Calcul	atio	n book	Oil Car Storage	e	·				76
63(5)	63	3.85	-30.57	-274.20	81.22	12.42	1	Mymax	
63(1)	63	-0.03	-16.14	-276.69	32.04	-0.12	0	V-V	_
63(0)	63	-0.03	-16.14	-276.69	32.04	-0.12	0	Wx+V	
63(0)	63	-0.03	-16.14	-276.69	32.04	-0.12	0	•Wx+V	
63(0)	63	-0.03	-16.14	-276.69	32.04	-0.12	0	Wy+V	-
63(0)	63	-0.03	-16.14	-276.69	32.04	-0.12	0	-Wy+V	
63(0)	63	-1.53	-13.86	-263.16	25.73	-4.96	1	Ex+V	
63(0)	63	1.47	-16.52	-264.92	34.58	4.74	1	-Ex+V	
63(0)	63	3.85	-30.57	-274.20	81.22	12.42	ì	Ey+V	
63(0)	63	-3.91	0.19	-253.88	-20.91	-12.63	1	-Ey+V	
64( 5)	64	3.84	-31.88	-275.06	85.55	12.40	i	Vxmax	
64(5)	64	3.84	-31.88	-275.06	85.55	12.40	1	Vymax	
64(10)	64	-3.91	4.03	-209.02	-30.28	-12.64	1	Nmin	
64(1)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	Nmax	
64(5)	64	3.84	-31.88	-275.06	85.55	12.40	1	Mxmax	
64(5)	64	3.84	-31.88	-275.06	85.55	12.40	1	Mymax	
64(1)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	V-V	
64(0)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	Wx÷V	
64(0)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	-Wx+V	
64(0)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	Wy+V	
64(0)	64	-0.05	-16.14	-276.70	32.04	-0.14	0	-Wy+V	
64(0)	64	-1.54	-13.74	-263.09	25.35	-4.98	1	Ex+V	
64( 0)	64	1.46	-16.64	-265.00	34.96	4.72	1	-Ex+V	
64( 0)	64	3.84	-31.88	-275.06	85.55	12.40	1	Ey+V	
64(0)	64	-3.92	1.50	-253.03	-25.25	-12.66	ì	-Ey+V	
65( 5)	65	3.87	-33.18	-276.16	89.89	12.47	1	Vxmax	
65(5)	65	3.87	-33.18	-276.16	89.89	12.47	1	Vymax	
65(10)	65	-3.89	5.34	-208.32	-34.62	-12.59	1	Nmin	:
65(1)								Nmax	
65( 5)	65	3.87	-33.18	-276.16	89.89	12.47	1	Mxmax	
65( 5)	65	3.87	-33.18	-276.16	89.89	12.47		Mymax	
65(1)	65	-0.01	-16.14	-276.93	32.04			V-V	
65(0)	65	-0.01						Wx+V	
65(0)	65	-0.01	-16.14					-Wx+V	
65(0)	65	-0.01	-16.14			-0.07		∵ Wy+V	
		-0.01			32.04			-Wy+V	
			-13.63					Ex+V	
65(0)								-Ex+V	
65( 0)					89.89				
65(0)	65		2.81		-29.59	-12.60	l	-Ey+V	
66( 5)	66				94.24	12.03	1	Vxmax	

				O .				
66(5)	66	3.65	-34.50	-275.49	94.24	12.03	1	Vymax
66(10		-4.04	6.64	-206.38	-38.94	-12.89	1	Nmin
66(1)		-0.23	-16.15	-275.43	32.05	-0.50	0	Nmax
66(5)		3.65	-34.50	-275.49	94.24	12.03	1	Mxmax
66(5)		3.65	-34.50	-275.49	94.24	12.03	1	Mymax
66(1)		-0.23	-16.15	-275.43	32.05	-0.50	0	V-V
66( 0)		-0.23	-16.15	-275.43	32.05	-0.50	0	Wx+V
66(0)		-0.23	-16.15	-275.43	32.05	-0.50	0	-Wx+V
66(0)	66	-0.23	-16.15	-275.43	32.05	-0.50	0	Wy+V
66(0)	66	-0.23	-16.15	-275.43	32.05	-0.50	0	-Wy+V
66(0)	66	-1.71	-13.52	-261.78	24.60	-5.31	1	Ex+V
66( 0)	66	1.28	-16.87	-263.90	35.73	4.37	1	-Ex+V
66(0)	66	3.65	-34.50	-275.49	94.24	12.03	1	Ey+V
66(0)	66	-4.08	4.11	-250.19	-33.91	-12.97	1	-Ey+V
********					**			•
67(5)	67	5.06	-35.72	-286.81	98.40	14.83	1	Vxmax
67(5)	67	5.06	-35.72	-286.81	98.40	14.83	l	Vymax
67(10)	67	-3.05	8.01	-212.98	-43.41	-10.92	1	Nmin
67(1)	67	1.15	-16.05	-285.73	31.87	2.24	0	Nmax
67(5)	67	5.06	-35.72	-286.81	98.40	14.83	1	Mxmax
67(5)	67	5.06	-35.72	-286.81	98.40	14.83	1	Mymax
67(1)	67	1.15	-16.05	-285.73	31.87	2.24	0	V-V
67(0)	67	1.15	-16.05	-285.73	31.87	2.24	0	Wx+V
67( 0)	67	1.15	-16.05	-285.73	31.87	2.24	0	-Wx+V
67(0)	67	1.15	-16.05	-285.73	31.87	2.24	0	Wy+V
67(0)	67	1.15	-16.05	-285.73	31.87	2.24	0	-Wy+V
67(0)	67	-0.44	-13.32	-271.14	24.06	-2.80	1	Ex+V
67(0)	67	2.64	-16.90	-274.08	35.94	7.07	1	-Ex+V
67(0)	67	5.06	-35.72	-286.81	98.40	14.83	Ì	Ey+V
67(0)	67	<sup>7</sup> -2.87	5.49	-258.41	-38.41	-10.56	l	-Ey+V
********		***********	•••••		***********			
· -			10.52			-26.28	ì	Vxmax
68( 5)		-4.10			95.50	-3.36	1	Vymax
68(10)		-9.54			-53.92	-23.81	ŧ	Nmin
68(1)	68	-7.83		-172.37	23.67	-15.61	0	Nmax
68(5)	-	<sub>i</sub> -4.10				-3.36	1	Mxmax
68(6)			10.52			-26.28	1	Mymax
68(1)		-7.83		-172.37	23.67	-15.61		V-V
68(0)		-7.83		-172.37	23.67	-15.61		Wx+V
68(0)		-7.83				-15.61	0	-Wx+V
68(0)			-11.93	-	23.67	-15.61	0	Wy+V
68(0)		-7.83		-172.37	23.67	-15.61	0	-Wy+V
		-8.68			16.34	-19.16	1	Ex+V
68(0)	68	-6.20	-13.34	-166.58	29.02	-10.48	1	-Ex+V

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DXI III	68	-4.	10	-33.38	-178.24	95.50	-3.36	1	Ey+V
68( 0) 68( 0)	68	-10.		10.52	-154.54	-50.14	-26.28	1	-Ey+V
N-W(N	lw)	N	v.x	٧	-Y	=N=	M-X		M-Y 1
1(5)	69	758	.11	626.34	-1507.86	-2648.25	2489.87	1	Vxma
1(5)	69	758	.11	626.34	-1507.86	-2648.25	2489.87	1	Vyma
1(10)	69	-742	.03	-650.51	80.29	2301.89	-2490.38	1	Nmin
1(5)	69	758	.11	626.34	-1507.86	-2648.25	2489.87	1	Nmax
1(5)	69	758	.11	626.34	-1507.86	-2648.25	2489.87	1	Mxma
1(5)	69	758	.11	626.34	-1507.86	-2648.25	2489.87	1	Myma
1(1)	69		.10	-13.61	-791.16	-200.49	-1.19	0	V-V
1(0)	69		.10	-13.61	-791.16	-200.49	-1.19	0	Wx+\
1(0)	69		.10	-13.61	-791.16	-200.49	-1.19	0	-Wx+V
1(0)	69	9	.10	-13.61	-791.16	-200.49	-1.19	0	Wy+\
1(0)	69		.10	-13.61	-791.16	-200.49	-1.19	0	-Wy+V
1(0)	69	-392.		-37.47	-371.08	-56.14	-1319.30	1	Ex+V
1(0)	69	410	.29	11.10	-1186.27	-321.70	1318.75	1	-Ex+V
1(0)	69	758		626.34	-1507.86	-2648.25	2489.87	1	Ey+\
1(0)	69	-740.		-652.71	-49.49	2270.41	-2490.43	1	-Ey+V
N-W	N	N-B(II-	12) (14V	v) N	и-м	N-N	V-V	NE	
	9	1(4-2)		9.76					
	9	1(4-2)	(5)	-196.88	-2862.52		1 Nm		
	9	1(4-2)	(4)	-359.51	-1732.13				ţ: .
	9	1(4-2)	• /	-196.88	-2862.52				
	9	1(4-2)	(1)	-100.55	-525.47		0 V-		
	9	1(4-2)	(0)	-100.55	-525.47			x+V	
	9	1(4-2)	(0)	-100.55	-525.47		0 -Wx		
	9								
		1(4-2)	(0)	-100.55	-525.47		0 ′′ W <sub>3</sub>	,	
1 6	9	1(4-2)	(0)	-100.55	-525.47	-13.34	0 -Wy	/+V	•
1 6	i9 i9	1(4-2) 1(4-2)	(0) (0)	-100.55 172.39	-525.47 696.24	-13.34 -48.85	0 -Wy	/+V x+V	•
1 6 1 6 1 6	i9 i9 i9	1(4-2) 1(4-2) 1(4-2)	(0) (0) (0)	-100.55 172.39 -359.51	-525.47 696.24 -1732.13	-13.34 -48.85 23.00	0 -Wy 1 Ex 1 -Ex	/+V x+V +V	•
1 6 1 6 1 6 1 6	9 9 9 9	1(4-2) 1(4-2) 1(4-2) 1(4-2)	(0) (0) (0) (0)	-100.55 172.39 -359.51 -196.88	-525.47 696.24 -1732.13 -2862.52	-13.34 -48.85 23.00 648.07	0 -Wy 1 Ex 1 -Ex 1 Ey	/+V x+V +V /+V	•
1 6 1 6 1 6 1 6 1 6	59 59 59 59	1(4-2) 1(4-2) 1(4-2) 1(4-2) 1(4-2)	(0) (0) (0) (0) (0)	-100.55 172.39 -359.51 -196.88 9.76	-525.47 696.24 -1732.13 -2862.52 1826.63	-13.34 -48.85 23.00 648.07 3 -673.92	0 -Wy 1 Ex 1 -Ex 1 Ey 1 -Ey	/+V x+V +V /+V	•
1 6 1 6 1 6 1 6 1 6	59 59 59 59 59	1(4-2) 1(4-2) 1(4-2) 1(4-2) 1(4-2) 2(1-3)	(0) (0) (0) (0) (0) (0) (9)	-100.55 172.39 -359.51 -196.88 9.76 -433.42	-525.47 696.24 -1732.13 -2862.52 1826.63 395.58	-13.34 -48.85 23.00 648.07 3 -673.92 -337.47	0 -Wy 1 Ex 1 -Ex 1 Ey 1 -Ey 1 Nm	/+V x+V +V /+V /+V	•
1 6 1 6 1 6 1 6 1 6 1 6	59 59 59 59 59 59	1(4-2) 1(4-2) 1(4-2) 1(4-2) 1(4-2) 2(1-3) 2(1-3)	(0) (0) (0) (0) (0) (9) (3)	-100.55 172.39 -359.51 -196.88 9.76 -433.42 306.62	-525.47 696.24 -1732.13 -2862.52 1826.63 395.58 -641.56	-13.34 -48.85 23.00 648.07 3 -673.92 3 -337.47 261.06	0 -Wy 1 Ex 1 -Ex 1 Ey 1 -Ey 1 Nm 1 Nm	/+V x+V +V /+V /+V in	•
1 6 1 6 1 6 1 6 1 6 1 6 1 6	59 59 59 59 59 59	1(4-2) 1(4-2) 1(4-2) 1(4-2) 1(4-2) 2(1-3) 2(1-3) 2(1-3)	(0) (0) (0) (0) (0) (9) (3) (5)	-100.55 172.39 -359.51 -196.88 9.76 -433.42 306.62 -433.48	-525.47 696.24 -1732.13 -2862.52 1826.63 395.58 -641.56 367.71	-13.34 -48.85 23.00 648.07 -673.92 -337.47 261.06 -338.79	0 -Wy 1 Ex 1 -Ex 1 Ey 1 -Ey 1 Nm 1 Nm	/+V x+V +V /+V /+V in lax	•
1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	59 59 59 59 59 59	1(4-2) 1(4-2) 1(4-2) 1(4-2) 1(4-2) 2(1-3) 2(1-3)	(0) (0) (0) (0) (0) (9) (3)	-100.55 172.39 -359.51 -196.88 9.76 -433.42 306.62	-525.47 696.24 -1732.13 -2862.52 1826.63 395.58 -641.56	-13.34 -48.85 23.00 648.07 -673.92 -337.47 261.06 -338.79 -338.79	0 -Wy 1 Ex 1 -Ex 1 Ey 1 -Ey 1 Nm 1 Nm	r+V x+V +V r+V r+V in lax lax	•

اه^	أردعا	lation	book	Oil Car Storag
.71	(CUI	iauwii	UUUN	OH Car Storas

1	69	2(1-3) (0	)) -0.28	-170.80	-8.45	0	-Wx+V
1	69	2(1-3) (0	•	-170.80	-8.45	0	Wy+V
1	69	2(1-3) (	•	-170.80	-8.45	0	-Wy+V
1	69	2(1-3) (1	•	-641.56	261.06	1	Ex+V
1	69	2(1-3) (	•	307.16	-276.99	1	-Ex+V
1	69	2(1-3) (1	•	367.71	-338.79	1	Ey+V
1	69	2(1-3) (1	•	-702.11	322.87	1	-Ey+V
1	69	3(2-5) (	,	986.95	400.82	1	Nmin
1	69	3(2-5) (	•	-1174.00	-398.45	1	Nmax
1	69	3(2-5) (	•	986.95	400.82	1	Mmax
1	69	3(2-5) (	•	986.95	400.82	ı	Vmax
1	69	3(2-5) (	•	-94.88	1.05	0	V-V
1	69	3(2-5) (	•	-94.88	1.05	0	Wx+V
1	69	3(2-5) (	•	-94.88	1.05	0	-Wx+V
1	69	3(2-5) (	•	-94.88	1.05	0	Wy+V
1	69	3(2-5)	•	-94.88	1.05	0	-Wy+V
1	69	, , ,	0) -135.22	-425.75	-130.43	1	Ex+V
1	69	, , ,	9) 134.29	238.70	132.80	1	-Ex+V
1	69	• •	o) 387.28		400.82	1	Ey+V
1	69	•	0) -388.21	-1174.00	-398.45	1	-Ey+V
	.,						

N-W(N	w)	N V	-X	V-Y	=N=	M-X		M-Y N	E
2(6)	70	-597.65	1559.85	-780.83	-8122.40	-2191.10	1	Vxmax	
2(5)	70	482.38	-1497.10	-1538.50	8606.21	1956.26	1	Vymax	
2(10)	70	-588.04	1554.62	-587.55	-8162.72	-2171.53	1	Nmin	
2(5)	70	482.38	-1497.10	-1538.50	8606.21	1956.26	1	Nmax	
2(5)	70	482.38	-1497.10	-1538.50	8606.21	1956.26	1	Mxmax	:
2(6)	70	-597.65	1559.85	-780.83	-8122.40	-2191.10	1	Mymax	
2(1)	70	-61.62	33.74	-1191.67	266.38	-126.25	0	V-V	
2(0)	70	-61.62	33.74	-1191.67	266.38	-126.25	0	Wx+V	•
2(0)	70	-61.62	33.74	-1191.67	266.38	-126.25	0	•Wx+V	
2(0)	70	-61.62	33.74	-1191.67	266.38	-126.25	0	Wy+V	
2(0)	70	-61.62	33.74	-1191.67	266.38	-126.25	0	-Wy+V	
2(0)	70	-457.88	-1012.80	-1428.34	5897.92	-1581.44	1	Ex+V	
2(0)	70	342.61	1075.55	-890.99	-5414.10	1346.60	1	•Ex+V	
2(0)	70	482.38	-1497.10	-1538.50	8606.21	1956.26	i	Ey+V	
2(0)	70	-597.65	1559.85	-780.83	-8122.40	-2191.10	1	•Ey+V	
N-B =	4	Xw = 3	3.29 Yw≖	4.06	Arfw = -1.1!	990 Aw≔	3	.1320	
N-W	N	N-B(II-J2) (	Nw)	M-M	N-N	V-V	NE		
					. *				

