasar	
	Sargı✓	-Y	3.98	2.10	0.03	0.14	13.79	7.70	1.79	Minimum Hasar
	+Y	6.97	2.85	0.05	0.19	13.79	8.31	1.66	Minimum Hasar	
S412	-X	10.82	3.29	0.07	0.22	14.62	4.12	3.55	Belirgin Hasar	
	+X	11.90	3.37	0.08	0.22	14.62	4.22	3.47	Belirgin Hasar	
	Sargı✓	-Y	8.96	5.34	0.06	0.35	15.64	8.71	1.80	Minimum Hasar
	+Y	13.15	7.65	0.09	0.51	15.64	9.56	1.64	Minimum Hasar	
S413	-X	1.86	2.63	0.01	0.17	17.30	3.29	5.25	Belirgin Hasar	
	+X	1.87	2.63	0.01	0.17	17.30	3.29	5.25	Belirgin Hasar	
	Sargı✓	-Y	9.19	2.46	0.06	0.16	21.09	8.76	2.41	Minimum Hasar
	+Y	1.16	2.96	0.01	0.20	21.09	7.12	2.96	Minimum Hasar	
S414	-X	7.92	3.08	0.05	0.20	14.90	3.85	3.87	Belirgin Hasar	
	+X	7.92	3.08	0.05	0.20	14.90	3.85	3.87	Belirgin Hasar	
	Sargı✓	-Y	5.19	2.95	0.03	0.20	22.04	7.94	2.77	Minimum Hasar
	+Y	13.22	4.11	0.09	0.27	22.04	9.58	2.30	Minimum Hasar	
S415	-X	8.27	2.29	0.06	0.15	8.23	3.88	2.12	Minimum Hasar	
	+X	11.16	2.55	0.07	0.17	8.23	4.15	1.98	Minimum Hasar	
	Sargı✓	-Y	11.06	5.41	0.07	0.36	12.81	9.14	1.40	Minimum Hasar
	+Y	7.56	3.23	0.05	0.21	12.81	8.42	1.52	Minimum Hasar	
S416	-X	8.85	3.15	0.06	0.21	10.58	3.94	2.69	Minimum Hasar	
	+X	9.22	3.18	0.06	0.21	10.58	3.97	2.66	Minimum Hasar	
	Sargı✓	-Y	12.78	2.72	0.09	0.18	16.61	9.49	1.75	Minimum Hasar
	+Y	8.52	2.91	0.06	0.19	16.61	8.62	1.93	Minimum Hasar	
S417	-X	5.08	6.30	0.03	0.42	22.53	7.92	2.85	Minimum Hasar	
	+X	7.88	6.34	0.05	0.42	22.53	8.49	2.65	Minimum Hasar	
	Sargı✓	-Y	6.56	0.00	0.04	0.00	1.29	3.73	0.35	Minimum Hasar
	+Y	6.56	0.00	0.04	0.00	1.29	3.73	0.35	Minimum Hasar	
S418	-X	5.03	0.00	0.03	0.00	0.42	3.58	0.12	Minimum Hasar	
	+X	5.03	0.00	0.03	0.00	0.42	3.58	0.12	Minimum Hasar	
	Sargı✓	-Y	0.90	4.86	0.01	0.32	24.11	7.07	3.41	Belirgin Hasar
	+Y	-0.07	4.78	0.00	0.32	24.11	6.87	3.51	Belirgin Hasar	
S419	-X	2.06	4.13	0.01	0.27	3.39	7.31	0.46	Minimum Hasar	
	+X	6.83	2.57	0.05	0.17	3.39	8.28	0.41	Minimum Hasar	
	Sargı✓	-Y	7.86	2.43	0.05	0.16	15.49	3.85	4.03	Belirgin Hasar
	+Y	0.17	1.95	0.00	0.13	15.49	3.14	4.94	Belirgin Hasar	
S420	-X	10.76	2.87	0.06	0.16	22.00	9.05	2.43	Minimum Hasar	
	+X	15.87	3.31	0.09	0.18	22.00	10.08	2.18	Minimum Hasar	
	Sargı✓	-Y	12.22	4.22	0.07	0.23	15.60	5.28	2.96	Minimum Hasar
	+Y	13.11	4.30	0.07	0.24	15.60	5.38	2.90	Minimum Hasar	
S421	-X	10.00	7.14	0.07	0.47	28.33	8.92	3.18	Belirgin Hasar	
	+X	10.59	6.68	0.07	0.44	28.33	9.04	3.13	Belirgin Hasar	
	Sargı✓	-Y	14.63	3.58	0.10	0.24	9.29	4.47	2.08	Minimum Hasar
	+Y	16.86	3.66	0.11	0.24	9.29	4.58	2.03	Minimum Hasar	
S422	-X	7.66	3.06	0.05	0.20	8.81	3.83	2.30	Minimum Hasar	
	+X	1.96	2.64	0.01	0.17	8.81	3.30	2.67	Minimum Hasar	
	Sargı✓	-Y	0.80	1.64	0.01	0.11	3.55	7.05	0.50	Minimum Hasar
	+Y	8.49	3.89	0.06	0.26	3.55	8.61	0.41	Minimum Hasar	