2 70 1(4-2) (4) 183.16 670.36 56.40 1 Nmin

2	70	1(4-2)	(3)	-244.56	-1515.77	70.85	1	Nmax
2	70	1(4-2)	(5)	626.85	-1280.05	-1037.85	1	Mmax -
2	70	1(4-2)	(5)	626.85	-1280.05	-1037.85	1	Vmax
2	70	1(4-2)	(1)	-32.79	-437.59	68.09	0	. V-V
2	70	1(4-2)	(0)	-32.79	-437.59	68.09	0	Wx+V
2	70	1(4-2)	(0)	-32.79	-437.59	68.09	0	-Wx+V
2	70	1(4-2)	(0)	-32.79	-437.59	68.09	0	Wy+V
2	70	1(4-2)	(0)	-32.79	-437.59	68.09	0	-Wy+V
2	70	1(4-2)	(0)	-244.56	-1515.77	70.85	1	Ex+V
2	70	1(4-2)	(0)	183.16	670.36	56.40	1	-Ex+V
2	70	1(4-2)	(0)	626.85	-1280.05	-1037.85	1	Ey+V
2	70	1(4-2)	(0)	-688.25	434.64	1165.11	i	-Ey+V
2	70	2(1-3)	(5)	1402.44	561.60	1576.62	1	Nmin
2	70	2(1-3)	(6)	-1249.68	-1454.11	-1625.62	1	Nmax
2	70	2(1-3)	(3)	1526.89	-226.05	1021.29	1	Mmax
2	70	2(1-3)	(5)	1402.44	561.60	1576.62	1	Vmax
2	70	2(1-3)	(1)	83.38	-457.64	-26.36	0	V-V
2	70	2(1-3)	(0)	83.38	-457.64	-26.36	0	Wx+V
2	70	2(1-3)	(0)	83.38	-457.64	-26.36	0	-Wx+V
2	70	2(1-3)	(0)	83.38	-457.64	-26.36	0	Wy+V
2	70	2(1-3)	(0)	83.38	-457.64	-26.36	0	-Wy+V
2	70	2(1-3)	(0)	1526.89	-226.05	1021.29	1	Ex+V
2	70	2(1-3)	(0)	-1374.14	-666.45	-1070.29	1	-Ex+V
2	70	2(1-3)	(0)	1402.44	561.60	1576.62	1	Ey+V
2	70	2(1-3)	(0)	-1249.68	-1454.11	-1625.62	1	-Ey+V
2	70	3(2-5)	(6)	-148.84	1134.18	-389.42	1	Nmin
2	70	3(2-5)	(5)	138.56	-1483.65	357.01	i	: Nmax
2	70	3(2-5)	(3)	-135.03	-197.40	-88.65	3	Mmax
2	70	3(2-5)	(5)	138.56	-1483.65	357.01	1	Vmax
2	70	3(2-5)	(1)	-5.59	-179.41	-17.31	0	V-V
2	70	3(2-5)	(0)	-5.59	-179.41	-17.31	0 -	· Wx+V
2	70	3(2-5)	(0)	-5.59	-179.41	-17.31	0	-Wx+V
2	70	3(2-5)	(0)	-5.59	-179.41	-17.31	0	Wy+V
2	70	3(2-5)	(0)	-5.59	-179.41	-17.31	0	-Wy+V
2	70	3(2-5)	(0)	-135.03	-197.40	-88.65	1	Ex+V
2	70	3(2-5)	(0)	124.75	-152.07	56.24	ì	Ex+V
2	70	3(2-5)	(0)	138.56	-1483.65	357.01	i	Ey+V
2	70	3(2-5)	(0)	-148.84	1134.18	-389.42	i	-Ey+V
2	70	4( 7- 6)	(5)	-156.98	663.60	44.60	i	Nmin
						15.09	•	<b>M</b>
2	70	4(7-6)	(4)	-12.65	-742.83	13.09	1	Nmax
2 2		4( 7- 6) 4( 7- 6)	(4) (5)	-12.65 -156.98	-742.83 663.60	44.60	1	Mmax
	70					44.60		
2	70 70	4( 7- 6)	(5)	-156.98	663.60	44.60	1	Mmax

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2 2	70 70	4( 7- 6) 4( 7- 6)	• •	-2.18 -2.18	-117.04 -117.04	1.58 1.58	0 0	-Wx+V Wy+V
2	70	4(7-6)	(0)	-2.18	-117.04	1.58	0	-Wy+V
2	70	4(7-6)	(0)	8.62	510.88	-12.16	1	Ex+V
2	70	4(7-6)	(0)	-12.65	-742.83	15.09	ì	-Ex+V
2	70	4(7-6)		-156.98	663.60	44.60	1	Ey+V
2	70	4(7-6)	` •	152.95	-895.54	-41.67	1	-Ey+V

(-Y	N	M-X	=N=	V-Y		V-X	N	w)	N-W(N
Vxmax	. 1	2421.12	4863.29	-146.55	-955.66	.06	739	71	3(5)
Vymax	1	2421.12	4863.29	-146.55	-955.66	.06	739	71	3(5)
Nmin	1	2420.90	4905.57	20.99	-946.71	.48	737	71	3(9)
Nmax	1	-2418.50	-5370.71	-1863.87	848.21	.12	-720.	71	3(6)
Mxma	1	2421.12	4863.29	-146.55	-955.66	.06	: 739	71	3(5)
Myma	1	2421.12	4863.29	-146.55	-955.66	.06	739	71	3(5)
V-V	0	1.00	-271.88	-1038.77	-58.06	0.11	- 10	71	3(1)
Wx+V	0	1.00	-271.88	-1038.77	-58.06	0.11	10	71	3(0)
-Wx+V	0	1.00	-271.88	-1038.77	-58.06	).11	10	71	3(0)
Wy+\	0	1,00	-271.88	-1038.77	-58.06	).11	10	71	3(0)
-Wy+V	0	1.00	-271.88	-1038.77	-58.06	).11	10	71	3(0)
Ex+V	1	-1240.98	-452.23	-1478.94	-98.43	.93	-368.	71	3(0)
-Ex+V	1	1243.60	-55.19	-531.47	-9.02	1.86	387	71	3(0)
Ey+V	1	2421.12	4863.29	-146.55	-955.66	0.06	739	71	3(0)
-Ey+V	1	-2418.50	-5370.71	-1863.87	848.21	.12	-720	71	3(0)

NE V-V N-N N-B(II-I2) (Nw) M-M 10000 -992.74 Nmin 3 71 1(1-2) (5) -1301.41 1598.68 Nmax -2870.68 884.45 1414.49 3 71 1(1-2) (6) Mmax 1598.68 -992.74 -1301.41 3 71 1(1-2) (5) -1301.41 1598.68 -992.74 Vmax 3 71 1(1-2) (5) -58.50 V-V -657.37 ± 60.93 3 . 71 1(1-2) (1) -58.50 Wx+V60.93 -657.37 3 71 1(1-2) (0) -Wx+V-58.50 . 60.93 -657.37 3 1(1-2) (0) 71 . Wy+V -58.50 -657.37 3 71 1(1-2) (0) £ 60.93 -Wy+V ÷ 60.93 -657.37 -58.50 3 71 1(1-2) (0) -79.15 Ex+V -1810.47 1(1-2) (0) 443.02 3 71 -29.14 -Ex+V 538.47 -329.94 3 71 1(1-2) (0) -992.74 Ey+V -1301.41 1598.68 3 71 1(1-2) (0) -Ey+V 884.45 -2870.68 71 1(1-2) (0) 1414.49 3 Nmin -244.21 150.41 3 . 71 2(1-3) (7) -299.68

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3	71	2(1-3)	(4)	310.16	-601.95	253.29	1	Nmax	:	-
3	71	2(1-3)	(5)	433.58	-292.77	260.98	1	Mmax		
3	71	2(1-3)	(3)	-298.72	109.36	-243.39	1	Vmax	.1.	
3	71	2(1-3)	(1)	6.00	-255.60	5.20	0	V-V		
3	71	2(1-3)	(0)	6.00	-255.60	5.20	0	Wx+V		
3	71	2(1-3)	(0)	6.00	-255.60	5.20	0	-Wx+V	-	
3	71	2(1-3)	(0)	6.00	-255.60	5.20	0	Wy+V		
3	71	2(1-3)	(0)	6.00	-255.60	5.20	0	-Wy+V		
3	71	2(1-3)	(0)	-298.72	109.36	-243.39	1	Ex+V		
3	71	2(1-3)	(0)	310.16	-601.95	253.29	1	-Ex+V	•	
3	71	2(1-3)	(0)	433.58	-292.77	260.98	1	Ey+V		
3	71	2(1-3)	(0)	-422.14	-199.82	-251.08	1	-Ey+V		,
3	71	3(2-4)	(6)	392.35	1206.63	424.06	1	Nmin		
3	71	3( 2- 4)	(5)	-384.50	-1452.45	-427.50	1	Nmax		-
3	71	3( 2- 4)	(5)	-384.50	-1452.45	-427.50	1	Mmax		
3	71	3(2-4)	(5)	-384.50	-1452.45	-427.50	1	Vmax	:	
3	71	3(2-4)	<b>(1)</b>	4.22	-125.81	-1.89	0	V-V		
3	71	3(2-4)	(0)	4.22	-125.81	-1.89	0	· Wx+V		
3	71	3(2-4)	(0)	4.22	-125.81	-1.89	0	-Wx+V	-	

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3(2-4) (0)

3(2-4) (0)

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3(2-4) (0)

3(2-4) (0)

3(2-4) (0)

4.22

4.22

138.19

-130.35

-384.50

392.35

-125.81

-125.81

-467.99

-1452.45

1206.63

222.17

-1.89

-1.89

130.14

-133.58

-427.50

424.06

0

0

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₩y+V

Ex+V

-Wy+V

-Ex+V

Ey+V

-Ey+V

N-W(N	lw)	N	V-2	X	V-Y	=N=	M-X	: .	M-Y NE
4(4)	72		6.75	-46.79	-321.04	163.77	19.01	1	Vxmax
4(5)	72		-3.89	127.35	141.87	-421.25	-12.15	1	Vymax
4(5)	72		-3.89	127.35	141.87	-421.25	-12.15	1	Nmin
4(6)	72		5.29	-129.46	-466.12	417.79	14.95	1	Nmax
4(5)	72		-3.89	127.35	141.87	-421.25	-12.15	- 1	Mxmax
4(3)	72		-5.35	44.68	-3.22	-167.23	-16.22	- 1	Mymax
4(1)	72		0.74	-1.01	-162.36	-2.14	1.47	0	V-V
4(0)	72		0.74	-1.01	-162.36	-2.14	1.47	0	Wx+V
4(0)	72		0.74	-1.01	-162.36	-2.14	1.47	. 0	-Wx+V
4(0)	72		0.74	-1.01	-162.36	-2.14	1.47	0	Wy+V
4(0)	72		0.74	-1.01	-162.36	-2.14	1.47	: 0	-Wy+V
4(0)	72		-5.35	44.68	-3.22	-167.23	-16.22	1	Ex+V
4(0)	72		6.75	-46.79	-321.04	163.77	19.01	1	-Ex+V
4(0)	72		-3.89	127.35	141.87	-421.25	-12.15	1	Ey+V
4(0)	72		5.29	-129.46	-466.12	417.79	: 14.95	. 1	-Ey+V

Oil	Car	Storage
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N-B =	2	Xw=	0.47	Yw=	0.17	4rfw = i	.2051	Aw=	• 0	.5760	)
N-W			·12) (Nw)			N-N	V	/-V	NE		
4	72	1(1-2)	(10)	-178.32	2 15.3	9 -122	.58 1	l Ni	min		
4	72	1(1-2)	(5)	177.03	-205.6	0 120.	.31 1	Nı	nax		
4	72	1(1-2)	(5)	177.03	-205.6	0 120.	.31 1	M	max		
4	72	1(1-2)	(5)	177.03	-205.6	0 120.	.31 1	Vı	nax		
4	72	1(1-2)	(1)	-0.61	-104.2	5 -1.2	21 0	V	-V		
4	72	1(1-2)	(0)	-0.61	-104.2	5 -1.2	21 0	W	'x+V		
4	72	1(1-2)	(0)	-0.61	-104.2	5 -1.3	21 0	-W	x+V		
4	72	1(1-2)	(0)	-0.61	-104.2	5 -1.2	21 0	W	y+V		
4	72	1(1-2)	(0)	-0.61	-104.2	5 -1.2	21 0	-W	y+V		
4	72	1(1-2)	(0)	81.52	-109.2	7 43.	.64 1	E	X+V		
4	72	1(1-2)	(0)	-82.92	-98.2	3 -46.1	11 1	-Ex	( <b>+V</b>		
4	72	1(1-2)	(0)	177.03	-205.6	0 120	.31 1	E	y+V		
4	72	1(1-2)	(0)	-178.44	-1.9	1 -122.7	79 1	-Ey	/ <b>+V</b>		
4	72	2(1-3)	(5)	6.89	347.4	7 41	.92	1 N	min		
4	72	2(1-3)	(6)	-5.22	-464.2	2 -41.3	36 1	Nn	iax		
4	72	2(1-3)	(5)	6.89	347.4	17 41	.92	1 · M	max		
4	72	2(1-3)	(5)	6.89	347.4	17 41	.92	1 V	max		
4	72	2(1-3)	(1)	0.89	-58.1	0 0	.33 (	) 1	/-V		
4	72	2(1-3)	(0)	0.89	-58.1	0 0	.33 (	) (	Vx+V		
4	72	2(1-3)	(0)	0.89	-58.1	0 0.	.33 (	<b>y</b> -	Vx+V		
4	72	2(1-3)	(0)	0.89	-58.1	0 0.	.33 (	) V	<b>∀y+</b> V		
4	72	2(1-3)	(0)	0.89	-58.1	0 0.	.33 (	γ- (	/y+V		
4	72	2(1-3)	(0)	-3.60	106.0	5 10.	.99 1	E	x+V		
4	72	2(1-3)	(0)	5.27	-222.8	1 -10.	43 1	-E:	<b>κ+V</b>		
4	72	2(1-3)	(0)	6.89	347.4	7 ~ 41	.92	<b>1</b> I	∃y+V		
4	72	2(1-3)	(0)	-5.22	-464.2	2 -41.3	36 1	-Ey	τŧV	•	
*********				~~~~~~			-				
		- 3	:								
N-W(	Nw)		V-X		V-Y	=N=	M-	X	. ]	M-Y	NE
				:		22.04				1.7	
5(5)		-	.86		-254.79	33.84		52.23	i	Vхл	
5(3)				131.80	-73.63	486.24		-8.35	1	Vyn	
5(7)				131.82	-23.56	484.90		-7.80	1	Nmi	
5(4)				132.04	-527.19	-470.19		1.72	1	Nm	
5(3)				131.80	-73.63	486.24		-8.35	1	Mxn	
5( 5)			.86	25.57	-254.79			52.23	1	Му	
5(1)			.54	0.23	-306.44	8.66		-3.51	0	٧-	
5(0)			.54	0.23	-306.44	8.66		-3.51	0		x+V
5(0)		1	.54	0.23	-306.44	8.66		-3.51	0		(+V
5(0)	73	; -1	.54	0.23	-306.44	8.66	•	-3.51	0	W:	y+V

Calcu	latio	on boo	k o	il Car Storage	n van de state de sta				84
5(0)	73	-1.	54	0.23	-306.44	8.66	-3.51 0	-Wy+V	
5(0)		-4.		-131.80	-73.63	486.24	-8.35 1	Ex+V	
5(0)		- 1		132.04	-527.19	-470.19	1.72 1	-Ex+V	
5(0)		-19.		25.57	-254.79	33.84	-52.23 1	Ey+V	
5(0)		16	.95	-25.34	-346.02	-17.79	45.60 1	-Ey+V	
` '		-			;				-
N•B ≃	- 2	Xw =	0.64	Yw≖	6.27 A	rfw = -1.526	68 Aw=	0.8280	
N-W	N	N-B(I1-	I2) (Nw	r) M	ſ-M	N-N	V-V NE		
								-	
5	73	1(1-2)	(8)	-216.70	-48.07	-131.95	i Nmin		
5	73	1(1-2)	(3)	224.44	-294.05	131.85	1 Nmax		-
5	73	1(1-2)	(3)	224.44	-294.05	131.85	1 Mmax		•
5	73	1(1-2)	(3)	224.44	-294.05	131.85	1 Vmax		•
5	73	1(1-2)	(1)	4.55	-190.59	-0.16	0 V-V	•	
5	73	1(1-2)	(0)	4.55	-190.59	-0.16	0 Wx+\	7	
5	73	1(1-2)	(0)	4.55	-190.59	-0.16	0 -Wx+V		
5	73	1(1-2)	(0)	4.55	-190.59	-0.16	0 Wy+\		
5	73	1(1-2)	(0)	4.55	-190.59	-0.16	0 -Wy+V		
5	73	1(1-2)	(0)	224.44	-294.05	131.85	1 Ex+V	•	•
5	73	1(1-2)	(0)	-215.99	-79.17	-131.96	1 -Ex+V		
5	73	1(1-2)	(0)	24.09	-166.53	-24.67	1 Ey+V		
5	73	1(1-2)	(0)	-15.64	-206.69	24.57	1 -Ey+V		
5	73	2(4-3)	(3)	-5.66	220.42	-1.73	1 Nmin		
5	73	2(4-3)		-0.82	-448.02	4.64	1 Nmax		
5	73	2(4-3)	(5)	-51.54	-88.26	20.96	i Mmax		
5	73	2(4-3)	(5)	-51.54	-88.26	20.96	1 Vmax		
5	73	2(4-3)		-3.43	-115.86	1.54	0 V-V		
5			•		-115.86		0 Wx+\		
					-115.86		0 -Wx+V		-
5	73	2(4-3)			-115.86		0 Wy+\		
5	73	2(4-3)					0 -Wy+V		
					•		1 Ex+V		
							i -Ex+V		-
							! Ey+V		
							1 -Ey+V		
					70 % S H ### # \$# \$ ## ### #	4 + 2 <del>7 + 5 + 4</del> + 5 + 4 + <del>7</del>			
N-W(	Nw)	N	V-X			=N=	M-X	M-Y N	Е
6(3)	74	.n.	.77		-100.72	-2.22	-2.91 1	Vxmax	
	74		.45	27.07				Vymax	
• •	74		.77			-1.63		•	
	74		 ).77			-4.92			
. 6(5)			.45	27.07					
	, ,	U		a 1 . V 1	-00,00		1,71	ATTERITY.	