KİRİŞLERİN r KAPASİTE ORANI

KİRİŞ	yön	V/ (Ac.fct)	$\rho-\rho'$ / ρ_{bi}	$r_i=M_{di}/M_{ri}$	Hasar	V/ (Ac.fct)	$\rho-\rho'$ / ρ_{bj}	$r_j=M_{dj}/M_{rj}$	Hasar
KZ01 Sargı✓	-X	0.0510	0.0199	9.73/4.01=2.43	MH	0.0125	-0.0511	4.25/3.31=1.28	MH
	+X	0.0099	-0.0199	6.7/3.31=2.02	MH	0.0536	0.0511	9.02/5.16=1.75	MH
KZ02 Sargı✓	-X	0.0508	0.0087	8.39/5.16=1.63	MH	0.0205	0.0225	9.23/4.84=1.91	MH
	+X	0.0152	-0.0087	5.45/4.84=1.13	MH	0.0455	-0.0225	11.39/4.01=2.84	MH
KZ04 Sargı✓	-X	0.0764	0.0217	36.42/5.63=6.47	BH	0.0156	-0.0217	26.75/4.88=5.49	BH
	+X	0.0156	-0.0217	29.6/4.88=6.07	BH	0.0764	0.0217	34.67/5.63=6.16	BH
KZ05 Sargı✓	-X	0.0930	-0.0173	32.08/5.63=5.7	BH	0.0722	0.0485	28.2/6.27=4.5	BH
	+X	0.0156	0.0173	26.33/6.27=4.2	BH	0.0052	-0.0485	36.94/4.49=8.23	IH
KZ06 Sargı✓	-X	0.0695	0.0217	46.14/5.63=8.19	IH	0.0091	-0.0217	39.92/4.84=8.25	IH
	+X	0.0090	-0.0217	38.8/4.84=8.02	IH	0.0696	0.0217	44.63/5.63=7.92	IH
KZ07 Sargı✓	-X	0.1254	0.1732	3.26/12.8=0.25	MH	0.1031	-0.3465	0.37/6.52=0.06	MH
	+X	0.0279	-0.1732	2.74/6.52=0.42	MH	0.0502	0.3465	8.97/18.31=0.49	MH
KZ07 Sargı✓	-X	0.1596	0.3465	22.11/18.31=1.21	MH	0.1385	-0.3465	26.84/2.94=9.12	IH
	+X	0.0907	-0.3465	16.74/6.52=2.57	MH	0.1118	0.3465	26.8/8.27=3.24	BH
KZ08 Sargı✓	-X	0.0436	0.0199	30.18/4.01=7.53	IH	0.0046	-0.0624	22.93/3.28=7.0	IH
	+X	0.0005	-0.0199	27.01/3.28=8.25	IH	0.0477	0.0624	26.85/5.57=4.82	BH
KZ09 Sargı✓	-X	0.0472	0.0624	19.63/5.57=3.53	BH	0.0071	-0.0624	12.16/3.28=3.71	BH
	+X	0.0067	-0.0624	15.39/3.28=4.7	BH	0.0476	0.0624	17.17/5.57=3.08	BH
KZ10 Sargı✓	-Y	0.0802	0.1732	21.78/9.56=2.28	MH	0.0329	-0.1490	6.1/3.31=1.84	MH
	+Y	0.0358	0.1732	7.67/3.31=2.31	MH	0.0772	-0.1490	16.85/8.71=1.93	MH
KZ11 Sargı✓	-Y	0.0545	0.1715	14.92/8.67=1.72	MH	0.0230	-0.0424	11.16/2.45=4.56	BH
	+Y	0.0064	0.1715	10.85/2.45=4.43	BH	0.0379	-0.0424	13.18/4.01=3.29	BH
KZ12 Sargı✓	-Y	0.0433	0.0199	15.58/4.01=3.89	BH	0.0023	-0.0624	18.53/3.28=5.66	BH
	+Y	0.0016	0.0199	13.43/3.28=4.1	BH	0.0471	-0.0624	23.29/5.57=4.18	BH
KZ13 Sargı✓	-Y	0.0785	0.0217	27.91/5.63=4.95	BH	0.0212	-0.0459	21.32/4.88=4.37	BH
	+Y	0.0150	0.0217	23.76/4.88=4.87	BH	0.0847	-0.0459	32.68/6.52=5.01	BH
KZ14 Sargı✓	-Y	0.0729	0.0459	29.66/6.52=4.55	BH	0.0322	0.0225	16.49/4.88=3.38	BH
	+Y	0.0210	0.0459	24.26/4.88=4.98	BH	0.0617	0.0225	16.59/4.01=4.14	BH
KZ15 Sargı✓	-Y	0.0577	-0.0225	9.49/4.01=2.37	MH	0.0036	-0.0528	7.28/4.84=1.5	MH
	+Y	0.0134	-0.0225	8.43/4.84=1.74	MH	0.0674	-0.0528	12.79/6.78=1.89	MH
KZ16 Sargı✓	-Y	0.1084	0.0069	15.94/6.78=2.35	MH	0.0880	-0.0312	15.94/6.52=2.44	MH
	+Y	0.0256	0.0069	8.72/6.52=1.34	MH	0.0051	-0.0312	25.58/7.67=3.34	BH
KZ17 Sargı✓	-Y	0.0706	0.0424	9.87/4.84=2.04	MH	0.0270	-0.0736	8.96/3.28=2.73	MH
	+Y	0.0257	0.0424	7.15/3.28=2.18	MH	0.0719	-0.0736	19.58/5.98=3.27	BH
KZ18 Sargı✓	-Y	0.0654	0.0961	34.74/5.98=5.81	BH	0.0276	-0.2824	28.93/2.45=11.82	GB
	+Y	0.0588	0.0961	31.82/2.45=13.0	GB	0.0966	-0.2824	29.26/12.31=2.38	MH
KZ21 Sargı✓	-Y	0.0590	-0.0225	25.86/4.01=6.45	BH	0.0222	-0.0217	20.08/4.84=4.15	BH
	+Y	0.0302	-0.0225	23.75/4.84=4.91	BH	0.0670	-0.0217	22.7/5.63=4.03	BH
KZ22 Sargı✓	-X	0.0536	0.0511	9.2/5.16=1.79	MH	0.0099	-0.0199	7.26/3.31=2.19	MH
	+X	0.0125	-0.0511	4.51/3.31=1.36	MH	0.0510	0.0199	10.46/4.01=2.61	MH
KZ23 Sargı✓	-X	0.0455	-0.0225	11.32/4.01=2.82	MH	0.0152	-0.0087	5.33/4.84=1.1	MH
	+X	0.0205	0.0225	9.23/4.84=1.91	MH	0.0508	0.0087	8.31/5.16=1.61	MH
KZ25 Sargı✓	-X	0.0764	0.0217	32.3/5.63=5.73	BH	0.0156	-0.0217	26.76/4.88=5.49	BH
	+X	0.0156	-0.0217	23.6/4.88=4.84	BH	0.0764	0.0217	31.93/5.63=5.67	BH
KZ26 Sargı✓	-X	0.0902	-0.0615	36.33/4.01=9.06	IH	0.0566	0.0173	25.1/6.27=4.0	BH
	+X	0.0105	0.0615	27.76/6.27=4.43	BH	0.0231	-0.0173	31.13/5.63=5.53	BH
KZ27 Sargı✓	-X	0.0695	0.0217	44.22/5.63=7.85	IH	0.0091	-0.0217	38.28/4.84=7.91	IH
	+X	0.0090	-0.0217	39.44/4.84=8.15	IH	0.0696	0.0217	45.39/5.63=8.06	IH
KZ28 Sargı✓	-X	0.1118	0.3465	26.78/8.26=3.24	BH	0.0906	-0.3465	16.72/6.52=2.56	MH
	+X	0.1385	-0.3465	26.82/2.94=9.11	IH	0.1596	0.3465	22.09/18.31=1.21	MH
KZ28 Sargı✓	-X	0.1459	0.3465	9.01/18.31=0.49	MH	0.1041	-0.1732	2.56/6.52=0.39	MH
	+X	0.0127	-0.3465	0.39/6.52=0.06	MH	0.0546	0.1732	3.11/12.8=0.24	MH
KZ29 Sargı✓	-X	0.0477	0.0624	22.72/5.57=4.08	BH	0.0005	-0.0199	24.99/3.28=7.63	IH
	+X	0.0046	-0.0624	19.24/3.28=5.87	BH	0.0436	0.0199	28.12/4.01=7.01	IH