Calcu	ılati	on boo	ok o	il Car Stora	ge				وروان	-
6(3)	74	-0	.77	2.31	-100.72	-2.22	-2.91	i	Mymax	(
6(1)			0.00	1.63	-174.18	-3.79	-0.04	0	V-V	
6(0)			0.00	1.63	-174.18	-3.79	-0.04	0	Wx+	٧
6(0)			0.00	1.63	-174.18	-3.79	-0.04	0	-Wx+\	,
6(0)			0.00	1.63	-174.18	-3.79	-0.04	0	Wy+1	٧
6(0)			0.00	1.63	-174.18	-3.79	-0.04	0	-Wy+\	1
6(0)			.77	2.31	-100.72	-2.22	-2.91	1	Ex+V	
6(0)			).77	0.76	-240.18	-4.92	2.84	1	-Ex+V	,
6(0)			.45	27.07	-206.53	-72.71	1.41	1	Ey+\	,
6(0)			.44	-23.99	-134.37	65.57	-1.48	1	-Ey+V	
N-B =	= 1	Xw=	0.00	Yw=	9.22 A	Arfw = 0.00	000 Aw=	;	0.3960	
N-W	N		-I2) (Nw		М-М	N-N	V-V	NE		
6 ·	74	1(3-2)	(2)	-1.63	-72.31	2.05	1 Nn	nin		
6	74	1(3-2)		-4.92				nax		
	74	1(3-2)		-72.71			1 : Mr			
6	74	1(3-2)		-72.71				nax		
6	74	1(3-2)	(1)	-3.79				-V		
	74	1(3-2)		-3.79				/x+V	,	
6	74	1(3-2)	(0)	-3.79				′x+V		
6	74	1(3-2)		-3.79				/y+V		
	74	1(3-2)	(0)	-3.79				'y+V		
6	74 -	1(3-2)	(0)	-2.22		2.31	1 E	χ+V		
6	74	1(3-2)		-4.92	-240.18	0.76	1 -Ex	(+V	•	
6	74	1(3-2)	(0)	-72.71	-206.53	27.06	1 E	y+V	-	
6	74 :	1(3-2)	(0)	65.57	-134.37	-23.99	1 -E3	/ <b>+V</b>		
*******				· · · · · · · · · · · · · · · · · · ·		************				
·		N	V-X		/-Y	=N=	M•X		M-Y	٧E
	75	-0	.70	-1.74	-91.86	4.34	-2.60	1	Vxmax	
7(5)	75	· : 0	.77	13.49	-250.08	-38.24	2.70	1	Vyma	<
7(10	75	-0	).75	-13.91	-5.42	38.24	-2.72	1	Nmin	
7(5)	75	0	.77	13.49	-250.08	-38.24	2.70	1	Nmax	
7(5)	75	: 0	.77	13.49	-250.08	-38.24	2.70	1	Mxma	X
7(3)	75	: -0.	.70	-1.74	-91.86	4.34	-2.60	i	Mymax	•
					-142.55		-0.01	0	V-V	
7(0)	75	0	.01	-0.22	-142.55	-0.04	-0.01	0	Wx+V	,
7(0)	75				-142.55					
7(0)	75	0	.01	-0.22	-142.55				Wy+V	
7( 0)	75	^	Δ1	0.33	142 55	0.04	0.01	Λ	Workly	

1

7(0) 75 7(0) 75

7(0) 75

0.01

-0.70

0.73

-0.22

-1.74

1.29

-142.55

-91.86

-186.86

-0.04

4.34

-4.35

-0.01

-2.60

2.58

-Wy+V

Ex+V

1 - Ex+V

7(0)	75	0	.77	13.49	-250.08	-38.24	,	2.70	1 E	y+V
7(0)	75	-0.	74 -	-13.94	-28.64	38.24	-2	2.72	l -Ey	+γ
<b>V•B</b> =	1	Xw=	0.00	Yw≔	12.23 A	rfw = 0.00	00 A	<b>4</b> w=	0.3240	)
N-W	N	N-B(I1-	I2) (Nw)	M	-M	N-N	۷-۲	V NI	3	
7	75	1(3-2)	(10)	38.24	-5,42	-13.91	1	Nmin	1	
	75	1(3-2)		-38.25	-250.08		1	Nmax		
7	75	1(3-2)		-38.25	-250.08	13.49	1	Mmax	ζ.	
		1(3-2)	- •	-38.25	-250.08	13.49	1	Vmax	-	
7	75	1(3-2)	(1)	-0.04	-142.55	-0.22	0	V-V		
7	75	1(3-2)	(0)	-0.04	-142.55	-0.22	0	Wx+	V	
7	75	1(3-2)	(0)	-0.04	-142.55	-0.22	0	-Wx+	V	
7	<b>7</b> 5	1(3-2)	(0)	-0.04	-142.55	-0.22	0	Wy+	V	
7	75	i(3-2)	(0)	-0.04	-142.55	-0.22	0	-Wy+	V	
7	75	1(3-2)	(0)	4.34	-91.86	-1.74	1	Ex+	V	
7	75	1(3-2)	(0)	-4.35	-186.86	1.29	1	-Ex+V	<b>√</b>	
7	75	1(3-2)	(0)	-38.25	-250.08	13.49	1	Ey+	V	
7	75	1(3-2)	(0)	38.24	-28.64	-13.95	1	-Ey+\	<b>V</b>	

N-W(N	lw)	N	v-x	V-Y	=N=	M-X		M-Y NE
8(3)	76	-13.18	-48.28	-408.74	180.54	-42.26	1	Vxmax
8(5)	76	-10.02	-171.00	-198.37	564.66	-28.07	i	Vymax
8(8)	76	12.4	50.68	-38.04	-180.07	39.20	1	Nmin
8(3)	76	-13.18	-48.28	-408.74	180.54	-42.26	1	Nmax
8(5)	76	-10.02	-171.00	-198.37	564.66	-28.07	1	Mxmax
8(3)	76	-13.18	-48.28	-408.74	180.54	-42.26	1	Mymax
8(1)	76	-0.46	1.50	-249.46	0.22	-1.83	0	V-V
8(0)	76	-0.46	1.50	-249.46	0.22	-1.83	0	Wx+V
8(0)	76	-0.46	1.50	-249.46	0.22	-1.83	0	-Wx+V
8(0)	76	-0.46	1.50	-249.46	0.22	-1.83	0	Wy+V
8(0)	76	-0.46	1.50	-249.46	0.22	-1.83	0	-Wy+V
8(0)	76	-13.18	-48.28	-408.74	180.54	-42.26	1	Ex+V
8(0)	76	12.3	50.90	-78.66	-180.02	38.92	1	-Ex+V
8(0)	76	-10.02	-171.00	-198.37	564.66	-28.07	1	Ey+V
8(0)	76	9.18	3 173.62	-289.03	-564.14	24.73	1	-Ey+V
N-B =	2	Xw=	4.68 Yw =	0.27	Arfw = -0.9	984 Aw=	0	.6480
N-W	N	N-B(II-I2)	(Nw)	M-M	N-N	V-V	NE	`

286.02

-501.89

-86.33

84.20

-36.09

34.02

Nmin

Nmax

76

76

8

1(1-2) (6)

1(1-2) (5)

Calculation book	Oil Car Storage
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8	76	1(1-2)	(5)	34.02	-501.89	84.20	1	Mmax
8	76	1(1-2)	(5)	34.02	-501.89	84.20	ŧ.	Vmax
8	76	1(1-2)	(1)	-1.14	-110.41	-1.20	0	V-V
8	76		(0)	-1.14	-110.41	-1.20	0	Wx+V
8	76		(0)	-1.14	-110.41	-1.20	0	-Wx+V
8	76		(0)	-1.14	-110.41	-1.20	0	Wy+V
8	76		(0)	-1.14	-110.41	-1.20	0	-Wy+V
8	76	•	(0)	-10.25	-302.52	15.08	ì	Ex+V
8	76	•	(0)	8.18	86.66	-17.20	1	-Ex+V
8	76	•	(0)	34.02	-501.89	84.20	1	Ey+V
8	76	• •	(0)	-36.09	286.02	-86.33	i	-Ey+V
8	76	• -	(5)	179.56	303.52	149.17	1	Nmin
		• -						
8	76	2(1-3)	(6)	-176.75	-575.05	-150.92	1	Nmax
8 8	76 76		(6) (5)	-176.75 179.56	-575.05 303.52	-150.92 149.17	1 1	Nmax Mmax
		2(1-3)	(5)				_	
8	76	2(1-3) 2(1-3)		179.56	303.52	149.17	<b>i</b>	Mmax
8 8	76 76	2(1-3) ( 2(1-3) ( 2(1-3) (	(5) (5)	179.56 179.56	303.52 303.52	149.17 149.17	i 1	Mmax Vmax
8 8 8	76 76 76	2(1-3) (2(1-3) (2(1-3) (2(1-3) (2-3)	(5) (5) (1)	179.56 179.56 1.52	303.52 303.52 -139.05	149.17 149.17 -1.01	1 0	Mmax Vmax V-V
8 8 8	76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0)	179.56 179.56 1.52 1.52	303.52 303.52 -139.05 -139.05	149.17 149.17 -1.01 -1.01	1 0 0	Mmax Vmax V-V Wx+V
8 8 8 8	76 76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0) (0)	179.56 179.56 1.52 1.52 1.52	303.52 303.52 -139.05 -139.05 -139.05	149.17 149.17 -1.01 -1.01	1 0 0 0	Mmax Vmax V-V Wx+V -Wx+V
8 8 8 8 8	76 76 76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0) (0) (0)	179.56 179.56 1.52 1.52 1.52 1.52	303.52 303.52 -139.05 -139.05 -139.05	149.17 149.17 -1.01 -1.01 -1.01	1 0 0 0 0	Mmax Vmax V-V Wx+V -Wx+V Wy+V
8 8 8 8 8	76 76 76 76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0) (0) (0) (0)	179.56 179.56 1.52 1.52 1.52 1.52 1.52	303.52 303.52 -139.05 -139.05 -139.05 -139.05	149.17 149.17 -1.01 -1.01 -1.01 -1.01	1 0 0 0 0	Mmax V-V Wx+V -Wx+V Wy+V -Wy+V
8 8 8 8 8 8	76 76 76 76 76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0) (0) (0) (0) (0)	179.56 179.56 1.52 1.52 1.52 1.52 1.52 84.00	303.52 303.52 -139.05 -139.05 -139.05 -139.05 -106.22	149.17 149.17 -1.01 -1.01 -1.01 -1.01 47.72	1 0 0 0 0 0	Mmax V-V Wx+V -Wx+V Wy+V -Wy+V Ex+V
8 8 8 8 8 8	76 76 76 76 76 76 76 76	2(1-3) (2(1-3)	(5) (5) (1) (0) (0) (0) (0) (0) (0)	179.56 179.56 1.52 1.52 1.52 1.52 1.52 84.00	303.52 303.52 -139.05 -139.05 -139.05 -139.05 -106.22 -165.32	149.17 149.17 -1.01 -1.01 -1.01 -1.01 47.72 -49.47	1 0 0 0 0 0 1	Mmax Vmax V-V Wx+V -Wx+V Wy+V -Wy+V Ex+V

## The coordinate points of Mx=0 and My=0

Tower $= 1$	Xodf=	41.08	Yodf =	10.67	SGM-N =	-24341.5	Vxmax
Tower = 1	Xodf =	40.25	Yodf =	10.68	SGM-N =	-24856.0	Vymax
Tower = 1	Xodf =	47.02	Yodf =	10.28	SGM-N =	-17694.3	Nmin
Tower = 1	Xodf=	36.68	Yodf =	11.12	SGM-N =	-28515.1	Nmax
Tower = 1	Xodf=	40.22	· Yodf =	10.65	SGM-N =	-24776.4	Mxmax
Tower = 1	Xodf=	41.54	Yodf =	10.81	SGM-N =	-23959.9	Mymax
Tower = 1	Xodf =	40.64	Yodf=	10.80	SGM-N =	-25769.2	v-v
Tower = 1	Xodf=	40.64	Yodf=	10.80	SGM-N =	-25769.2	Wx+V
Tower = 1	Xodf=	40.64	Yodf =	10.80	SGM-N =	-25769.2	-Wx+V
Tower = 1	Xodf=	40.64	Yodf =	10.80	SGM-N =	-25769.2	Wy+V
Tower = 1	Xodf =	40.64	Yodf =	10.80	SGM-N =	-25769.2	-Wy+V
Tower = 1	Xodf=	40.55	Yodf =	10.65	SGM-N =	-24610.8	Ex+V
Tower = 1	Xodf=	40.45	Yodf =	10.94	SGM-N =	-24610.8	-Ex+V
Tower = 1	Xodf=	39.77	Yodf=	10.64	SGM-N =	-24610.8	Ey+V
Tower = 1	Xodf=	41.23	Yodf =	10.96	SGM-N =	-24610.8	-Ey+V

•	Output of Reinforcements	
ŧ	PJ-1.OUT	
ŧ	*	. *
•	Symbols:	
•	B,H Height and Width of section(m)	
•	Lc,Lw,Lg,Lb Length of column, shear wall, brace and beam(m) COLUMN:	•
•	(NUc)Uc Ratio of axial force to section axial strength(N/A*fc)*	
t	NUc Combinatorial number which controls Uc	
:	Ascx,y(NAsc) Reinforcement area at one side of column(mm2)	*
ŧ	Asc(NAsc) Reinforcement area of column of circular section(mm	2)*
•	NAsc Combinatorial number which controls Asc	
•	0 Minimum reinforcement	
ŧ	Mc,Nc(x,y) Moment and axial force which controls Acs	*
	Rsc Ratio of reinforcement of column(As/B*H)	4
	Asvc(NAsvc) Reinforcement area of stirrups for column(mm2)	*
	in certain spacing	
	NAsvc Combinatorial number which controls Asvc	
	0 ··· Minimum reinforcement	
	Vc,Nc(x,y) Shear and axial force which controls Asve	*
	Rsvc Volumetric ratio of stirrups of column(Vs/Vc)	*
	Vs Volume of stirrups in column	
	Vc Volumn of concrete Vc = B*H*Sc	
	Sc Distance of stirrups in column	•
	WALL:	
	Arfw Angle of section between wall axis and coordinate axis	ŧ ··
	N(11-12) Number of branch of shear wall	. *
	11-12 Number of nodes in front and back of wall branch	*
	T*L Thickness and length of wall branch	. •
	aa Thickness of nominal cover(mm)(thickness of the wall)	•
	As Reinforcement area in the embedded column at one end(mm2) of branch	*
	Rs Ratio of reinforcement of branch(As/2*T*T)	
	(NAs)M,N Moment and axial force which controls As	*
	NAS Combinatorial number which controls As	

Ash --- Horizontal reinforcement area in certain spacing(mm2) Rsh --- Ratio of horizontal reinforcement(Ash/T\*Swh) (NAsh)V,Nh ... Shear and axial force which controls Ash NAsh --- Combinatorial number which controls Ash Swh --- Distance of horizontal bar in wall BEAM: +M(Nm) --- Maximum positive moment of beam on I,1,2,3,J with equal spacing -M(Nm) --- Maximum negative moment of beam on I,1,2,3,J with equal spacing Nm --- Combinatorial number which controls +M and -M As(NAs) --- Reinforcement area of beam on I,1,2,3,J(mm2) with equal spacing NAs --- Combinatorial number which controls As 0 --- Minimum reinforcement Rs --- Ratio of reinforcement of beam(As/B\*H) V(NV) --- Maximum combined shear of beam NV --- Combinatorial number which controls V Asv(NAsv) --- Reinforcement area of stirrups(mm2) NAsy --- Combinatorial number which controls Asy 0 --- Minimum reinforcement Rsv --- Ratio of stirrups of beam(Asv/B\*Sb) T & V(NTV) --- Maximum Combined torsion and shear(kN-m) NTV --- Combinatorial number which controls T & V Ast(NAst) --- Longitudinal reinforcement area by torsion and shear\* NAst --- Combinatorial number which controls Ast 0 --- Minimum reinforcement Asty --- Reinforcement area of stirrups by torsion and shear(mm2) \* Ast1 --- Single reinforcement area of stirrups for torsion(mm2)

i					•	·		-	1				
1		- 1											
i							-		1				
1	No.	E-X	E-Y	W-2	X · · '	W-Y	V-D	V-L	V-E	- <b> </b> -			
1		ļ.,							1				
1	1	0.000	0.000	0.000	0.000	1.200	1.400	0.000	1				
1	2	0.000	0.000	0.000	0.000	1.000	1.400	0.000	-	-			
1	3	1.300	0.000	0.000	0.000	1.200	0.600	0.000	1 -	· · .			
1	4	-1.300	0.000	0.000	0.000	1.200	0.600	0.000	• [	٠			
1	5	0.000	1.300	0.000	0.000	1.200	0.600	0.000	1				
1	6	0.000	-1.300	0.000	0.000	1.200	0.600	0.000	1				

Sb --- Distance of stirrups in beam

```
1,300 0.000 0.000 0.000 1.000 0.500 0.000
Τ
   7
   8 -1.300 0.000 0.000 0.000 1.000
                              0.500
                                  0.000
   9 0.000 1.300 0.000 0.000 1.000
                              0.500
                                  0.000
10 0.000 -1.300 0.000 0.000 1.000
                              0.500 0.000 |
| No. of Floor = 1 |
N-C= 1(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -264.
 (1) Mx = -62. Ncx = -275.
 (1) My = 0. Ncy = -275.
Ascx(1)= 322. Ascy(1)= 200. Rsc= 0.65 Asvc(0)= 70.0 Rsvc= 0.40
      2D18 1D18 3D6
N-C= 2(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -265.
 (1) Mx = -64. Ncx = -275.
 (1) My = 0. Ncy = -275.
Ascx(1)= 341. Ascy(1)= 200. Rsc= 0.68 Asvc(0)= 70.0 Rsvc= 0.40
      2D18 1D18 3D6
N-C= 3(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -266.
 (1) Mx = -64. Ncx = -275.
 (1) My = 0. Ncy = -275.
Ascx(1)= 342. Ascy(1)= 200. Rsc=0.68 Asvc(0)= 70.0 Rsvc=0.40
   2D18 1D18
                                    3D6
N-C= 4(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -267.
                        A Company
 (6) Mx = -77. Ncx = -267.
 (1) My = 0. Ncy = -276.
Ascx(6)= 355. Ascy(1)= 200. Rsc=0.69 Asvc(0)= 70.0 Rsvc=0.40
            1D18
      2D18
                              · 3D 6
N-C= 5 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -266.
 (6) Mx = -80. Ncx = -266.
 (1) My = -1. Ncy = -274.
Ascx(6)= 382. Ascy(1)= 200. Rsc=0.73 Asvc(0)= 70.0 Rsvc=0.40
```

```
3D6
       2D18
             1D18
N-C= 6(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -278.
 (6) Mx = -83. Ncx = -278.
 (1) My = 5. Ncy = -285.
Ascx(6)= 393. Ascy(1)= 200. Rsc=0.74 Asvc(0)= 70.0 Rsvc=0.40
                                    3D6
                 1D18
       2D18
N-C= 7(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.08 N = -170.
 (6) Mx = -72. Ncx = -170.
 (1) My = -35. Ncy = -170.
Ascx(6)= 397. Ascy(1)= 200. Rsc=0.75 Asvc(0)= 70.0 Rsvc=0.40
      2D18 1D18
                                     3D 6
N-C= 8(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.09 N = -173.
 (6) Mx = -72. Nex = -173.
 (1) My = 35. Ncy = -170.
Ascx(6)= 396. Ascy(1)= 200. Rsc=0.74 Asvc(0)= 70.0 Rsvc=0.40
      2D18 1D18
                                     3D 6
N-C= 9(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -279.
 (6) Mx = -90. Ncx = -279.
 (1) My = -6. Ncy = -285.
Ascx(6)= 446. Ascy(1)= 200. Rsc=0.81 Asvc(0)= 70.0 Rsvc=0.40
       2D18 ID18
                                    3D 6
N-C= 10(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -270.
 (6) Mx = -95. Nex = -270.
 (1) My = 1. Ncy = -274.
Ascx(6)= 484. Ascy(1)= 200. Rsc=0.85 Asvc(0)= 70.0 Rsvc=0.40
       2D18 1D18 3D6
N-C= 11 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -272.
 (6) Mx = -98. Ncx = -272.
 (1) My = 0. Ncy = -276.
                         f •
Ascx(6)= 508. Ascy(1)= 200. Rsc= 0.88 Asvc(0)= 70.0 Rsvc= 0.40
       2D18 1D18 3D6
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N-C= 12(1)B^{+}H(mm)= 400^{+} 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -273.
 (6) Mx = -102. Ncx = -273.
 (1) My = 0. Ncy = -275.
Ascx(6)= 533. Ascy(1)= 200. Rsc= 0.92 Asvc(0)= 70.0 Rsvc= 0.40
       3D18 1D18 3D6
N-C= 13 (1)B*H(mm)= \cdot 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -274.
 (6) Mx = -105. Ncx = -274.
 (1) My = 0. Ncy = -275.
Ascx(6)= 558. Ascy(1)= 200. Rsc= 0.95 Asvc(0)= 70.0 Rsvc= 0.40
        3D18 ID18
                                     3D 6
N-C= 14(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -275.
 (6) Mx = -109. Nex = -275.
 (1) My = 0. Ncy = -276.
Ascx(6)= 583. Ascy(1)= 200. Rsc= 0.98 Asvc(0)= 70.0 Rsvc= 0.40
            1D18
       3D18
                                      3D6
N-C= 15(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -274.
 (6) Mx = -112. Nex = -274.
 (1) My = -1. Ncy = -274.
Ascx(6)= 609. Ascy(1)= 200. Rsc=1.01 Asvc(0)= 70.0 Rsvc=0.40
      3D18 1D18 3D6
N-C= 16 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -285.
 (6) Mx = -115. Ncx = -285.
 (1) My = 5. Ncy = -284.
Ascx(6)= 624. Ascy(1)= 200. Rsc= 1.03 Asvc(0)= 70.0 Rsvc= 0.40
       3D18
             1D18
                                 3D 6
N-C= 17(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.09 N = -179.
                         .....
 (6) Mx = -105. Nex = -179.
(1) My = -31. Ney = -172.
                                     Ascx(6)= 627. Ascy(1)= 200. Rsc=1.03 Asvc(0)= 70.0 Rsvc=0.40
      3D18
                1D18
                                     3D 6
N-C= 18(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -389.
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Ascx(0)= 200. Ascy(0)= 200. Rsc= 0.50 Asvc(0)= 70.0 Rsvc= 0.40
                                   3D 6
     1D18 1D18
N-C= 19(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -379.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
      1D18 1D18
                                   3D 6
N-C= 20(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -381.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
            1D18
      1D18
N-C= 21 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -381.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                                   3D 6
                 1D18
      1D18
N-C= 22(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -380.
Ascx(0)= 200. Ascy(0)= 200. Rsc= 0.50 Asvc(0)= 70.0 Rsvc= 0.40
      1D18 1D18
                                   3D 6
N-C= 23 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -389.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
             1D18
      1D18
N-C= 24(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -266.
Asex(0)= 200. Asey(0)= 200. Rsc= 0.50 Asvc(0)= 70.0 Rsvc= 0.40
      1D18 1D18
                                   3D 6
N-C= 25(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -266.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
             1D18
                                   3D 6
      1D18
N-C= 26(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -390.
Ascx(0)=200. Ascy(0)=200. Rsc=0.50 Asvc(0)=70.0 Rsvc=0.40
      1D18 1D18 3D6
N-C= 27(1)B*H(mm)= 400* 400 Lc= 6.00(m)
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(5) Uc = N/Ac/fc = 0.19 N = -382.
Ascx(0)=200. Ascy(0)=200. Rsc=0.50 Asvc(0)=70.0 Rsvc=0.40
      N-C= 28(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -384.
Ascx(0)= 200. Ascy(0)= 200. Rsc= 0.50 Asvc(0)= 70.0 Rsvc= 0.40
                 1D18
      1D18
N-C= 29 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -384.
 (9) Mx = 64. Ncx = -320.
 (1) My = 0. Ncy = -401.
Ascx(9)= 230. Ascy(1)= 200. Rsc=0.54 Asvc(0)= 70.0 Rsvc=0.40
       1D18 1D18 3D6
N-C= 30(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -384.
 (9) Mx = 68. Ncx = -321.
 (1) My = 0. Ncy = -401.
Ascx(9)= 265. Ascy(1)= 200. Rsc= 0.58 Asvc(0)= 70.0 Rsvc= 0.40
      2D18 1D18
N-C= 31 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -385.
 (9) Mx = 72. Ncx = -321.
 (1) My = 0. Ncy = -401.
Ascx(9)= 299. Ascy(1)= 200. Rsc= 0.62 Asvc(0)= 70.0 Rsvc= 0.40
      2D18 1D18
N-C= 32(1)B*H(mm)= 400* 400 \cdot Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.19 N = -384.
 (9) Mx = 77. Ncx = -321.
 (1) My = -1. Ncy = -400.
Ascx(9)= 334. Ascy(1)= 200. Rsc= 0.67 Asvc(0)= 70.0 Rsvc= 0.40
      2D18 1D18 3D6
N-C= 33(1)B*H(mm)= 400* 400 Lc= 6.00(m)
(5) Uc = N/Ac/fc = 0.20 N = -391.
 (9) Mx = 81. Ncx = -327.
 (1) My = 3. Ncy = -408.
Ascx(9)= 363. Ascy(1)= 200. Rsc=0.70 Asvc(0)= 70.0 Rsvc=0.40
       2D18 1D18
```

```
N-C= 34(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -272.
 (9) Mx = 85. Ncx = -228.
 (1) My = -23. Ncy = -277.
Ascx(9)= 444. Ascy(1)= 200. Rsc=0.80 Asvc(0)= 70.0 Rsvc=0.40
        2D18 1D18
                                       3D6
N-C= 35(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -387.
Ascx(0)= 200. Ascy(0)= 200. Rsc= 0.50 Asvc(0)= 70.0 Rsvc= 0.40
                                       3D 6
                   1D18
      1D18
N-C= 36(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -378.
A_{SCX}(0)= 200. A_{SCY}(0)= 200. A_{SC}=0.50 A_{SVC}(0)= 70.0 A_{SVC}=0.40
                                       3D6
        1D18
                   1D18
N-C= 37(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -380.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                                       3D 6
                   1D18
        1D18
N-C= 38(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -380.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                                       3D6
                   1D18
        1D18
N-C= 39(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -379.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                                       3D 6
                   1D18
        1D18
N-C= 40(1)B^{+}H(mm)= 400^{+} 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -387.
Ascx(\theta)= 200. Ascy(\theta)= 200. Rsc=0.50 Asvc(\theta)= 70.0 Rsvc=0.40
             1D18
                                       3D6
        1D18
N.C= 41(1)B*H(mm)= 400* 400 Lc= 6.00(m)
  (6) Uc = N/Ac/fc = 0.13 N = -266.
Ascx(0)=200. Ascy(0)=200. Rsc=0.50 Asvc(0)=70.0 Rsvc=0.40
               1D18
                          . . . .
                                      3D 6
      1D18
N-C= 42(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.13 N = -264.
```

```
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                             3D 6
                   1D18
        1D18
             .
N-C= 43(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -389.
A_{SCX}(0)= 200. A_{SCY}(0)= 200. R_{SC}=0.50 A_{SVC}(0)= 70.0 R_{SVC}=0.40
                   1D18
                                        3D 6
        1D18
N-C= 44(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -380.
Asex(0)= 200. Asey(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                   1D18
       1D18
N-C= 45(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -382.
Ascx(0)= 200. Ascy(0)= 200. Rsc=0.50 Asvc(0)= 70.0 Rsvc=0.40
                1D18
                                        3D 6
       1D18
N-C= 46(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -382.
 (10) Mx = -63. Ncx = -319.
 (1) My = 0. Ncy = -400.
Ascx(10)= 230. Ascy(1)= 200. Rsc=0.54 Asvc(0)= 70.0 Rsvc=0.40
                   1D18
       1D18
                                        3D 6
44-----
N-C= 47(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -383.
 (10) Mx = -68. Ncx = -320.
 (1) My = 0. Ncy = -400.
Ascx(10)= 265. Ascy(1)= 200. Rsc=0.58 Asvc(0)= 70.0 Rsvc=0.40
        2D18
                   1D18
                                        3D6
N-C= 48(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -383.
 (10) Mx = -72. Ncx = -320.
 (1) My = 0. Ncy = -400.
Ascx(10)= 299. Ascy(1)= 200. Rsc= 0.62 Asvc(0)= 70.0 Rsvc= 0.40
                                       3D 6
                   1D18
       2D18
N-C= 49(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) \text{ Uc} = \text{N/Ac/fc} = 0.19 \text{ N} = -383.
 (10) Mx = -77. Ncx = -320.
 (1) My = -1. Ncy = -399.
Ascx(10)= 335. Ascy(1)= 200. Rsc= 0.67 Asvc(0)= 70.0 Rsvc= 0.40
```

```
1D18
                                       3D6
       2D18
N-C= 50(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.19 N = -390.
 (10) Mx = -81. Ncx = -325.
 (1) My = 3. Ncy = -406.
Ascx(10)= 365. Ascy(1)= 200. Rsc= 0.71 Asvc(0)= 70.0 Rsvc= 0.40
               . 1D18
                                       3D6
       2D18
N-C= 51(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (6) Uc = N/Ac/fc = 0.14 N = -273.
 (10) Mx = -85. Ncx = -229.
 (1) My = -23. Ncy = -276.
Ascx(10)= 443. Ascy(1)= 200. Rsc= 0.80 Asvc(0)= 70.0 Rsvc= 0.40
             1D18
       2D18
                                       3D6
N-C= 52(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -266.
 (1) Mx = 63. Ncx = -276.
 (1) My = 0. Ncy = -276.
Ascx(1)= 326. Ascy(1)= 200. Rsc= 0.66 Asvc(0)= 70.0 Rsvc= 0.40
                                       3D 6
       2D18 1D18
N-C= 53 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -266.
 (1) Mx = -65. Ncx = -277.
 (1) My = 0. Ncy = -277.
Ascx(1)= 345. Ascy(1)= 200. Rsc=0.68 Asvc(0)= 70.0 Rsvc=0.40
                  1D18
                                       3D6
       2D18
***********************************
N-C= 54(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -267.
 (1) Mx = 65. Ncx = -277.
 (1) My = 0. Ncy = -277.
Ascx(1)= 346. Ascy(1)= 200. Rsc= 0.68 Asvc(0)= 70.0 Rsvc= 0.40
       2D18 ID18
                                      3D 6
N-C= 55(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.13 N = -268.
 (5) Mx = 77. Ncx = -268.
                           (1) My = 0. Ncy = -277.
Ascx(5)= 358. Ascy(1)= 200. Rsc=0.70 Asvc(0)= 70.0 Rsvc=0.40
             ID18
      2D18
                                     3D 6
```

```
N-C= 56(1)B^+H(mm)= 400^+ 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc \approx 0.13 N = -267.
 (5) Mx = 81. Ncx = -267.
 (1) My = -1. Ncy = -275.
Ascx(5)= 385. Ascy(1)= 200. Rsc=0.73 Asvc(0)= 70.0 Rsvc=0.40
      2D18 1D18
                                      3D 6
N-C= 57 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -280.
 (5) Mx = 84. Ncx = -280.
 (1) My = 5. Ncy = -286.
Ascx(5)= 395. Ascy(1)= 200. Rsc=0.74 Asvc(0)= 70.0 Rsvc=0.40
      2D18 1D18
                                      3D 6
N-C= 58(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.08 N = -169.
 (5) Mx = 72. Ncx = -169.
 (1) My = -35. Ncy = -171.
Ascx(5)=400. Ascy(1)=200. Rsc=0.75 Asvc(0)=70.0 Rsvc=0.40
            1D18
                                      3D6
        2D18
N-C= 59(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.09 N = -174.
        73. Ncx = -174.
 (5) Mx =
 (1) My = 35. Ncy = -171.
Ascx(5)= 396. Ascy(1)= 200. Rsc=0.74 Asvc(0)= 70.0 Rsvc=0.40
                                   3D 6
       2D18 1D18
N-C= 60 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -280.
 (5) Mx = 91. Nex = -280.
 (1) My = -6. Ncy = -286.
Ascx(5)= 449. Ascy(1)= 200. Rsc= 0.81 Asvc(0)= 70.0 Rsvc= 0.40
             1D18
                                    3D 6
       2D18
N-C= 61(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -271.
 (5) Mx = 95. Nex = -271.
(1) My = 1. Ney = -275.
Ascx(5)= 487. Ascy(1)= 200. Rsc=0.86 Asvc(0)= 70.0 Rsvc=0.40
              1D18
                                      3D 6
        2D18
N-C= 62(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -274.
```

```
99. Nex = -274.
 (5) Mx =
 (1) My = 0. Ncy = -277.
Ascx(5)= 510. Ascy(1)= 200. Rsc= 0.89 Asvc(0)= 70.0 Rsvc= 0.40
                                      3D 6
                  1D18
       3D18
N-C= 63 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -274.
 (5) Mx = 102. Ncx = -274.
 (1) My = 0. Ncy = -277.
Ascx(5)= 536. Ascy(1)= 200. Rsc= 0.92 Asvc(0)= 70.0 Rsvc= 0.40
       3D18 ID18
N-C= 64(1)B^*H(mm)= 400^* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -275.
 (5) Mx = 106. Ncx = -275.
 (1) My = 0. Ncy = -277.
Ascx(5)=561. Ascy(1)=200. Rsc=0.95 Asvc(0)=70.0 Rsvc=0.40
             1D18
                                      3D6
       3D18
N-C= 65(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -276.
 (5) Mx = 109. Ncx = -276.
 (1) My = 0. Ncy = -277.
Ascx(5)=585. Ascy(1)=200. Rsc=0.98 Asvc(0)=70.0 Rsvc=0.40
       3D18 1D18
                                      3D6
N-C= 66 (1)B^*H(mm) = 400^* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -275.
 (5) Mx = 113. Nex = -275.
 (1) My = -1. Ncy = -275.
Ascx(5)=612. Ascy(1)=200. Rsc=1.01 Asvc(0)=70.0 Rsvc=0.40
                                      3D 6
       3D18 ID18
N-C= 67 (1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.14 N = -287.
 (5) Mx = 116. Ncx = -287.
 (1) My = 5. Ncy = -286.
Ascx(5)= 626. Ascy(1)= 200. Rsc= 1.03 Asvc(0)= 70.0 Rsvc= 0.40
       3D18 1D18
                                      3D 6
N-C= 68(1)B*H(mm)= 400* 400 Lc= 6.00(m)
 (5) Uc = N/Ac/fc = 0.09 N = -178.
 (5) Mx = 105. Nex = -178.
 (1) My = -31. Ncy = -172.
```