BINA PERFORMANSI

KİRİŞ HASAR YÜZDELERİ

KAT NO	(-X)				(+X)				(-Y)				(+Y)			
	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB
5	3.0	15.0	1.0	1.0	4.0	14.0	1.0	1.0	6.9	10.3	0.0	2.3	4.6	12.6	2.3	0.0
4	2.0	14.0	2.0	2.0	2.0	14.0	2.0	2.0	5.7	10.3	1.1	2.3	4.6	14.9	0.0	0.0
3	3.0	12.0	1.0	4.0	3.0	11.0	3.0	3.0	4.6	11.5	1.1	2.3	5.7	12.6	0.0	1.1
2	2.0	9.0	4.0	5.0	2.0	9.0	4.0	5.0	3.4	10.3	2.3	3.4	2.3	11.5	3.4	2.3
1	6.0	7.0	6.0	1.0	6.0	7.0	6.0	1.0	9.2	10.3	0.0	2.3	4.6	14.9	0.0	2.3
Max.		15.0	6.0	5.0					9.2							

X yönü kiriş sayısı= 100, Y yönü kiriş sayısı= 87

KOLON KESME KUVVETİ DAĞILIMI

KAT NO	(-X)				(+X)				(-Y)				(+Y)			
	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB
5	94.5	5.5	0.0	0.0	94.4	5.6	0.0	0.0	98.1	1.9	0.0	0.0	98.6	1.4	0.0	0.0
4	96.9	2.5	0.6	0.0	96.7	2.7	0.6	0.0	98.4	1.6	0.0	0.0	98.7	1.3	0.0	0.0
3	96.9	2.5	0.6	0.0	97.0	2.4	0.6	0.0	100.	0.0	0.0	0.0	99.9	0.1	0.0	0.0
2	98.0	1.7	0.3	0.0	97.9	1.8	0.3	0.0	100.	0.0	0.0	0.0	100.	0.0	0.0	0.0
1	99.8	0.2	0.0	0.0	99.8	0.2	0.0	0.0	100.	0.0	0.0	0.0	100.	0.0	0.0	0.0
Max.						5.6	0.6		100.							

PLASTİKLESEN KOLONLARIN KESME KUVVETİ DAĞILIMI

KAT NO	(-X)				(+X)				(-Y)				(+Y)			
	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB	MH	BH	IH	GB
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	4.4	0.8	0.6	0.0	4.1	0.8	0.6	0.0	2.2	0.0	0.0	0.0	1.5	0.0	0.0	0.0
3	1.6	0.0	0.6	0.0	1.6	0.0	0.6	0.0	1.4	0.0	0.0	0.0	1.3	0.0	0.0	0.0
2	0.5	0.0	0.3	0.0	0.6	0.0	0.3	0.0	0.3	0.0	0.0	0.0	1.0	0.0	0.0	0.0
1	0.4	0.2	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
Max.	5.8					1.4	0.6									

Göçme bölgesi Kiriş Hasar oranı=%5.0<=%20 Göçmenin önlenmesi durumu, Güçlendirme gerekli olabilir.
 Ust kat Vc oranı=%0.0<=%40
 Plastiklesen kolon Vc oranı=%1.4<=%30

GÜÇLENDİRME PROJESİ MEVCUT KOLON KAPASİTE TABLOSU

$$N_o = 0,85 \cdot f_{cd} \cdot b \cdot d + f_{yd} \cdot A_s$$

$$N_{max} = 0,5 \cdot f_{ck} \cdot A_c$$

$N_{d,max}$ = Tüm yük kombinasyonları altında elde edilen en yüksek tasarım aksel yükü

$N_{d,x/y}$ = x/y yönünde en büyük momente ($M_{d,x/y}$) sahip kombinasyonun aksel yükü

$M_{d,x/y}$ = x/y yönünde en büyük kombinasyonun momenti

$M_{r,x/y}$ = x/y yönünde ($N_{d,x/y}$) aksel yük seviyesindeki kapasite momenti

$V_{d,max}$ = Tüm yük kombinasyonları içinde elde oluşan en büyük kesme kuvveti

$$V_{r,max} = 2 \cdot f_{ck}^{1/2} \cdot A_c$$

A_c = Kolon kesit alanı

$A_{s,g}$ = Gerekli donatı alanı

$A_{s,m}$ = Mevcut donatı alanı

r_m = Mevcut donatı oranı

Mevcut kolon min. boyuna donatı oranı : 0.01

Mevcut kolon donatı korozyon oranı % : 0

Mevcut Eleman yeterlilik opsiyonu : $M_r > M_d$

ZEMİN. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	A_c cm ²	MEVCUT DONATI baslik gövde	A_{sm} cm ²	A_{sg} cm ²	r_m %	N_o (t)	N_{max} (t)	$N_{d,max}$ (t)	$V_{d,max}$ (t)
SZ01	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	67.8	4.6
SZ02	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	66.6	2.9
SZ03	60x25	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	48.2	1.1
SZ04	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	6.4	1.3
SZ05	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	5.0	0.5
SZ06	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	89.1	2.5
SZ07	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	89.0	3.5
SZ08	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	6.0	0.9
SZ09	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	73.4	4.1
SZ10	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	100.9	3.9
SZ11	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	43.0	4.1
SZ12	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	80.5	3.0
SZ13	30x70	2100	2x5ø14 + 2x2ø14 (	21.54	21.54	0.010	216.5	126.0	91.7	3.3
SZ14	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	58.2	2.1
SZ15	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	68.2	4.7
SZ16	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	66.2	2.9
SZ17	60x25	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	48.3	1.1
SZ18	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	6.4	1.3
SZ19	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	5.5	0.3
SZ20	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	88.5	3.9
SZ21	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	86.9	3.7
SZ22	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	5.7	0.7
SZ23	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	75.0	4.3
SZ24	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	102.2	4.0
SZ25	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	44.2	4.2
SZ26	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	78.7	3.4