Asex(5)= 629. Asey(1)= 200. Rse= 3D18 1D18			3		0	<del></del>						
N-W = 1 Lw = 6.00 Arfw = 0.0290												
N(II-I2) T*L aa As	SAs	Rs	Ash	Sz	Ash	Rsh						
Uc		:				-						
(m*m) (cm) (mm*2)		(%)	(mm*2)		- (%)							
(6) $M = 10$ . $N = 1827$ .												
1(4-2) 0.24* 7.2 24.0 1152. 5D1	8 1.00	72.00	3D 6	0.20	0.00	- '						
(5) $M = -433$ . $N = 368$ .			45.									
2(1-3) 0.24* 2.1 24.0 1152. 5D1	8 1.00	72.00	3D 6	0.20	0.00							
(5) M = 387. N = 987.												
(10) $V = 399$ . Nh = 1022.		005.05	en e	0.62								
3(2-5) 0.24* 1.5 24.0 2304. 8D2	0 2.00	205.75	20.8	0.57	0.00	•						
N-W = 2 Lw = 6.00 Arfw = -1.1990												
N(11-12) T*L aa As	SAs	Rs	Ash	Sá	Ash	Rsh						
Uc												
(m*m) (cm) (mm*2)		(%)	(mm*2)		(%)							
(6) $V = 1165$ . $Nh = 435$ .					,							
1(4-2) 0.24* 4.2 24.0 576. 3D1	8 0.50	125.95	5D 6	0.35	0.00							
(9) $V = 1581$ . $Nh = 636$ .			÷									
2(1-3) 0.24* 5.1 24.0 576. 3D1	8 0.50	151.38	6D 6	0.42	0.00							
(6) $M = -149$ . $N = 1134$ .												
(10) $V = -387$ . $Nh = 1163$ .												
3(2-5) 0.24* 2.1 24.0 1728. 7D1	8 1.50	106.49	4D 6	0.30	0.00							
(5) $M = -157$ . $N = 664$ .				-	-							
4(7-6) 0.24* 1.7 24.0 1152. 5DI	8 1.00	72.00	3D 6	0.20	0.00							
N-W = 3 Lw = 6.00 Arfw = -0.0519	*********	********										
N(II-I2) T*L aa As	SAs	Rs	Ash	SA	sh.	Reh						
Uc .	0710	103	76311	07	1311	Kan						
(m*m) (cm) (mm*2)		(%)	(mm*2)		(%)							
(5) $M = -1301$ . $N = 1599$ .												
1(1-2) 0.24* 6.3 24.0 1728. 7D1						٠,						
(5) $M = 311$ . $N = 498$ .					••••							
2(1-3) 0.24* 2.1 24.0 1152, 5D1	8 1.00	72.00	3D 6	0.20	0.00	: :						
(6) $M = 392$ . $N = 1207$ .				. <del>-</del> .								
(10) $V = 424$ . $Nh = 1227$ .												
3(2-4) 0.24* 1.5 24.0 2880, 6D2	5 2.50	235.41	5D 8	0.65	0.00							
			-									
N-W = 4 Lw = 6.00 Arfw = 1.2051												
N(I1-I2) T*L aa As	SAs	Rs	Ash	SA	sh	Rsh						
Uc				÷	• .	. •						

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(m*m) (cm) (mm*2)
                       (%) (mm*2)
                                       (%)
1(1-2) 0.24* 1.5 24.0 576. 3D18 0.50 72.00
                               3D 6 0.20
                                       0.00
2(1-3) 0.24* 0.9 4.0 648. 3D18 0.60 93.17
                               4D 6
                                   0.40
                                       0.17
N-W = 5 Lw = 6.00 Arfw = -1.5268
N(11-12) T*L aa As SAs Rs Ash SAsh Rsh
Uc
       (m^*m) (cm) (mm^*2) (%) (mm^*2)
                                       (%)
 1(1-2) 0.24* 2.1 24.0 576. 3D18 0.50 72.00
                               3D 6
                                   0.20
                                       0.00
 2(4-3) 0.24* 1.3 24.0 576. 3D18 0.50 72.00
                               3D 6
                                   0.20
                                       0.00
N-W = 6 Lw = 6.00 Arfw = 0.0000
            aa As SAs Rs
                               Ash SAsh Rsh
N(11-12) T*L
Uc
        (m*m) (cm) (mm*2) (%) (mm*2)
                                       (%)
 1(3-2) 0.24* 1.7 24.0 576. 3D18 0.50 72.00
                               3D 6 0.20 0.00
N-W = 7 Lw = 6.00 Arfw = 0.0000
N(11-12) T*L: aa As SAs Rs Ash SAsh Rsh
Uc
      (m*m) (cm) (mm*2) (%) (mm*2)
                                       (%)
                               3D 6 0.20 0.00
1(3-2) 0.24* 1.3 24.0 576. 3D18 0.50 72.00
N-W = 8 Lw = 6.00 Arfw = -0.9984
           aa As SAs Rs Ash SAsh
                                          Rsh
 N(11-12)
       T*L
Uc
        (m*m) (cm) (mm*2) (%) (mm*2)
                                       (%)
 1(1-2) 0.24* 1.2 24.0 576. 3D18 0.50 72.00
                               3D 6 0.20
                                       0.00
 2(1-3) 0.24* 1.5 24.0 576. 3D18 0.50 72.00 3D6
                                   0.20
                                       0.00
N-B= 1(1)B*H(mm)= 240* 450 Lb= 5.10(m)
-I- -I- -2- -3- -J-
    0. 36. 54. 36. 0. -M= -57.
                             0.
                                 0. 0. -55.
   (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 293. 438. 293. 270. As= 470. 216. 216. 216. 451.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.44 0.20 0.20 0.20 0.42
V(1)=73. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(1) = 1.9 \& 73. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
        Ast1 = 0. \quad 0D0
N-B= 2(1)B*H(mm)= 240* 450 Lb= 5.10(m)
```

```
·[· -[- -2· -3- -J-
                       -I- -I- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -56. 0. 0. -56.
   (1) (1) (1) (1) (5)
As= 270. 293. 440. 293. 270. As= 457. 216. 216. 216. 462.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.43
V( 1)= 72. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(5) = 0.1 \& 70. \text{ Ast}(0) = 0. \text{ } 0D0 \text{ Ast}v = 0. \text{ } 0D0
                             Ast1 = 0. \quad 0D0
_____
N-B= 3(1)B*H(mm)= 240* 450 Lb= 5.10(m)
  -[- -1- -2- -3- -J-
+M= 0, 36, 54, 36, 0, -M= -56, 0, 0, -56.
  (1) (1) (1) (1) (6) (1) (5)
As= 270. 293. 439. 293. 270. As= 460. 216. 216. 216. 460.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43
V(1)= 72. Asv(0)= 36. 2D6 Rsv= 0.15
T \& V(5) = 0.1 \& 70. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
Ast I = 0. \quad 0D 0
N-B= 4(1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -l- -l- -2- -3- -J- -1- -2- -3- -J.
+M= 0. 36. 54. 36. 0. -M= -56. 0. 0. 0. -56.
  (1) (1) (1) (1) (6) (1) (1) (1)
As= 270. 293. 438. 293. 270. As= 459. 216. 216. 216. 461.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43
V(1)=72. Asy(0)= 36. 2D6 Rsy= 0.15
T \& V(6) = -0.1 \& 70. Ast(0) = 0. 0D0 Astv = 0. 0D0
                Ast1 = 0. \quad 0D0
1 4 4 5 5 6 B
N-B= 5(1)B^{+}H(mm)= 240^{+} 450 Lb= 5.10(m)
   -l· -l· -2- -3- -J- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -56. 0. 0. 0. -56.
  (1) (1) (1) (1) (6) (1) (1) (5)
As= 270. 293. 441. 293. 270. As= 461. 216. 216. 216. 455.
```

(0) (1) (1) (0) (0) (0) (1)

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Calculation book Oil Car Storage
                  2D18 2D18 2D18 1D18 1D18 1D18
   2D18 2D18 2D18
2D18
R_{S}= 0.25 0.27 0.41 0.27 0.25 R_{S}= 0.43 0.20 0.20 0.20 0.42
V(1)= 72. Asv(0)= 36. 2D6 Rsv= 0.15
T \& V(5) = 0.1 \& 70. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                           Ast1 = 0. \quad 0D0
N-B= 6 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 36. 52. 36. 0. -M= -55. 0.
                                     0. 0. -60.
  (1) (1) (1) (1) (1) (6) (1) (1) (1)
As= 270. 293. 425. 293. 270. As= 448. 216. 216.
                                         216. 496.
   (0) (1) (1) (0) (0) (0) (0) (1)
```

2D18 1D18 1D18 1D18 2D18 2D18 2D18 2D18 2D18 2D18  $R_{S}$ = 0.25 0.27 0.39 0.27 0.25  $R_{S}$ = 0.41 0.20 0.20 0.20 0.46 V(1)=73. Asv(0)=36. 2D 6 Rsv= 0.15 T & V(6) = -0.1 & 69. Ast(0) = 0. 0D 0 Astv = 0. 0D 0

 $Ast1 = 0. \quad 0D0$ 

N-B= 7(1)B+H(mm)= 240+ 450 Lb= 5.10(m)-I- -1- -2- -3- -J- -I- -1- -2- -3· -J-+M= 0. 36, 64. 43, 0. -M= -65. 0. 0. -33. (1) (1) (6) (1) (6) (1) (5) As= 270. 293. 530. 341. 270. As= 536. 216. 216. 216. 270. (0) (1) (1) (0) (1) (0) (0) (0) 2D18 2D18 3D18 2D18 2D18 3D18 1D18 1D18 1D18 2D18  $R_{S}$ = 0.25 0.27 0.49 0.32 0.25  $R_{S}$ = 0.50 0.20 0.20 0.20 0.25 V(1)=80. Asy(0)= 36. 2D6 Rsy= 0.15 T & V(1) = -0.5 & 80. Ast(0) = 0. 0D 0 Astv = 0. 0D 0 $Ast I = 0. \quad 0D 0$ 

N-B= 8 (1)B\*H(mm)= 240\* 450 Lb= 5.10(m) .I. .I. -2. -3. -J. -1. -1. -2- -3. -J. +M= 0. 43. 64. 36. 0. -M= -32. 0. 0. -65. (1) (5) (1) (1) (6) (1) (1) (5) As= 270. 342. 530. 293. 270. As= 270. 216. 216. 216. 537. (0) (1) (1) (0) (0) (0) (0) (0) (1) 2D18 2D18 3D18 2D18 2D18 2D18 1D18 1D18 1D18 3D18 Rs= 0.25 0.32 0.49 0.27 0.25 Rs= 0.25 0.20 0.20 0.20 0.50 V(1)=80. Asy(0)= 36. 2D6 Rsy= 0.15 T & V(1) = 0.5 & 80. Ast(0)= 0. OD 0 Astv = 0. OD 0

 $Ast1 = 0. \quad 0D0$ 

```
N-B= 9(1)B*H(mm)= 240* 450  Lb= 5.10(m)
   -I- -1- -2- -3- -J-
+M= 0. 36. 52. 36. 0. +M= -60. 0. 0. -55.
   (1) (1) (1) (1) (1) (5)
As= 270. 293. 425. 293. 270. As= 495. 216. 216. 216. 448.
  (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 2D18 2D18 2D18 2D18 2D18
                               1D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.39 0.27 0.25 Rs= 0.46 0.20 0.20 0.20 0.42
V(1)=73. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 69. Ast(0)= 0. OD 0 Asty = 0. OD 0
                            Ast1 = 0. 0D0
N-B= 10(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -55. 0. 0. 0. -56.
```

(1) (1) (1) (1) (1) (6) (1) (1) (5) As= 270. 293. 441. 293. 270. As= 454. 216. 216. 216. 462. (0) (1) (1) (0) (0) (0) (0) (1) 2D18 Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.43 V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15 T & V(6) = -0.1 & 70. Ast(0) = 0. 000 Astv = 0. 000

 $Ast1 = 0. \quad 0D0$ 

N-B= 11(1)B\*H(mm)= 240\* 450 Lb= 5.10(m)-I- ·I- -2- -3- -J. -I- -1- -2- -3. -J. +M= 0. 36. 54. 36. 0. -M= -56. 0. 0. -56. (1) (1) (1) (1) (1) (6) (1) (1) (5) As= 270. 293. 438. 293. 270. As= 460. 216. 216. 216. 460. (0) (1) (1) (0) (0) (0) (0) (1) 2D18 Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43

V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15 T & V(5) = 0.1 & 70. Ast(0) = 0. OD 0 Astv = 0. OD 0 $Ast1 = 0. \quad 0D0$ 

N-B= 12 (1)B\*H(mm)= 240\* 450 Lb= 5.10(m) -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-+M= 0. 36. 54. 36. 0. •M= -56. 0. 0. 0. -56.

```
(1) (1) (1) (1) (1) (6) (1) (1) (5)
As= 270. 293. 439. 293. 270. As= 459. 216. 216. 216. 460.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 2D18 2D18 2D18 2D18
                        2D18 1D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43
V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 70. \text{ Ast}(0) = 0. \text{ 0D 0 Ast}v = 0. \text{ 0D 0}
                       Ast1 = 0. \quad 0D0
.
N-B = 13 (1)B+H(mm) = 240+450 Lb= 5.10(m)
 .j. .j. -2- -3- -J- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -56. 0. 0. 0. -56.
   (1) (1) (1) (1) (6) (1) (1) (1)
As= 270, 293, 439, 293, 270, As= 459, 216, 216, 216, 461,
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
V(1)= 72. Asv(0)= 36. 2D6 Rsv= \cdot 0.15
T & V( 6)= -0.1 & 70. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
                      Ast1 = 0. \quad 0D0
N-B= 14(1)B*H(mm)= 240* 450 Lb= 5.10(m)
-1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -56. 0. 0. -56.
  (1) (1) (1) (1) (1) (6) (1) (1) (5)
As= 270, 293, 441, 293, 270, As= 461, 216, 216, 216, 455.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.42
V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15
T & V( 5)= 0.1 & 70. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
   Ast1 = 0. 0D 0
N-B= 15(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 36. 52. 36. 0. -M= -55. 0. 0. 0. -60.
  (1) (1) (1) (1) (1) (6) (1) (1) (1)
As= 270. 293. 426. 293. 270. As= 449. 216. 216. 216. 492.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
```

```
Rs= 0.25 0.27 0.39 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.46
V( 1)= 73. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 69. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 16(1)B^*H(mm)= 240^* 450 Lb= 5.10(m)
    -I- -1- -2- -3- -J-
+M= 0, 36, 63, 40, 0, -M= -64,
                                0.
                                    0.
                                        0. -35.
   (1) (1) (6) (1) (1) (1) (5)
As= 270, 293, 520, 323, 270, As= 528, 216, 216, 216, 270,
   (0) (1) (1) (0) (1) (0) (0) (0) (0)
   2D18 2D18 3D18 2D18 2D18
                            3D18 1D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.48 0.30 0.25 Rs= 0.49 0.20 0.20 0.20 0.25
V(1)=79. Asv(0)=36. 2D 6 Rsv=0.15
T & V( 1)= -0.5 & 79. Ast( 0)= 0. OD 0 Astv = 0. OD 0
                                Ast1 = 0. \quad 0D0
N-B= 17(1)B*H(mm)= 250* 600 Lb= 7.12(m)
    -I- -I- -2- -3- -J-
+M= 0. 109. 226. 92. 0. -M= -69.
                                0.
                                    0. 0. -175.
   (1) (1) (1) (1) (6) (1) (1) (1)
As= 375. 657. 1467. 549. 375. As= 393.
                               300. 300. 300. 1097.
   (0) (1) (1) (0) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18
                               2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.44 0.98 0.37 0.25 Rs= 0.26 0.20 0.20 0.20 0.73
V( 1)= 139. Asv( 0)= 37. 2D6 Rsv= 0.15
T \& V(5) = 0.3 \& 133. Ast(0)= 0. 0D0 Asty = 0. 0D0
                                Ast1 = 0. \quad 0D0
_______
N-B= 18(1)B+H(mm)= 250+ 600 Lb= 7.12(m)
    ·I· ·I· ·2· ·3· ·J· ·I· ·I· ·2· ·3· ·J·
+M= 0. 111. 228. 92. 0. -M= -70.
                                0.
                                    0. 0. -174.
   (1) (1) (1) (1) (6) (1) (1) (1)
As= 375. 670. 1479. 549. 375. As= 380. 300. 300. 300. 1093.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.25 0.20 0.20 0.20 0.73
V(1)=140. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 129. Ast(0)= 0. 0D0 Astv = 0. 0D0
                       Ast1 = 0. \quad 0D0
```

```
N-B= 19(1)B*H(mm)= 250* 600 Lb= 7.12(m)
 +M= 0. 113. 228. 92. 0. -M= -74. 0. 0. 0. -174.
  (1) (5) (1) (1) (1) (6) (1) (1) (1)
As= 375. 671. 1480. 549. 375. As= 380. 300. 300. 300. 1093.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.25 0.20 0.20 0.20 0.73
V(1)= 140. Asv(0)= 37. 2D 6 Rsv= 0.15
T \& V(5) = 0.1 \& 135. Ast(0)= 0. 0D0 Astv = 0. 0D0
                                 Ast1 = 0. \quad 0D0
dicodesupprocessicationisticosos (0.0000) (0.0000) (0.0000) (0.0000) (0.0000) (0.0000) (0.0000) (0.0000) (0.0000)
N-B= 20 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
 -I- -1- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 116. 228. 92. 0. -M= -77. 0. 0. 0. -177.
   (1) (5) (1) (1) (1) (6) (1) (1) (5)
As= 375. 671. 1480. 549. 375. As= 380. 300. 300. 300. 1093.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.25 0.20 0.20 0.20 0.73
V(1)=140. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 136, Ast(0) = 0, 0D 0 Astv = 0, 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 21(1)B*H(mm)= 250* 600 Lb= 7.12(m)
 +M= 0. 118. 228. 92. 0. -M= -81. 0. 0. -179.
   (1) (5) (1) (1) (6) (1) (1) (5)
As= 375. 671. 1480. 549. 375. As= 379. 300. 300. 300. 1093.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.25 0.20 0.20 0.20 0.73
V( 1)= 140. Asv( 0)= 37. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 127. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
     Ast1 = 0. \quad 0D0
N-B= 22 (1)B^*H(mm)= 250^* 600 Lb= 7.12(m)
 .j. -j. -2. -3. -j. -i. -i. -2- -3· -j.
+M= 0. 120. 228. 92. 0. -M= -85. 0. 0. 0. -182.
 (1) (5) (1) (1) (1) (6) (1) (1) (5)
As= 375, 665, 1476, 549, 375, As= 385, 300, 300, 300, 1091.
```

```
(0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18 2D18
5D18
Rs= 0.25 0.44 0.98 0.37 0.25 Rs= 0.26 0.20 0.20 0.20 0.73
V(1)= 140. \text{ Asy}(0)= 37. 2D6 \text{ Rsy}= 0.15
T \& V(5) = 0.1 \& 137. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 23 (1)B+H(mm)= 250+ 600 Lb= 7.12(m)
   -l- -l- -2- -3- -J- -1- -2- -3- -J-
+M= 0. 98. 150. 66. 0. -M= -68. 0. 0.
   (1) (5) (1) (1) (1)
                        (6) (1) (1) (5)
As= 375, 496, 929, 391, 375, As= 375, 300,
                                    300.
                                        300. 751.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 2D18 4D18 2D18 2D18 2D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.33 0.62 0.26 0.25 Rs= 0.25 0.20 0.20 0.20 0.50
V(5)=107. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.3 \& 94. \text{ Ast}(0) = 0. \text{ 0D 0 Ast} = 0. \text{ 0D 0}
                                 Ast1 = 0. \quad 0D0
N-B= 24 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
   -l- -l- -2- -3- -J-
+M= 0. 98. 150. 66. 0. -M= -69. 0.
                                     0.
   (1) (5) (1) (1) (1) (6) (1) (1) (5)
As= 375. 496. 929. 391. 375. As= 375. 300.
                                    300.
                                        300. 751.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 2D18 4D18 2D18 2D18 2D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.33 0.62 0.26 0.25 Rs= 0.25 0.20 0.20 0.20 0.50
V(5)= 107. Asv(0)= 37. 2D 6 Rsv= 0.15
T \& V(5) = 0.3 \& 107. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                        Ast1 = 0. \quad 0D0
N-B= 25 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
          -2- -3- -J- -1- -2- -3- -J-
      -1-
     0. 125. 228. 92. 0. -M= -92. 0. 0. 0. -187.
   (1) (5) (1) (1) (1) (6) (1) (1) (5)
As= 375. 665. 1476. 549. 375. As= 409. 300.
                                    300.
                                        300. 1091.
   ( 0) ( 1) ( 1) ( 0) . ( 6) ( 0) ( 0) ( 0) ( 1)
   2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
```

Rs= 0.25 0.44 0.98 0.37 0.25 Rs= 0.27 0.20 0.20 0.20 0.73

V(1)=140. Asv(0)=37. 2D6 Rsv=0.15

5D18

```
T \& V(6) = -0.1 \& 124. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                                                           Ast1 = 0, \quad 0D0
 N-B= 26 (1)B^{+}H(mm)= 250^{+} 600 Lb= 7.12(m)
   .j. -j. -2- -3- -J-
 +M= 0. 128. 228. 92. 0. -M= -95.
                                                                          0, 0, 0, -190,
       (1) (5) (1) (1) (1) (6) (1) (1) (5)
 As= 375. 671. 1480. 549. 375. As= 421. 300. 300. 300. 1093.
       (0) (1) (1) (0) (6) (0) (0) (1)
        2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
 Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.28 0.20 0.20 0.20 0.73
 V(5)=140. Asv(0)=37. 2D 6 Rsv=0.15
 T \& V(5) = 0.1 \& 140. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                                                           Ast1 = 0. \quad 0D0
 acoccupositional acomposition and a constant acoustic aco
 N-B= 27 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
  -I- -1- -2- -3- -J-
                                                          -1- -2- -3- -J-
 +M= 0. 130. 228. 92. 0. -M= -98.
                                                                          0. 0. 0. -193.
        (1) (5) (1) (1) (1) (6) (1) (1) (5)
 As= 375. 671. 1480. 549. 375. As= 437. 300. 300. 300. 1093.
        (0) (1) (1) (0) (6) (0) (0) (1)
        2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
 Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.29 0.20 0.20 0.20 0.73
 V(5)=141. Asv(0)=37. 2D6 Rsv=0.15
 T \& V(6) = -0.1 \& 122. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                                             :
                              . .
                                                                           Ast1 = 0. \quad 0D0
 Bac-00-419144477764575
 N-B= 28 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
  -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
 +M= 0. 132. 228. 92. 0. -M= -102. 0. 0. -195.
    (1) (5) (1) (1) (6) (1) (1) (5)
 As= 375, 671, 1480, 549, 375, As= 453, 300, 300, 300, 1093,
       (0) (1) (1) (0) (6) (0) (0) (1)
        2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18 2D18
5D18
 Rs= 0.25 0.45 0.99 0.37 0.25 Rs= : 0.30 0.20 0.20 0.20 0.73
 V(5)= 142. Asv(0)= 37. 2D 6 Rsv= 0.15
 T \& V(5) = 0.1 \& 142. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                                                      Ast1 = 0. \quad 0D0
                             N·B= 29 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
 -[- -1- -2- -3- -J- -1- -1- -2- -3- -J-
```

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Calculation book Oil Car Storage
+M= 0. 135, 228. 92. 0. -M= -105. 0. 0.
   (1) (5) (1) (1) (6) (1) (5)
As= 375. 671. 1480. 549. 375. As= 470. 300.
                                    300.
                                        300. 1093.
   (0) (1) (1) (0) (6) (0) (0) (1)
                                2D18
                                    2D18 2D18 2D18
        3D18 6D18 3D18 2D18
   2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.31 0.20 0.20 0.20 0.73
V(5)=143. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 121. Ast(0) = 0. 0D 0 Astv = 0.
                                 Ast1 = 0. \quad 0D0
N-B=30(1)B*H(mm)=250*600 Lb= 7.12(m)
          -2- -3· -J·
                           -I- -1- -2- -3- -J-
   -I- -1-
+M= 0. 137. 228. 92. 0. -M= -109. 0. 0.
   (1) (5) (1) (1) (6) (1) (1) (5)
As= 375. 671. 1480. 549. 375. As= 486.
                                300.
                                     300.
                                         300. 1093.
    (0) (1) (1) (1) (0) (6) (0) (0) (1)
       3D18 6D18 3D18 2D18 2D18
                                    2D18 2D18
    2D18
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.32 0.20 0.20 0.20 0.73
 V(5)= 144. Asv(0)= 37. 2D 6 Rsv= 0.15
T \& V(5) = 0.1 \& 144. Ast(0) = 0.000 Astv = 0.000
                                 Ast1 = 0. \quad 0D0
 N-B= 31 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
           -2- -3- -J- -1- -2- -3- -J-
    -]- -1-
 +M= 1, 140, 228, 92, 0, -M= -112, 0, 0, -203,
    (9) (5) (1) (1) (1)
                        (6) (1) (1) (5)
 As= 375, 671, 1480, 549, 375, As= 502, 300,
                                     300.
                                         300. 1093.
    (0) (1) (1) (0) (6) (0) (0) (1)
    2D18 3D18 6D18 3D18 2D18 2D18 2D18 2D18
5D18
 Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.33 0.20 0.20 0.20 0.73
 V(5)= 144, Asv(0)= 37. 2D 6 Rsv= 0.15
 T \& V(6) = -0.1 \& 119. Ast(0)= 0. 0D0 Astv = 0. 0D0
                                 Ast1 = 0. \quad 0D0^{-1}
```

 $N-B= 32 (1)B^{+}H(mm)= 250^{+} 600$ Lb = 7.12(m)-3- -J- -1- -2- -3--1--2-+M= 4, 142, 229, 92, 0, -M= -117, 0, 0, -207, (9) (5) (1) (1) (6) (1) (1) (5) As= 375. 670. 1489. 553. 375. As= 524. 300. 300. (0) (1) (1) (1) (0) (6) (0) (0) (1) 2D18 3D18 6D18 3D18 2D18 3D18 2D18 2D18 2D18

```
5D18
Rs= 0.25 0.45 0.99 0.37 0.25 Rs= 0.35 0.20 0.20 0.20 0.73
V(5)=146. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 146. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                  Ast1 = 0. \quad 0D0
 N-B= 33 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
    -1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 24. 120. 154. 67. 0. -M= -101.
                                 0.
                                      0. 0. -164.
   (9) (5) (5) (1) (1) (6) (1) (1) (5)
As= 375, 538, 941, 394, 375, As= 448, 300, 300, 300, 757,
   (0) (5) (1) (1) (0) (6) (0) (0) (1)
    2D18 3D18 4D18 2D18 2D18 2D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.36 0.63 0.26 0.25 Rs= 0.30 0.20 0.20 0.20 0.50
 V(5)=115. Asv(0)=37. 2D 6 Rsv=0.15
T & V(6)= -0.4 & 89. Ast(0)= 0. 0D = 0 Astv = 0. 0D = 0
                                 Ast1 = 0. \quad 0D0
 N-B= 34(1)B*H(mm)= 250* 750 Lb= 0.90(m)
 -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
         1. 1. 1. 0. -M= -274, -275, -223, -171, -120.
    (1) (1) (1) (1) (1) (6) (6) (6)
 As= 469, 375, 375, 375, 469, As= 1356, 1351, 1059, 784, 526,
   (0) (0) (0) (0) (1) (1) (1) (1)
    2D18 2D18 2D18 2D18 2D18 6D18 6D18 5D18 4D18
3D18
 Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.72 0.72 0.56 0.42 0.28
 V(1)=209. Asv(0)=37. 2D 6 Rsv=0.15
T & V( 8)= -9.5 & 165. Ast( 0)= 450. 2D18 Astv = 56. 2D6
                                 Ast1 = 7. ID6
 N-B= 35 (1)B+H(mm)= 240+ 450 Lb= 5.10(m)
 -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
. +M= 0, 31, 49, 31, 0. -M= -34,
                                  0.
                                      0. 0. -67.
    (1) (1) (1) (1) (1) (6) (1) (1) (1)
 As= 270. 246. 396. 246. 270. As= 274. 216. 216. 216. 553.
    (0) (1) (1) (0) (1) (0) (0) (0) (1)
    3D18
Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.25 0.20 0.20 0.20 0.51
 V(1)=63. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(1) = -1.4 \& 63. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                Ast1 = 0. 0D0
```

```
N-B= 36 (1)B+H(mm)= 240+ 450 Lb= 5.10(m)
.[. -]- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 31. 47. 31. 0. -M= -52. 0. 0. -47.
   (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 380. 246. 270. As= 423. 216. 216. 216. 378.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.39 0.20 0.20 0.20 0.35
V(1)=57. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 53. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                      Ast1 = 0. \quad 0D0
## 77 PP 16 74006600 PP 27 PA PARS ## 2000 PP 2000 PP 2000 PA 1000 PA 1000 PA 1000 PA 1000 PA 1000 PA 1000 PA
N-B= 37 (1)B^{+}H(mm)= 240^{+} 450 Lb= 5.10(m)
   -j- -j- -j- -j- -j- -j-
+M= 0. 31. 48. 31. 0. -M= -47. 0. 0. -48.
   (1) (1) (1) (1) (1) (1) (1) (1)
As= 270, 246, 395, 246, 270, As= 384, 216, 216, 216, 391,
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs{=}\quad 0.25 \quad 0.23 \quad 0.37 \quad 0.23 \quad 0.25 \quad Rs{=}\quad 0.36 \quad 0.20 \quad 0.20 \quad 0.20 \quad 0.36
V(1)=56. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = 0.0 \& 52. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                         Ast1 = 0. 0D0
N-B= 38 (1)B+H(mm)= 240+ 450 Lb= 5.10(m)
   -l- -l- -2- -3- -J- -1- -2- -3- -J-
+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. -48.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 392. 246. 270. As= 389. 216. 216. 216. 390.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V( 1)= 55. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.0 \& 52. \text{ Ast}(0) = 0. 0D 0 \text{ Ast} = 0. 0D 0
                         Ast1 = 0. \quad 0D0
N-B= 39 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -I- -I- -2- -3- -J-
+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. 0. -47.
```

\*

```
As= 270. 246. 395. 246. 270. As= 390. 216. 216. 216. 385.
   (0) (1) (1) (0) (0) (0) (1)
   2D18
R_{S}= 0.25 0.23 0.37 0.23 0.25 R_{S}= 0.36 0.20 0.20 0.20 0.36
V( 1)= 56. Asv( 0)= 36. 2D6 Rsv= 0.15
T & V(5) = 0.0 & 52. Ast(0) = 0. 0D 0  Astv = 0. 0D 0
                             Ast i = 0. \quad OD 0
N-B=40(1)B*H(mm)=240*450 Lb= 5.10(m)
   -I- -1- -2- -3- -J-
+M= 0. 31. 47. 31. 0. -M= -47.
                              0.
                                  0.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 381. 246. 270. As= 379. 216. 216. 216. 419.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.35 0.20 0.20 0.20 0.39
V(1)=57. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.0 \& 53. \text{ Ast}(0) = 0. 0D 0 \text{ Ast} = 0. 0D 0
                              Ast1 = 0. \quad 0D0
N-B= 41(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -1- -1- -2- -3- -J- -1- -2- -3- -J-
+M= 0. 31, 57. 35. 0. -M= -55. 0.
                                 0.
   (1) (1) (1) (1) (1) (1) (3)
As= 270, 246, 471, 285, 270, As= 450, 216, 216, 216, 270,
   (0) (1) (1) (0) (0) (0) (0)
   2D18
Rs= 0.25 0.23 0.44 0.26 0.25 Rs= 0.42 0.20 0.20 0.20 0.25
V(1)=62. Asy(0)=36. 2D 6 Rsy=0.15
T & V( 5)= 0.1 & 58. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
              . .
                        Ast1 = 0. 	 OD 0
saassassaatosratriamstissaassiotuaansaadubaatastootukeetastistajastastissajattistagaa
N-B= 42 (1)B^{+}H(mm)= 240^{+} 450 Lb= 5.10(m)
 +M= 0. 36. 57. 31. 0. -M= -26. 0.
                                  0.
   (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 286. 471. 246. 270. As= 270. 216. 216. 216. 451.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.26 0.44 0.23 0.25 Rs= 0.25 0.20 0.20 0.20 0.42
```

```
V(1)=62. Asy(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 58.  Ast(0) = 0.  OD 0 Astv = 0.  OD 0
                      Ast1 = 0. \quad 0D0
N-B= 43 (1)B^{+}H(mm)= 240^{+} 450 Lb= 5.10(m)
 -1- -1- -2- -3- -J- -1-
                         -1- -2- -3- -3-
+M= 0. 31. 47. 31. 0. -M= -51.
                             0.
                                 0. 0. -47.
  (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 381. 246. 270. As= 418. 216. 216. 216. 380.
. (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.39 0.20 0.20 0.20 0.35
V(1)= 56. Asv(0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.0 \& 53. Ast(0) = 0. 0D0 Astv = 0. 0D0
                    Ast1 = 0. \quad 0D0
N-B= 44(1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -l- -l- -2- -3- -J-
+M= 0. 31. 48. 31. 0. -M= -47. 0.
                                 0. 0. -48.
  (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 395. 246. 270. As= 384. 216. 216. 216. 391.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V( 1)= 56. Asv( 0)= 36. 2D6 Rsv= 0.15
T & V( 6)= 0.0 & 52. Ast( 0)= 0. 0D 0 Asty = 0. 0D 0
                            Ast1 = 0. 0D0
N-B= 45(1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -I- -1- -2- -3- -J- -1- -1- -2- -3. -J-
+M= 0. 31. 48. 31. 0. -M= -48.
                             0.
                                 0. 0. -48.
  (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 393. 246. 270. As= 390. 216. 216. 216. 389.
   (0) (1) (1) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V( 1)= 55. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.0 \& 52. Ast(0) = 0. 0D0 Astv = 0. 0D0
                 Ast1 = 0. \quad 0D0
N-B= 46(1)B^*H(mm)= 240^* 450 	 Lb= 5.10(m)
```

```
-1- -1- -2- -3- -1-
+M= 0, 31. 48. 31. 0. -M= -48. 0. 0. 0. -48.
  (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270, 246, 393, 246, 270, As= 389, 216, 216, 216, 390,
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V( 1)= 55. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.0 \& 52. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                            Ast1 = 0. \quad 0D0
N-B= 47 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -I- -1- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. -48.
   (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 393. 246. 270. As= 389. 216. 216. 216. 390.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)=55, Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.0 \& 52. \text{ Ast}(0) = 0. 0D0 \text{ Ast}v = 0. 0D0
                            Ast1 = 0. \quad 0D0
             for a second
N-B= 48(1)B*H(mm)= 240* 450 Lb= 5.10(m)
.j. .j. .2. .3. .j. .j. .j. -j. -2- -3- -j.
+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. 0. -48.
  (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 394. 246. 270. As= 390. 216. 216. 216. 386.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)=56. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = 0.0 \& 52. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
   Astl = 0. \quad 0D0
N-B=49(1)B+H(mm)=240+450 Lb= 5.10(m)
-I- -1- -2- -3- -I- -I- -2- -3-
+M= 0. 31. 47. 31. 0. -M= -47. 0. 0. 0. -50.
  As= 270. 246. 385. 246. 270. As= 382. 216. 216. 216. 410.
```

(0) (1) (1) (0) (0) (0) (1)