ZEMİN. KAT X YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	$N_{d,max}/N_{max}$	+X YÖNÜ					AÇIKLAMA	-X YÖNÜ					AÇIKLAMA
		$N_{d,x}$ (t)	$M_{d,x}$ (tm)	$M_{r,x}$ (tm)	$M_{d,x}/M_{r,x}$	$N_{d,x}$ (t)		$M_{d,x}$ (tm)	$M_{r,x}$ (tm)	$M_{d,x}/M_{r,x}$			
SZ01	0.753	67.8	1.5	6.0	0.254	✓	67.8	1.5	6.0	0.254	✓		
SZ02	0.740	66.1	1.5	6.0	0.248	✓	66.1	1.5	6.0	0.248	✓		
SZ03	0.536	29.0	2.9	13.2	0.220	✓	39.8	2.9	14.2	0.204	✓		
SZ04	0.071	6.4	0.1	3.7	0.039	✓	6.4	0.1	3.7	0.039	✓		
SZ05	0.047	5.0	0.2	11.4	0.015	✓	5.0	0.2	11.4	0.015	✓		
SZ06	0.825	35.9	6.4	16.3	0.392	✓	90.2	6.4	18.0	0.355	✓		
SZ07	0.824	51.7	7.8	17.9	0.440	✓	75.2	7.8	18.5	0.425	✓		
SZ08	0.055	6.0	0.1	5.3	0.027	✓	6.0	0.1	5.3	0.027	✓		
SZ09	0.680	12.2	9.6	12.9	0.743	✓	74.2	9.6	18.5	0.521	✓		
SZ10	0.934	94.5	10.3	17.7	0.583	✓	49.6	10.3	17.7	0.585	✓		
SZ11	0.398	23.8	4.2	6.9	0.604	✓	37.5	4.2	7.7	0.543	✓		
SZ12	0.746	70.3	5.1	8.6	0.590	✓	44.6	5.1	8.1	0.630	✓		
SZ13	0.728	38.7	5.5	8.6	0.638	✓	37.9	5.5	8.5	0.641	✓		
SZ14	0.646	42.2	3.4	5.8	0.589	✓	40.8	3.4	5.7	0.593	✓		
SZ15	0.758	68.2	1.5	6.0	0.256	✓	68.2	1.5	6.0	0.256	✓		
SZ16	0.736	65.9	1.5	6.0	0.247	✓	65.9	1.5	6.0	0.247	✓		
SZ17	0.536	39.8	2.9	14.2	0.207	✓	29.0	2.9	13.2	0.224	✓		
SZ18	0.071	6.4	0.1	3.7	0.039	✓	6.4	0.1	3.7	0.039	✓		
SZ19	0.051	5.5	0.2	11.5	0.016	✓	5.5	0.2	11.5	0.016	✓		
SZ20	0.819	89.6	8.4	18.1	0.466	✓	35.6	8.4	16.3	0.517	✓		
SZ21	0.805	74.1	8.2	18.5	0.442	✓	49.8	8.2	17.7	0.462	✓		
SZ22	0.052	5.7	0.1	5.3	0.026	✓	5.7	0.1	5.3	0.026	✓		
SZ23	0.694	75.8	10.7	18.5	0.579	✓	13.1	10.7	13.1	0.815	✓		
SZ24	0.946	49.7	9.9	17.7	0.561	✓	96.2	9.9	17.6	0.565	✓		
SZ25	0.409	38.0	4.7	7.7	0.608	✓	25.0	4.7	7.0	0.672	✓		
SZ26	0.729	42.7	5.5	8.0	0.691	✓	69.6	5.5	8.6	0.640	✓		

KAT KAPASİTE KONTROLÜ:

112.6 275.4

 $\sum M_{d,x}/\sum M_{r,x} = 0.409$ $\sum N_{d,max}/\sum N_{max} = 1501.385/2664.0 = 0.564$

112.6 275.3

 $\sum -M_{d,x}/\sum -M_{r,x} = 0.409$

ZEMİN. KAT Y YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd, max/ Nmax	+Y YÖNÜ					AÇIKLAMA	-Y YÖNÜ				
		Nd, y (t)	Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y	Nd, y (t)		Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y	AÇIKLAMA	
SZ01	0.753	37.2	6.9	14.0	0.489	✓	59.5	6.9	15.0	0.457	✓	
SZ02	0.740	27.0	4.2	12.9	0.322	✓	67.4	4.2	14.9	0.280	✓	
SZ03	0.536	48.2	1.1	5.9	0.195	✓	48.2	1.1	5.9	0.195	✓	
SZ04	0.071	6.4	0.5	9.9	0.055	✓	6.4	0.5	9.9	0.055	✓	
SZ05	0.047	5.0	0.2	5.2	0.031	✓	5.0	0.2	5.2	0.031	✓	
SZ06	0.825	35.9	3.9	7.6	0.506	✓	90.2	3.9	8.4	0.461	✓	
SZ07	0.824	89.0	2.1	8.4	0.253	✓	89.0	2.1	8.4	0.253	✓	
SZ08	0.055	6.0	0.6	11.6	0.055	✓	6.0	0.6	11.6	0.055	✓	
SZ09	0.680	12.2	3.3	6.0	0.559	✓	74.2	3.3	8.6	0.386	✓	
SZ10	0.934	100.9	2.4	7.8	0.310	✓	100.9	2.4	7.8	0.310	✓	
SZ11	0.398	23.8	9.4	14.9	0.633	✓	37.5	9.4	16.5	0.570	✓	
SZ12	0.746	70.3	5.6	18.5	0.304	✓	44.6	5.6	17.2	0.326	✓	
SZ13	0.728	92.2	4.3	25.8	0.166	✓	-15.7	4.3	9.3	0.458	✓	
SZ14	0.646	77.1	2.4	14.5	0.164	✓	6.0	2.4	9.8	0.242	✓	
SZ15	0.758	60.5	9.0	15.0	0.597	✓	36.9	9.0	14.0	0.641	✓	
SZ16	0.736	67.0	5.1	14.9	0.341	✓	27.0	5.1	12.9	0.392	✓	
SZ17	0.536	48.3	1.1	5.9	0.193	✓	48.3	1.1	5.9	0.193	✓	
SZ18	0.071	6.4	0.5	9.9	0.054	✓	6.4	0.5	9.9	0.054	✓	
SZ19	0.051	5.5	0.2	5.2	0.034	✓	5.5	0.2	5.2	0.034	✓	
SZ20	0.819	59.9	2.9	8.5	0.341	✓	35.6	2.8	7.6	0.364	✓	
SZ21	0.805	86.9	2.1	8.5	0.246	✓	86.9	2.1	8.5	0.246	✓	
SZ22	0.052	5.7	0.6	11.6	0.050	✓	5.7	0.6	11.6	0.050	✓	
SZ23	0.694	75.8	3.4	8.6	0.398	✓	13.1	3.4	6.0	0.569	✓	
SZ24	0.946	102.2	2.5	7.7	0.317	✓	102.2	2.5	7.7	0.317	✓	
SZ25	0.409	38.0	9.0	16.6	0.543	✓	-25.0	9.0	15.0	0.599	✓	
SZ26	0.729	42.7	4.4	17.0	0.258	✓	37.2	4.6	16.5	0.278	✓	