```
2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.35 0.20 0.20 0.20 0.38
V(1)=56. Asy(0)= 36. 2D6 Rsy= 0.15
T & V(5) = 0.0 & 53. \text{ Ast}(0) = 0. \text{ 0D 0 Ast}v = 0. \text{ 0D 0}
                     Ast1 = 0. \quad 0D0
N-B= 50(1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -J- -J- -2- -3- -J-
+M= 0. 31. 55. 31. 0. -M= -53. 0. 0. 0. -32.
  (1) (1) (1) (1) (1) (1) (1) (3)
As= 270. 246. 450. 246. 270. As= 431. 216. 216. 216. 270.
   (0) (1) (1) (0) (0) (0) (0) (0)
   2D18
Rs= 0.25 0.23 0.42 0.23 0.25 Rs= 0.40 0.20 0.20 0.20 0.25
V(1)=60. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 57. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                             Asti = 0. \quad 0D0
N-B= 51(1)B*H(mm)= 250* 750 Lb= 7.20(m)
   -j- -j- -j- -j- -j- -j- -j-
+M= 0. 158. 271. 159. 0. -M= -124. 0.
                                  0. 0. -124.
  (1) (1) (1) (1) (6) (1) (1) (5)
As= 469. 750. 1339. 754. 469. As= 547. 375. 375. 375. 542.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 3D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.40 0.71 0.40 0.25 Rs= 0.29 0.20 0.20 0.20 0.29
V(1)=144. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.0 \& 139. Ast(0)= 0. 0D 0 Asty = 0. 0D 0
                    Ast1 = 0. \quad 0D0
N-B= 52 (1)B*H(mm)= 250* 600 Lb= 7.20(m)
   -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 93. 186. 93. 0. -M= -161. 0. 0. -161.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 375. 556. 1176. 556. 375. As= 1003. 300.
                                300. 300. 999.
   (0) (1) (1) (0) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V( 1)= 122. Asv( 0)= 37. 2D 6 Rsv= 0.15
```

1 & V(5) = 0.0 & 115. Ast(0)= 0. 0D0 Astv = 0. 0D0

1

```
Ast1 = 0. \quad 0D0
```

V(1)= 122. Asv(0)= 37. 2D6 RSV= 0.13 T & V(6)= -0.1 & 117. Ast(0)= 0. 0D0 Astv= 0. 0D0 Ast1= 0. 0D0

N-B= 56 (1)B\*H(mm)= 250\* 600 Lb= 7.20(m)

-1. -1- -2- -3- -J- -1- -2- -3- -J
+M= 0. 93. 185. 93. 0. -M= -163. 0. 0. 0. -163.

```
(1) (1) (1) (1) (6) (1) (1) (5)
As= 375. 556. 1166. 556. 375. As= 1011. 300. 300. 300. 1006.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V( 1)= 122. Asv( 0)= 37. 2D6 Rsv= 0.15
T \& V(5) = 0.1 \& 118. Ast(0) = 0. 0D O Astv = 0. 0D O
          _ -
                                Ast1 = 0, \quad 0D0
N-B= 57(1)B*H(mm)= 250* 600 Lb= 7.20(m)
   -I- -I- -2- -3- -J-
+M= 0. 93. 185. 93. 0. -M= -165.
                               0. 0. 0. -164.
   (1) (1) (1) (1) (6) (1) (1) (5)
As= 375. 556. 1168. 556. 375. As= 1010. 300. 300. 300. 1005.
   (0) (1) (1) (0) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V( 1)= 122. Asv( 0)= 37. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 118. Ast(0) = 0. OD 0 Astv = 0. OD 0
                                Ast1 = 0. \quad 0D0
N-B= 58(1)B*H(mm)= 250* 600 Lb= 7.20(m)
   -I- -I- -2- -3- -J- -I- -1- -2- -3. .J.
+M= 0. 67. 118. 67. 0. -M= -124. 0.
                                   0. 0. -124.
   (-1) (-1) (-1) (-1) (-1) (-5)
As= 375. 397. 717. 397. 375. As= 696. 300. 300. 300. 694.
   (0) (1) (1) (0) (0) (0) (0)
   2D18 2D18 3D18 2D18 2D18 3D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.26 0.48 0.26 0.25 Rs= 0.46 0.20 0.20 0.20 0.46
V(6)=92. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 92. Ast(0) = 0. OD 0 AstV = 0. OD 0
                      • ;
                               Ast1 = 0. \quad 0D0
N-B= 59(1)B*H(mm)= 250* 600 Lb= 7.20(m)
   -I- -I- -2- -3- -J-
                        -i- -i- -2- -j-
+M= 0. 67. 118. 67. 0. -M= -124.
                               0. 0. 0. -124.
   (1) (1) (1) (1) (6) (1) (1) (5)
As= 375. 397. 717. 397. 375. As= 696. 300. 300. 300. 694.
   (0) (1) (1) (0) (0) (0) (1)
   2D18 2D18 3D18 2D18 2D18 3D18 2D18 2D18 2D18
```

3D18

```
Rs= 0.25 0.26 0.48 0.26 0.25 Rs= 0.46 0.20 0.20 0.20 0.46
V(6)=92, Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 92. \text{ Ast}(0) = 0. 0D 0 \text{ Ast}v = 0. 0D 0
                               Ast1 = 0. \quad 0D0
N-B= 60 (1)B^{+}H(mm)= 250^{+} 600 Lb= 7.20(m)
 .[. .]. -2. -3. -J. -I. -1. -2- -3· -J.
+M= 0. 93. 185. 93. 0. -M= -169. 0. 0. -168.
  (1) (1) (1) (1) (6) (1) (1) (5)
As= 375, 556, 1168, 556, 375, As= 1010, 300, 300, 300, 1005,
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V(1)=122. Asy(0)= 37. 2D6 Rsy= 0.15
T \& V(S) = 0.1 \& 119. Ast(0) = 0. 0D0 Astv = 0. 0D0
                               Ast1 = 0. \quad 0D0
N-B=61 (1)B*H(mm)=250*600 Lb=7.20(m)
 -1- : -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 93. 185. 93. 0. -M= -171. 0. 0. 0. -170.
  (1) (1) (1) (1) (6) (1) (1) (5)
As= 375, 556, 1166, 556, 375, As= 1011, 300, 300, 300, 1006.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V(1)=122. Asy(0)= 37. 2D6 Rsy= 0.15
T \& V(6) = -0.1 \& 120. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
      Ast1 = 0. \quad 0D0
N-B= 62(1)B^+H(mm)= 250^+ 600 Lb= 7.20(m)
 -1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 93. 185. 93. 0. -M= -173. 0. 0. -172.
  (1) (1) (1) (1) (6) (1) (1) (5)
As= 375, 556, 1166, 556, 375, As= 1011, 300, 300, 300, 1006.
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V(1)=122. Asy(0)= 37. 2D6 Rsy= 0.15
T \& V(6) = -0.1 \& 120. Ast(0) = 0. 0D 0 Asty = 0. 0D 0
Astl = 0. \quad 0D0
```

```
120
Calculation book Oil Car Storage
N-B= 63(1)B*H(mm)= 250* 600 Lb= 7.20(m)
    -J- -J- -2- -3- -J-
+M= 0, 93. 185.
                93. · 0. -M= -175. 0.
                                    0. 0. -174
   (1) (1) (1) (1) (6) (1) (1) (5)
As= 375, 556, 1166, 556, 375, As= 1011, 300, 300, 300, 1006,
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18
                                   2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V( 1)= 122. Asv( 0)= 37. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 121. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 64(1)B*H(mm)= 250* 600 Lb= 7.20(m)
    -I- -1- -2- -3- -J-
                          -I- -1- -2- -3- -J-
                93. 0. -M= -176.
     0. 93. 185.
                                0.
                                     0.
   (1) (1) (1) (1) (1) (5)
As= 375. 556. 1166. 556. 375. As= 1011. 300. 300. 300. 1006.
   (0) (1) (1) (0) (0) (0) (0) (1)
```

2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18 4D18 Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67 V(1)=122. Asv(0)=37. 2D 6 Rsv=0.15 T & V(6) = -0.1 & 121. Ast(0)= 0. 0D 0 Astv = 0. 0D 0  $Ast1 = 0. \quad OD 0$ 

N-B= 65(1)B\*H(mm)= 250\* 600 Lb= 7.20(m)-I- -1- -2- -3- -J--I- -I- -2- -3- -J-0. 93. 185. 93. 0. -M= -178. 0. 0. (1) (1) (1) (1) (5) As= 375. 556. 1166. 556. 375. As= 1011. 300. 300. 300. 1006. (0) (1) (1) (0) (1) (0) (0) (1) 2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18 4D18 Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67

V(6)=122. Asy(0)=37. 2D 6 Rsy= 0.15 T & V(6) = -0.1 & 122. Ast(0) = 0. 0D 0 Astv = 0. 0D 0  $Ast1 = 0. \quad 0D0$ 

N-B=  $66 (1)B^{+}H(mm)= 250^{+} 600 : Lb= 7.20(m)$ -l- -l- -2- -3- -J- -1- -1- -2- -3. -J. 0. 93. 185. 93. 0. -M= -180. 0. 0. 0. -179. (1) (1) (1) (1) (1) (6) (1) (1) (5) As= 375. 556. 1166. 556. 375. As= 1011. 300. 300. 300. 1006.

```
(0) (1) (1) (0) (0) (0) (1)
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.78 0.37 0.25 Rs= 0.67 0.20 0.20 0.20 0.67
V(6)=122. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 122. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                               Ast1 = 0. \quad 0D0
_____
N-B= 67 (1)B^*H(mm)= 250^* 600 Lb= 7.20(m)
                        -I- -I- -2- -3- -J-
.[. -]- -2- -3- -J-
+M= 0. 94. 187. 93. 0. -M= -183. 0. 0. 0. -182.
   ( 1) ( 1) ( 1) ( 1) ( 1) ( 5)
As= 375, 559, 1178, 559, 375, As= 1017, 300, 300, 300, 1012,
   2D18 3D18 5D18 3D18 2D18 4D18 2D18 2D18 2D18
4D18
Rs= 0.25 0.37 0.79 0.37 0.25 Rs= 0.68 0.20 0.20 0.20 0.67
V(6)=123. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 123. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                               Ast1 = 0. \quad 0D0
.
N-B= 68 (1)B^*H(mm)= 250^* 600 Lb= 7.20(m)
 -J- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 68. 120. 68. 0. -M= -142. 0. 0. -142.
   (1) (1) (1) (1) (1) (6) (1) (1) (5)
As= 375. 400. 727. 400. 375. As= 703. 300. 300. 300. 700.
   2D18 2D18 3D18 2D18 2D18 3D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.27 0.48 0.27 0.25 Rs= 0.47 0.20 0.20 0.20 0.47
V( 6)= 97. Asv( 0)= 37. 2D 6 Rsv= 0.15
T \& V(5) = 0.1 \& 97, Ast(0) = 0, 0D 0 Astv = 0, 0D 0
 Ast1 = 0. \quad 0D0
N-B= 69(1)B*H(mm)= 250* 750 Lb= 0.90(m)
                        -1- -1- -2- -3- -1-
 -I- -1- -2- -3- -J-
+M= 0. 1. 1. 0. -M= -120. -170. -222. -275. -274.
   (1) (1) (1) (1) (5) (5) (5) (5)
As= 469, 375, 375, 375, 469, As= 522, 780, 1054, 1345, 1352,
   (0) (0) (0) (0) (0) (1) (1) (1) (1)
   2D18 2D18 2D18 2D18 2D18 3D18 4D18 5D18 6D18
6D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.28 0.42 0.56 0.72 0.72
```

V(1)=209. Asv(0)=37. 2D 6 Rsv=0.15

```
T \& V(9) = 10.1 \& 169. Ast(0) = 473. 2D18 Astv = 57. 3D6
                            Ast1 = 8. 1D6
N-B= 70 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
  -j. .j. -2- -3- -j. -j. -j. -1- -2- -3- -j.
    0. 31, 49, 31, 0. -M= -36. 0.
                               0.
                                   0. -67.
   (1) (1) (1) (1) (5) (1) (1) (1)
As= 270, 246, 396, 246, 270, As= 271, 216, 216, 216, 555,
   (0) (1) (1) (0) (1) (0) (0) (1)
   3D18
Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.25 0.20 0.20 0.20 0.51
V(1)=63. Asy(0)=36. 2D 6 Rsy= 0.15
T & V( 1)= 1.4 & 63. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
                            Ast1 = 0. \quad 0D0
N-B= 71(1)B*H(mm)= 240* 450 Lb= 5.10(m)
  -l- -l- -2- -3- -J-
    0. 31. 47. 31. 0. ·M= -52.
                            0. 0. 0. -47.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 379. 246. 270. As= 423. 216. 216. 216. 378.
   (0) (1) (1) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.39 0.20 0.20 0.20 0.35
V(1)=57. Asy(0)= 36. 2D6 Rsy= 0.15
T \& V(5) = 0.1 \& 54. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                            Ast1 = 0. \quad 0D0
N-B= 72(1)B*H(mm)= 240* 450 Lb= 5.10(m)
   ·I· ·I· ·2· ·3· ·J·
    0. 31. 49. 31. 0. -M= -47.
                               0. 0. -48.
                            0.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 395. 246. 270. As= 384. 216. 216. 216. 391.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)=56. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.0 \& 53. Ast(0)= 0. 0D0 Astv = 0. 0D0
                        Asti = 0. \quad 0D0
N-B= 73 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -l- -l- -2- -3- -J- -l- -1- -2- -3- -J-
```

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+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. -48.
 (i) (i) (i) (l) (l) (l) (l) (l) (l) (l) (l)
As= 270. 246. 392. 246. 270. As= 389. 216.
                              216. 216. 390.
  ( 0) ( 1) ( 1) ( 0) ( 0) ( 0) ( 0) ( 1)
  2D18
R_{S}= 0.25 0.23 0.36 0.23 0.25 R_{S}= 0.36 0.20 0.20 0.20 0.36
V( 1)= 55. Asv( 0)= 36. 2D 6 Rsv= 0.15
T \& V(5) = 0.0 \& 53, Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                           Ast1 = 0. \quad 0D0
N-B= 74(1)B*H(mm)= 240* 450 Lb= 5.10(m)
-I- -I- -2- -3- -J-
+M= 0. 31. 48. 31. 0. -M= -48. 0. 0. -47.
  (1) (1) (1) (1) (1) (1) (1) (1)
As= 270, 246, 395, 246, 270, As= 390, 216,
                              216. 216. 385.
  (0) (1) (1) (0) (1) (0) (0) (1)
  2D18
Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)= 56. Asv(0)= 36. 2D6 Rsv= 0.15
T & V(6)= 0.0 & 53. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                           Ast1 = 0. \quad 0D0
N-B= 75(1)B*H(mm)= 240* 450 Lb= 5.10(m)
-1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 0. 31. 47. 31. 0. -M= -47. 0. 0. 0. -51.
  (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 381. 246. 270. As= 379. 216.
                              216. 216. 419.
  (0) (1) (1) (0) (0) (0) (1)
  2D18
Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.35 0.20 0.20 0.20 0.39
V(1)=57. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = 0.0 \& 54. Ast(0) = 0. 0D0 Astv = 0. 0D0
        Asti = 0. \quad 0D0
N-B= 76(1)B*H(mm)= 240* 450 Lb= 5.10(m)
.1. -1- -2- -3- -1-
+M= 0. 31. 57. 36. 0. -M= -55. 0. 0. 0. -28.
   (1) (1) (5) (1) (1) (1) (6)
As= 270. 246. 471. 285. 270. As= 450. 216.
                              216. 216. 270.
   (0) (1) (1) (0) (0) (0) (0) (0)
```