KAT KAPASİTE KONTROLÜ:

$$\frac{\sum Nd, y / \sum Nmax, y = 0.300}{\sum Nd, max / \sum Nmax = 1501.385 / 2664.0 = 0.564}$$

$$\frac{87.7}{\sum -Md, y / \sum -Mr, y = 0.325}$$

1. NORMAL. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm ²	MEVCUT DONATI baslik gövde	Asm cm ²	Asg cm ²	rm %	No (t)	Nmax (t)	Nd, max (t)	Vd, max (t)
S101	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	54.5	4.3
S102	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	53.0	5.1
S103	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	37.6	4.3
S104	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	3.2	1.2
S105	50x30	1500	2x4ø14 + 2x1ø14 (	15.39	15.39	0.010	154.6	90.0	2.6	0.9
S106	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	71.2	7.3
S107	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	71.0	10.2
S108	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	3.0	1.3
S109	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	58.0	8.7
S110	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	81.4	8.2
S111	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	34.7	5.4
S112	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	21.54	0.010	185.6	108.0	65.0	6.3
S113	30x70	2100	2x5ø14 + 2x2ø14 (	21.54	36.17	0.010	216.5	126.0	89.6	7.7
S114	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	18.46	0.012	134.2	75.0	62.3	3.7
S115	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	54.9	5.7
S116	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	52.7	5.1
S117	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	37.6	4.3
S118	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	3.2	1.1
S119	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	3.1	1.3
S120	50x30	1500	2x4ø14 + 2x1ø14 (	15.39	15.39	0.010	154.6	90.0	71.2	5.4
S121	60x25	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	68.2	9.1
S122	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	15.39	0.010	154.6	90.0	2.7	1.2
S123	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	59.7	7.7
S124	60x30	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	83.0	7.9
S125	30x60	1800	2x4ø14 + 2x2ø14 (	18.46	18.46	0.010	185.6	108.0	35.8	5.3
S126	25x60	1500	2x3ø14 + 2x2ø14 (	15.39	18.46	0.010	154.6	90.0	63.1	5.9

1. NORMAL. KAT X YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd, max/ Nmax	+X YÖNÜ					AÇIKLAMA	-X YÖNÜ				
		Nd, x (t)	Md, x (tm)	Mr, x (tm)	Md, x/ Mr, x	Nd, x (t)		Md, x (tm)	Mr, x (tm)	Md, x/ Mr, x	AÇIKLAMA	
S101	0.726	30.4	1.4	4.8	0.284	✓	46.6	1.4	5.0	0.269	✓	
S102	0.588	22.7	3.9	5.0	0.789	✓	52.0	3.9	5.9	0.660	✓	
S103	0.501	22.0	6.8	10.5	0.642	✓	30.9	6.8	11.2	0.605	✓	

2. NORMAL. KAT Y YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd, max/ Nmax	+Y YÖNÜ					AÇIKLAMA	-Y YÖNÜ				
		Nd, y (t)	Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y	Nd, y (t)		Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y	AÇIKLAMA	
S213	0.394	62.8	5.3	15.0	0.353	✓	-13.1	5.3	5.1	1.029	Mr	×
S214	0.611	45.8	4.8	11.7	0.412	✓	4.3	4.8	7.8	0.618		✓
S215	0.547	35.6	6.0	11.4	0.528	✓	22.0	6.0	10.5	0.571		✓
S216	0.525	38.6	4.5	11.5	0.393	✓	16.5	4.5	9.9	0.459		✓
S217	0.381	28.6	0.6	4.7	0.137	✓	28.6	0.6	4.7	0.137		✓
S218	0.632	12.4	6.2	9.3	0.675	✓	21.1	6.2	10.4	0.599		✓
S219	0.344	10.9	3.1	3.9	0.795	✓	25.2	3.1	4.6	0.681		✓
S220	0.597	36.7	6.7	6.5	1.029	Mr	×	38.6	6.6	1.017	Mr	×
S221	0.662	34.4	2.9	4.9	0.594	✓	35.2	2.9	4.9	0.592		✓
S222	0.434	-3.1	2.6	6.3	0.414	✓	48.6	2.6	11.8	0.222		✓
S223	0.464	24.8	4.5	5.1	0.878	✓	28.7	4.5	5.3	0.841		✓
S224	0.701	47.8	4.1	6.9	0.588	✓	40.5	4.1	6.7	0.606		✓
S225	0.248	24.5	5.9	14.9	0.394	✓	13.0	5.9	13.1	0.449		✓
S226	0.627	43.5	5.5	11.6	0.473	✓	22.3	5.5	10.6	0.521		✓

KAT KAPASİTE KONTROLÜ: 108.8 209.8 109.1 205.9
 $\sum+Md, y / \sum+Mr, y = 0.518$ $\sum-Md, y / \sum-Mr, y = 0.530$
 $\sum Nd, max / \sum Nmax = 1083.38 / 2043.0 = 0.530$

3. NORMAL. KAT MEVCUT KOLON BİLGİLERİ TABLOSU

KOLON NO	BOYUT	Ac cm ²	MEVCUT DONATI başlık gövde	Asm cm ²	Asg cm ²	rm %	No (t)	Nmax (t)	Nd, max (t)	Vd, max (t)
S301	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	27.5	3.7
S302	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	26.1	3.0
S303	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	19.1	3.6
S304	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	14.9	5.1
S305	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	13.6	2.9
S306	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	35.4	4.1
S307	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	33.6	5.3
S308	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	14.6	2.8
S309	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	25.7	5.1
S310	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	41.0	4.3
S311	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	17.2	3.0
S312	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	18.46	0.012	134.2	75.0	32.0	3.9
S313	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	24.62	0.012	134.2	75.0	20.6	3.9
S314	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	18.46	0.012	134.2	75.0	29.7	3.3
S315	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	27.4	4.0
S316	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	26.1	3.0
S317	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	19.1	3.5
S318	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	13.7	5.0
S319	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	13.9	2.9
S320	50x30	1500	2x4ø14 + 2x1ø14 (	15.39	15.39	0.010	154.6	90.0	36.0	4.3
S321	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	32.2	5.3
S322	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	14.6	2.8
S323	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	25.6	4.7
S324	50x25	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	41.8	4.2
S325	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	15.39	0.012	134.2	75.0	17.3	2.6
S326	25x50	1250	2x4ø14 + 2x1ø14 (	15.39	18.46	0.012	134.2	75.0	31.5	3.8

3. NORMAL. KAT X YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd, max/ Nmax	+X YÖNÜ					AÇIKLAMA	-X YÖNÜ					
		Nd, x (t)	Md, x (tm)	Mr, x (tm)	Md, x/ Mr, x	Nd, x (t)		Md, x (tm)	Mr, x (tm)	Md, x/ Mr, x	AÇIKLAMA		
S301	0.366	15.8	1.3	4.2	0.312	✓	22.8	1.3	4.5	0.291	✓		
S302	0.348	12.0	3.5	4.0	0.884	✓	24.6	3.5	4.5	0.776	✓		
S303	0.254	11.0	5.3	9.0	0.590	✓	15.6	5.3	9.7	0.547	✓		
S304	0.199	4.5	0.3	3.4	0.100	✓	14.9	0.3	4.1	0.083	✓		
S305	0.182	8.4	1.9	8.6	0.224	✓	10.6	1.9	9.0	0.214	✓		
S306	0.472	16.5	4.3	9.9	0.433	✓	33.1	4.3	11.3	0.378	✓		
S307	0.448	17.7	8.1	10.0	0.809	✓	29.4	8.1	11.1	0.730	✓		
S308	0.195	13.3	4.2	4.1	1.032	Mr	×	6.3	3.6	1.168	Mr	×	
S309	0.343	9.1	4.2	8.7	0.486	✓	25.7	4.2	10.9	0.388	✓		
S310	0.547	34.4	6.5	11.3	0.574	✓	23.0	6.5	10.7	0.611	✓		
S311	0.229	9.6	2.7	3.8	0.701	✓	14.4	2.7	4.1	0.655	✓		
S312	0.427	25.5	5.0	4.6	1.090	Mr	×	19.3	5.0	4.3	1.153	Mr	×
S313	0.274	14.5	5.9	4.1	1.437	Mr	×	14.3	5.9	4.1	1.441	Mr	×
S314	0.396	16.9	5.0	4.2	1.195	Mr	×	16.9	5.0	4.2	1.194	Mr	×
S315	0.365	22.8	2.7	4.5	0.610	✓	15.6	2.7	4.2	0.655	✓		

4. NORMAL. KAT Y YÖNÜ MEVCUT KOLON KAPASİTE TABLOSU

KOLON NO	Nd, max/ Nmax	+Y YÖNÜ					AÇIKLAMA	-Y YÖNÜ				
		Nd, y (t)	Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y			Nd, y (t)	Md, y (tm)	Mr, y (tm)	Md, y/ Mr, y	AÇIKLAMA
S425	0.112	7.1	5.9	8.4	0.712	✓	4.6	5.9	7.9	0.755	✓	
S426	0.208	13.5	7.8	9.4	0.831	✓	8.3	7.8	8.6	0.915	✓	

KAT KAPASİTE KONTROLÜ:

119.5

167.7

 $\sum +Md, y / \sum +Mr, y =$

0.712

 $\sum Nd, max / \sum Nmax = 324.737 / 1965.0 = 0.165$

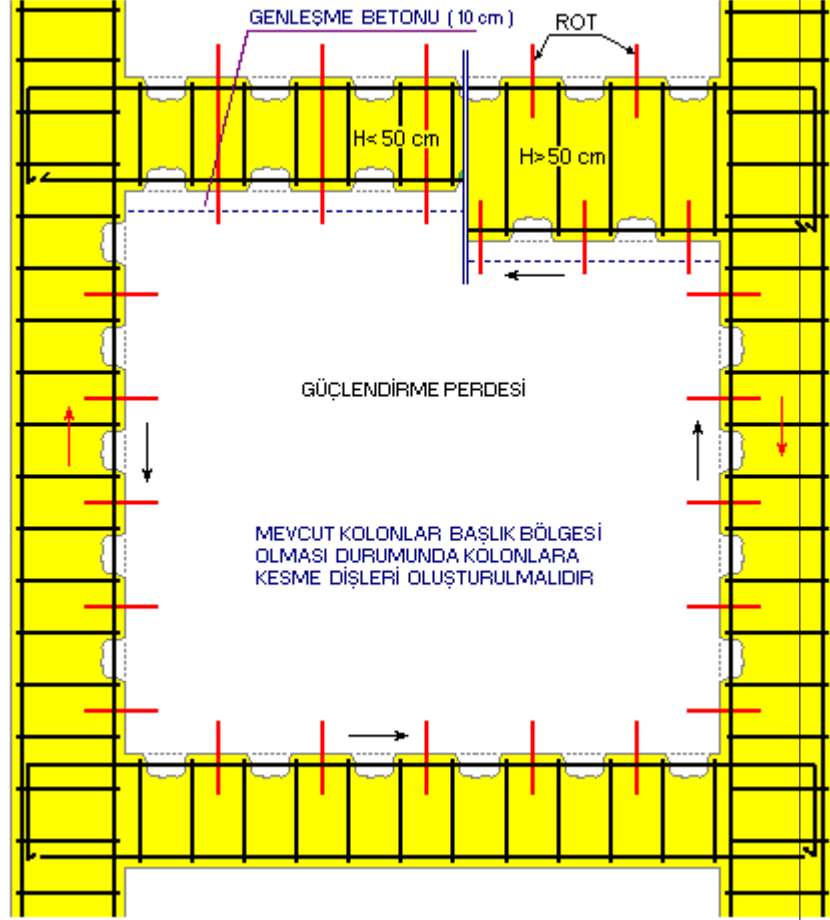
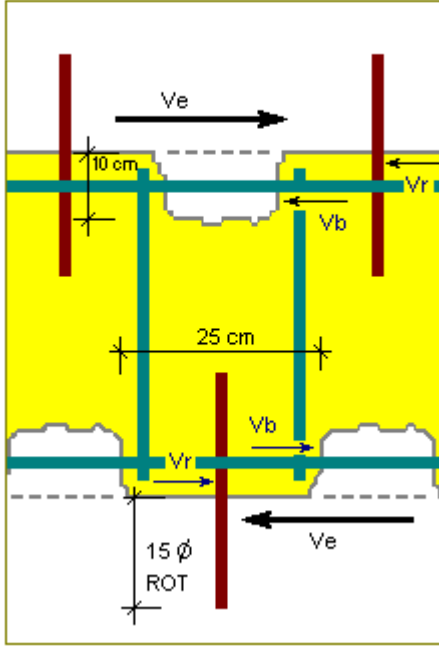
119.6

160.8

 $\sum -Md, y / \sum -Mr, y =$

0.744

ROT ve KESME dışlerinin hesabı

GÜÇLENDİRMEDE PANEL-KOLON KESME KONTROLU
C12

$f_{cd} = 96.$ $f_{ctd} = 9.69$ (kg/cm²)
 $f_{yd} = 4000.$ (kg/cm²)

Rot kesme kuvvet kapasitesi:
 $V_r = 1.49$ (t) $\phi 20$ $l = 597$ mm

PZ03 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dışın kesme kuvveti kapasitesi:

$V_{c1} = 96. \times 20. \times 5 = 9.6$ (t) $V_{c2} = 0.65 \times 9.69 \times 20. \times 25 = 3.15$ (t) $\gg V_b = 3.15$ (t)

Kolon bağlantısı kesme kontrolü: $V_{py} = 18.74$ (t)

Bir kenar kolonun kesme kuvveti kapasitesi: $V_k = 0.65 \times 9.69 \times 1500. = 9.45$ (t)

Kolon donatısı = $1\phi 14$ $A_s = 1.54$ cm²

$V = 5 \times 3.15$ (diş) $+ 5 \times 1.49$ (rot) $+ 6.16$ (donatı) $= 29.37 > 18.74$ (t)

Kiriş bağlantısı kesme kontrolü: $V_{px} = 94.9$ (t)

Sürtünme kuvveti = $1.4 \times (N_g - N_e) = 30.8$ (t)

$V = 4 \times 3.15$ (diş) $+ 29 \times 1.49$ (rot) $+ 9.45$ (kolon) $+ 30.8$ (sürtünme) $= 96.13 > 94.9$ (t)

PZ24 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dışın kesme kuvveti kapasitesi:

$V_{c1} = 96. \times 20. \times 5 = 9.6$ (t) $V_{c2} = 0.65 \times 9.69 \times 20. \times 25 = 3.15$ (t) $\gg V_b = 3.15$ (t)

Kolon bağlantısı kesme kontrolü: $V_{py} = 18.77$ (t)

Bir kenar kolonun kesme kuvveti kapasitesi: $V_k = 0.65 \times 9.69 \times 1500. = 9.45$ (t)

Kolon donatısı = $1\phi 14$ $A_s = 1.54$ cm²

$V = 5 \times 3.15$ (diş) $+ 5 \times 1.49$ (rot) $+ 6.16$ (donatı) $= 29.37 > 18.77$ (t)

Kiriş bağlantısı kesme kontrolü: $V_{px} = 95.35$ (t)

Sürtünme kuvveti = $1.4 \times (N_g - N_e) = 29.82$ (t)

$V = 4 \times 3.15$ (diş) $+ 30 \times 1.49$ (rot) $+ 9.45$ (kolon) $+ 29.82$ (sürtünme) $= 96.64 > 95.35$ (t)

P103 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dışın kesme kuvveti kapasitesi:

$V_{c1} = 96. \times 20. \times 5 = 9.6$ (t) $V_{c2} = 0.65 \times 9.69 \times 20. \times 25 = 3.15$ (t) $\gg V_b = 3.15$ (t)

Kolon bağlantısı kesme kontrolü: $V_{py} = 112.43$ (t)

Bir kenar kolonun kesme kuvveti kapasitesi: $V_k = 0.65 \times 9.69 \times 1500. = 9.45$ (t)

Kolon donatısı = $1\phi 14$ $A_s = 1.54$ cm²

$V = 5 \times 3.15$ (diş) $+ 61 \times 1.49$ (rot) $+ 6.16$ (donatı) $= 112.95 > 112.43$ (t)

Kiriş bağlantısı kesme kontrolü: $V_{px} = 41.93$ (t)

Sürtünme kuvveti = $1.4 \times (N_g - N_e) = -2.15$ (t)

$V = 4 \times 3.15$ (diş) $+ 15 \times 1.49$ (rot) $+ 9.45$ (kolon) $+ -2.15$ (sürtünme) $= 42.29 > 41.93$ (t)

P124 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=111.55 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1500. = 9.45 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+61x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 112.95 > 111.55 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=40.2 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = -1.93 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+14x1.49 \text{ (rot)}+9.45 \text{ (kolon)} + -1.93 \text{ (sürtünme)} = 41.02 > 40.2 \text{ (t)}$$

P203 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=37.21 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+11x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 38.33 > 37.21 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=68.51 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 42.16 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 42.16 \text{ (sürtünme)} = 68.6 > 68.51 \text{ (t)}$$

P224 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=37.66 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+11x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 38.33 > 37.66 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=67.1 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 43.14 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 43.14 \text{ (sürtünme)} = 69.59 > 67.1 \text{ (t)}$$

P303 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=22.48 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+5x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 29.37 > 22.48 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=45.81 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 31.38 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 31.38 \text{ (sürtünme)} = 57.83 > 45.81 \text{ (t)}$$

P324 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=22.53 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+5x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 29.37 > 22.53 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=46. (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 31.87 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 31.87 \text{ (sürtünme)} = 58.32 > 46. \text{ (t)}$$

P403 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=11.2 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+5x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 29.37 > 11.2 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=15.33 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 16.33 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 16.33 \text{ (sürtünme)} = 42.77 > 15.33 \text{ (t)}$$

P424 PANELİ GÜÇLENDİRME KESME KONTROLU

Bir dişin kesme kuvveti kapasitesi:

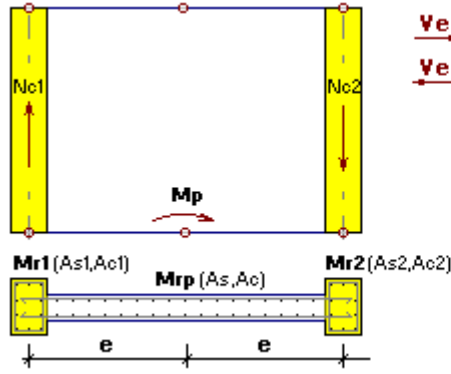
$$Vc1=96.x20.x5=9.6 \text{ (t)} \quad Vc2=0.65x9.69x20.x25=3.15 \text{ (t)} \quad \gg \quad Vb=3.15 \text{ (t)}$$

Kolon bağlantısı kesme kontrolu: Vpy=11.18 (t)Bir kenar kolonun kesme kuvveti kapasitesi: $Vk=0.65 \times 9.69 \times 1250. = 7.88 \text{ (t)}$ Kolon donatısı=1ø14 As=1.54 cm²

$$V=5x3.15 \text{ (diş)}+5x1.49 \text{ (rot)}+6.16 \text{ (donati)} = 29.37 > 11.18 \text{ (t)}$$

Kiriş bağlantısı kesme kontrolu: Vpx=15.38 (t)Sürtünme kuvveti= $1.4 \times (Ng - Ne) = 16.51 \text{ (t)}$

$$V=4x3.15 \text{ (diş)}+4x1.49 \text{ (rot)}+7.88 \text{ (kolon)} + 16.51 \text{ (sürtünme)} = 42.96 > 15.38 \text{ (t)}$$



$$\vec{V_e} \rightarrow Mr1 = A_s1 f_{yd} e, Mr2 = 0.85 A_{c2} f_{cd} + A_s2 f_{yd} e$$

$$\leftarrow \vec{V_e} \rightarrow Mr1 = 0.85 A_{c1} f_{cd} + A_s1 f_{yd} e, Mr2 = A_s2 f_{yd} e$$

$$M_d = (M_{c1} + N_{c1} \times e) + (M_{c2} + N_{c2} \times e) + M_p$$

$$M_r = M_{rp} + M_{r1} + M_{r2} > M_d$$

$$q_{sh} = \frac{2 \cdot A_{sWS}}{A_{ch}} \frac{L_w}{s} \quad V_r = 0.22 A_{ch} f_{cd} > V_d$$

$$V_r = 0.65 f_{ctd} A_c + q_{sh} A_{ch} f_{yd} > V_d$$

PANEL MOMENT ve KESME KAPASİTE KONTROLÜ (tm)

Panel	Kom.	Mp	Mc1	Mc2	Mrp	Mr1	Mr2	ΣMd	ΣMr	Vd	Vr	✓, X
PZ03	10	-325.17	-322.31	0.00	155.63	1016.95	56.96	647.48	1229.55	95.00	154.87	✓
PZ19	12	536.35	207.06	113.76	397.24	377.67	382.57	857.16	1157.48	138.66	146.60	✓
PZ24	10	325.22	319.85	0.00	156.57	870.81	200.64	645.07	1228.02	95.40	154.87	✓
PZ40	11	538.15	206.22	113.43	397.42	377.67	382.57	857.80	1157.66	139.88	146.60	✓
P103	10	-117.22	-348.11	0.00	102.11	1127.89	47.47	465.32	1277.47	44.31	125.43	✓
P119	12	136.29	224.84	201.15	233.47	468.08	405.61	562.28	1107.16	57.45	146.60	✓
P124	10	113.81	341.69	0.00	86.74	962.70	200.64	455.50	1250.08	41.96	122.60	✓
P140	11	146.32	223.05	199.96	233.38	454.22	405.61	569.33	1093.21	59.29	146.60	✓
P203	10	163.04	40.26	26.05	135.97	43.44	197.66	229.34	377.07	71.38	96.87	✓
P219	12	-217.41	-56.00	-53.30	324.91	285.25	93.28	326.71	703.44	93.17	148.58	✓
P224	10	-159.14	-27.03	-41.32	136.58	197.66	43.44	227.49	377.69	70.38	96.87	✓
P240	11	-210.60	-54.91	-52.37	324.91	285.25	93.28	317.88	703.44	90.42	148.58	✓
P303	10	73.03	7.03	-1.62	127.13	43.44	197.66	78.43	368.24	48.22	96.87	✓
P319	11	-97.91	-11.61	-12.90	306.90	285.25	93.28	122.42	685.43	63.57	148.58	✓
P324	10	-72.89	1.41	-7.18	127.41	197.66	43.44	78.65	368.52	48.54	96.87	✓
P340	12	-97.96	-11.47	-12.77	306.96	285.25	93.28	122.21	685.49	62.98	148.58	✓
P403	10	48.31	-3.01	-7.68	114.57	43.44	197.66	37.62	355.67	18.39	96.87	✓
P419	11	-54.34	-0.98	-0.50	274.58	285.25	93.28	55.82	653.12	26.30	148.58	✓
P424	10	-48.64	7.64	2.99	114.73	197.66	43.44	38.01	355.84	18.74	96.87	✓
P440	12	-54.21	-0.93	-0.44	274.61	285.25	93.28	55.59	653.15	26.50	148.58	✓