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2D18
```

Rs= 0.25 0.23 0.44 0.26 0.25 Rs= 0.42 0.20 0.20 0.20 0.25 V( 1)= 62. Asv( 0)= 36. 2D6 Rsv= 0.15 T & V(6) = -0.1 & 57. Ast(0) = 0. OD 0 Astv = 0. OD 0 - - $Ast1 = 0. \quad 0D0$ 

N-B= 77(1)B\*H(mm)= 240\* 450 Lb= 5.10(m)-l- -l- -2- -3- -J-+M= 0. 36. 57. 31. 0. -M= -28. 0. 0. 0. -55. (1) (6) (1) (1) (1) (5) (1) (1) (1) As= 270. 286. 471. 246. 270. As= 270. 216. 216. 216. 451. (0) (1) (1) (0) (0) (0) (0) (1) 2D18 Rs= 0.25 0.26 0.44 0.23 0.25 Rs= 0.25 0.20 0.20 0.20 0.42 V(1)= 62. Asv(0)= 36. 2D6 Rsv= 0.15 T & V(5) = 0.1 & 57. Ast(0) = 0. 0D 0 Astv = 0. 0D 0  $Ast1 = 0. \quad OD 0$ 

N-B=  $78(1)B^*H(mm)= 240^* 450$  Lb= 5.10(m)·I- ·I- ·2· ·3· ·J- ·I- -1- -2· -3· -J. +M= 0. 31. 47. 31. 0. -M= -51. 0. 0. 0. -47. (1) (1) (1) (1) (1) (1) (1) (1) (1) As= 270. 246. 381. 246. 270. As= 418. 216. 216. 216. 380. (0) (1) (1) (0) (0) (0) (1) 2D18 Rs= 0.25 0.23 0.35 0.23 0.25 Rs= 0.39 0.20 0.20 0.20 0.35 V(1)= 56. Asv(0)= 36. 2D6 Rsv= 0.15 T & V(5) = 0.0 & 54. Ast(0)= 0. 0D0 Astv = 0. 0D0  $Ast1 = 0. \quad 0D0$ 

N-B= 79(1)B\*H(mm)= 240\* 450 Lb= 5.10(m)-l- -l- -2- -3- -J- -1- -2- -3-.J. +M= 0. 31. 48. 31. 0. -M= -47. 0. 0. 0. -48. (1) (1) (1) (1) (1) (1) (1) (1) (1) As= 270. 246. 395. 246. 270. As= 384. 216. 216. 216. 391. (0) (1) (1) (0) (0) (0) (0) 2D18 1D18 2D18 1D18 2D18 2D18 1D18 1D18 2D18 Rs= 0.25 0.23 0.37 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36 V(1)=56. Asv(0)=36. 2D 6 Rsv=0.15 T & V(6) = 0.0 & 53. Ast(0) = 0. 0D 0 Astv = 0. 0D 0  $Ast1 = 0. \quad 0D0$ 

```
N-B=80(1)B*H(mm)=240*450 Lb= 5.10(m)
   .j. .j. .2. .3. .j. .j. -j. -j. -2- -3. .j.
                 31. 0. -M= -48.
                                  0.
                                      0.
                                          0. -48.
     0. 31. 48.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
            393. 246. 270. As= 390. 216.
                                     216. 216.
As = 270, 246,
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 1D18 2D18 1D18 2D18
                               2D18
                                     1D18 1D18 1D18
2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1) = 55. Asv(0) = 36. 2D 6 Rsv= 0.15
T \& V(5) = 0.0 \& 53. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
P4017544888817357448883197744486588888888888888888888484484888888484
N-B= 81 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
    -I- -I- -2- -3- -J-
                 31. 0. -M= -48.
                                 0.
                                      0. 0. -48.
     0. 31. 48.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
            393. 246. 270. As= 389. 216.
                                     216. 216.
As= 270, 246.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 1D18 2D18 1D18 2D18
                               2D18 1D18 1D18 1D18
2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)= 55. Asv(0)= 36. 2D6 Rsv= 0.15
T & V( 6)= 0.0 & 53. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 82 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -I- -I- -2- -3- -J-
         31. 48. 31. 0. -M= -48.
                                 0.
                                      0.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
As= 270. 246. 393. 246. 270. As= 389. 216.
                                     216. 216.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 1D18 2D18 1D18 2D18
                               2D18
                                     1D18 1D18 1D18
2D18
Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
V(1)=55. Asv(0)=36. 2D 6 Rsv=0.15
T & V( 6)= 0.0 & 53. Ast( 0)= 0. 0D 0 Asty = 0. 0D 0
               Ast1 = 0. \quad 0D0
$44.54.00V$4$64/88680$22V$02V$62V$4$643V43043S0EEDV4.66V884654674666666745
N-B= 83(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 .j. .j. -2- -3- -j-
                                      0. 0. -48.
+M= 0, 31, 48. 31. 0. -M= -48. 0.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
```

```
As= 270. 246. 394. 246. 270. As= 390. 216. 216. 216. 386.
   (0) (1) (1) (0) (0) (0) (1)
   2D18
 Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.36 0.20 0.20 0.20 0.36
 V(1)= 56. Asv(0)= 36. 2D6 Rsv= 0.15
 T \& V(5) = 0.0 \& 53. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                              Ast1 = 0. \quad 0D0
 N-B= 84 (1)B+H(mm)= 240+ 450 Lb= 5.10(m)
   -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
 +M= 0. 31. 47. 31. 0. -M= -47. 0. 0. 0. -50.
   (1) (1) (1) (1) (1) (1) (1) (1) (1)
 As= 270. 246. 385. 246. 270. As= 382. 216. 216. 216. 410.
   (0) (1) (1) (0) (1) (0) (0) (0) (1)
   2D18
 Rs= 0.25 0.23 0.36 0.23 0.25 Rs= 0.35 0.20 0.20 0.20 0.38
V(1)= 56. Asv(0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.0 \& 54. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                              Ast1 = 0. \quad 0D0
N-B= 85(1)B^*H(mm)= 240^* 450 Lb= 5.10(m)
  -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 31. 55. 31. 0. -M= -53. 0. 0. 0. -34.
   (1) (1) (1) (5) (1) (1) (1) (1) (6)
As= 270. 246. 450. 246. 270. As= 431. 216. 216. 216. 270.
   (0) (1) (1) (0) (0) (0) (0)
   2D18
Rs= 0.25 0.23 0.42 0.23 0.25 Rs= 0.40 0.20 0.20 0.20 0.25
V(1)=60. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 55. Ast(0) = 0. 0D 0 Asty = 0. 0D 0
                              Ast1 = 0. \cdot 0D0
N-B= 86 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
   -l· -l· -2- -3- -J- -1- -1- -2- -3. .j.
+M= 0. 91. 227. 111. 0. -M= -174. 0. 0. 0. -69.
   (1) (1) (1) (1) (1) (1) (5)
As= 375. 543. 1469. 672. 375. As= 1091. 300. 300. 300. 396.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
2D18
```

Rs= 0.25 0.36 0.98 0.45 0.25 Rs= 0.73 0.20 0.20 0.20 0.26

```
V(1)=138. Asv(0)=37. 2D 6 Rsv= 0.15
T \& V(6) = -0.3 \& 132, Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                             \cdot \quad Ast1 = 0. \quad 0D0
N-B= 87 (1)B^{+}H(mm)= 250^{+} 600 Lb= 7.12(m)
.j. .j. -2- -3. -j. -l- -1- -2- -3- -j-
+M= 0. 91. 228. 113. 0. -M= -174.
                                0.
                                     0. 0. -71.
   (1) (1) (1) (1)
                       (1) (1) (1) (5)
As= 375. 543. 1481. 685. 375. As= 1087. 300.
                                   300.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
2D18
Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.26
V(1)=138. Asy(0)=. 37. 2D6 Rsy= 0.15
T \& V(5) = 0.1 \& 128. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                Ast1 = 0. \quad OD 0
N-B= 88 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
   -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 91. 228. 116. 0. -M= -174.
                                0.
   (1) (1) (6) (1) (1) (1) (5)
As= 375, 543, 1481, 686, 375, As= 1087, 300, 300, 300, 382,
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
2D18
Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.25
V(1)=138. Asv(0)=37. 2D6 Rsv=0.15
T \& V(6) = -0.1 \& 134. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                         Ast1 = 0. \quad 0D0
N-B= 89(1)B*H(mm)= 250* 600 Lb= 7.12(m)
 -I- -1- -2- -3- -J- -I- -1- -2- -3- -J-
     0. 91. 228. 118. 0. -M= -176.
                                0.
                                    0.
   (1) (1) (6) (1) (6) (1) (5)
As= 375. 543. 1481. 686. 375. As= 1087. 300. 300. 300. 382.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
2D18
Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.25
V(1)=138. Asv(0)=37. 2D6 Rsv=0.15
T \& V(6) = -0.1 \& 134. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
        Ast1 = 0. \quad 0D0
N-B= 90 (1)B*H(mm)= 250* 600 Lb= 7.12(m)
```

N-B= 91 (1)B\*H(mm)= 250\* 600 Lb= 7.12(m)

-1- -1- -2- -3- -1- -1- -2- -3- -1
+M= 0. 91. 228. 122. 0. -M= -181. 0. 0. 0. -86.

(1) (1) (1) (6) (1) (6) (1) (1) (1) (5)

As= 375. 543. 1477. 680. 375. As= 1086. 300. 300. 300. 388.

(0) (1) (1) (1) (0) (1) (0) (0) (0) (1)

2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18

2D18

Rs= 0.25 0.36 0.98 0.45 0.25 Rs= 0.72 0.20 0.20 0.20 0.26

V(1)= 138. Asv(0)= 37. 2D6 Rsv= 0.15

T&V(6)= -0.1 & 136. Ast(0)= 0. 0D0 Astv= 0. 0D0

Ast1= 0. 0D0

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N-B= 92 (1)B\*H(mm)= 250\* 600 Lb= 7.12(m)

-1- -1- -2- -3- -J- -1- -1- -2- -3- -J
+M= 0. 66. 151. 99. 0. -M= -138. 0. 0. 0. 0. -69.

(1) (1) (1) (6) (1) (6) (1) (1) (1) (5)

As= 375. 388. 930. 503. 375. As= 748. 300. 300. 300. 375.

(0) (1) (1) (1) (0) (1) (0) (0) (0) (0)

2D18 2D18 4D18 2D18 2D18 3D18 2D18 2D18

2D18

Rs= 0.25 0.26 0.62 0.34 0.25 Rs= 0.50 0.20 0.20 0.20 0.25

V(6)= 106. Asv(0)= 37. 2D6 Rsv= 0.15

T & V(5)= 0.3 & 93. Ast(0)= 0. 0D0 Astv= 0. 0D0

Ast1 = 0. 0D0

N-B= 93 (1)B\*H(mm)= 250\* 600 Lb= 7.12(m)

-1- -1- -2- -3- -J- -1- -2- -3- -J
+M= 0. 66. 151. 100. 0. -M= -139. 0. 0. 0. -69.

(1) (1) (1) (6) (1) (6) (1) (1) (5)

As= 375. 388. 930. 503. 375. As= 748. 300. 300. 300. 375.

(0) (1) (1) (1) (0) (1) (0) (0) (0)



\*

```
3D18 2D18 2D18 2D18
   2D18 2D18 4D18 2D18 2D18
2D18
Rs= 0.25 0.26 0.62 0.34 0.25 Rs= 0.50 0.20 0.20 0.20 0.25
V(6)=106. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(6) = -0.3 \& 106. Ast(0) = 0. 0D0 Astv = 0. 0D0
                  -
                               Ast1 = 0. \quad 0D0
~~^~~
N-B= 94(1)B*H(mm)= 250* 600 Lb= 7.12(m)
 -I- -1- -2- -3- -J-
+M= 0. 91. 228. 127. 0. -M= -187.
                                    0. 0. -93.
                                0.
   (1) (1) (6) (1) (6) (5)
As= 375. 543. 1477. 680. 375. As= 1086. 300.
                                   300.
   (0) (1) (1) (0) (0) (0) (5)
   2D18 3D18 6D18 3D18 2D18 5D18
                                   2D18 2D18 2D18
2D18
Rs= 0.25 0.36 0.98 0.45 0.25 Rs= 0.72 0.20 0.20 0.20 0.27
V(1)=138. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 123. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                                Ast1 = 0. \quad 0D0
 N-B=95(1)B*H(mm)=250*600 Lb=7.12(m)
 -1- -1- -2- -3- -J- -1- -1- -2- -3- -J-
 +M= 0. 91. 228. 130. 0. -M= -189. 0. 0.
                                         0. -95.
    (1) (1) (6) (1) (6) (1) (5)
 As= 375. 543. 1481. 686. 375. As= 1087. 300.
                                    300. 300. 423.
    (0) (1) (1) (0) (1) (0) (0) (5)
    2D18 3D18 6D18 3D18 2D18 5D18
                                   2D18 2D18 2D18
2D18
 Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.28
 V(6)=139. Asv(0)=37. 2D 6 Rsv=0.15
 T \& V(6) = -0.1 \& 139. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                Ast1 = 0. \quad 0D0
        N-B=96(1)B*H(mm)=250*600 Lb= 7.12(m)
 -1. -1. -2- -3. -J- -1- -1- -2- -3- -J-
 +M= 0. 91. 228. 132. 0. -M= -192.
                                     0. 0. -99.
                                0.
    (1) (1) (6) (1) (6) (1) (7) (5)
 As= 375. 543. 1481. 686. 375. As= 1087. 300.
                                    300.
    (0)(1)(1)(0)(0)(0)(5)
    2D18 3D18 6D18 3D18 2D18 5D18
                                    2D18 2D18 2D18
2D18
 Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.29
 V( 6)= 140. Asv( 0)= 37. 2D6 Rsv= 0.15
 T \& V(5) = 0.1 \& 121. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
```

 $Ast1 = 0. \quad 0D0$ 

```
N-B= 97 (1)B*H(mm)= 250* 600 Lb= 7.12(m)

-1. -1- -2- -3- -J- -1- -1- -2- -3- -J-

+M= 0. 91. 228. 135. 0. -M= -195. 0. 0. 0. 0. -102.

(1) (1) (1) (6) (1) (6) (1) (1) (1) (5)

As= 375. 543. 1481. 686. 375. As= 1087. 300. 300. 300. 455.

(0) (1) (1) (1) (0) (1) (0) (0) (0) (5)

2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18

2D18

Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.30

V(6)= 141. Asv(0)= 37. 2D6 Rsv= 0.15

T & V(6)= -0.1 & 141. Ast(0)= 0. 0D0 Astv= 0. 0D0

Ast1= 0. 0D0
```

N-B= 98 (1)B\*H(nm)= 250\* 600 Lb= 7.12(m)

-I- -1- -2- -3- -J- -I- -1- -2- -3- -J
+M= 0. 91. 228. 137. 0. -M= -197. 0. 0. 0. -106.

(1) (1) (1) (6) (1) (6) (1) (1) (1) (5)

As= 375. 543. 1481. 686. 375. As= 1087. 300. 300. 300. 472.

(0) (1) (1) (1) (0) (1) (0) (0) (0) (5)

2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18

2D18

Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.31

V(6)= 141. Asv(0)= 37. 2D 6 Rsv= 0.15

T & V(5)= 0.1 & 119. Ast(0)= 0. 0D 0 Astv= 0. 0D 0

Ast1 = 0. 0D 0

\_\_\_\_\_\_

N-B= 100 (1)B\*H(mm)= 250\* 600 Lb= 7.12(m)
-I- -I- -2- -3- -J- -I- -1- -2- -3- -J+M= 0. 91. 228. 142. 1. -M= -203. 0. 0. 0. -113.

T

```
(1) (1) (6) (10) (6) (1) (1) (5)
As= 375. 543. 1481. 686. 375. As= 1087. 300.
                                  300. 300. 504.
   (0) (1) (1) (0) (0) (0) (5)
 2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
2D18
Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.72 0.20 0.20 0.20 0.34
V(6)=143. Asv(0)=37. 2D 6 Rsv= 0.15
T \& V(5) = 0.1 \& 118. Ast(0)= 0. 0D 0 Astv = 0. 0D 0
                         Ast1 = 0. \quad 0D0
N-B= 101 (1)B^*H(mm)= 250^* 600 Lb= 7.12(m)
-I. -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 91. 229. 144. 3. -M= -206. 0. 0. 0. -118.
  (1) (1) (6) (10) (6) (1) (1) (5)
                                  300. 300. 526.
As= 375. 546. 1491. 685. 375. As= 1094. 300.
   (0) (1) (1) (0) (1) (0) (5)
   2D18 3D18 6D18 3D18 2D18 5D18 2D18 2D18 2D18
3D18
Rs= 0.25 0.36 0.99 0.46 0.25 Rs= 0.73 0.20 0.20 0.20 0.35
V(6) = 145. Asv(0) = 37. 2D 6 Rsv= 0.15
T \& V(6) = -0.1 \& 145. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                         Ast 1 = 0. \quad 0D 0
N-B=102(1)B*H(mm)=250*600 Lb= 7.12(m)
 -I- -I- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 66. 154. 121. 23. -M= -163. 0. 0. 0. -101.
   (1) (1) (6) (6) (10) (6) (1) (1) (5)
As= 375, 391, 942, 543, 375, As= 755, 300, 300, 300, 448.
   (0) (1) (6) (0) (1) (0) (0) (5)
   2D18 2D18 4D18 3D18 2D18 3D18 2D18 2D18 2D18
2D18
R_{S}= 0.25 0.26 0.63 0.36 0.25 R_{S}= 0.50 0.20 0.20 0.20 0.30
V(6)=115. Asv(0)=37. 2D 6 Rsv=0.15
T \& V(5) = 0.4 \& 90. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
    Ast1 = 0. 0D 0
 N-B= 103 (1)B^*H(mm)= 240^* 450 Lb= 5.10(m)
 _i__i___i. _2. _3. _j. _i-_ -1- -2- -3- -j-
 +M= 0. 36. 53. 36. 0. -M= -58. 0. 0. 0. -56.
   (1) (1) (1) (1) (5) (1) (6)
 As= 270. 293. 438. 293. 270. As= 472. 216. 216. 216. 449.
   (0) (1) (1) (0) (0) (0) (0) (1)
    2D18
```

```
Calculation book Oil Car Storage
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.44 0.20 0.20 0.20 0.42
V( 1)= 73. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(1) = -1.9 \& 73. Ast(0) = 0. 0D0 Astv = 0. 0D0
Ast 1 = 0, \quad 0D 0
N-B= 104 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
    .]. -]. -2- -3. -J. -1- -2- -3· -J·
+M= 0. 36. 54. 36. 0. -M= -59. 0. 0.
   (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 440. 293. 270. As= 456. 216. 216. 216. 462.
   (0) (1) (1) (0) (1) (0) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.43
V( 1)= 72. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 71. \text{ Ast}(9) = 0.000 \text{ Ast}v = 0.000
                               Ast1 = 0. \quad 0D0
N-B= 105 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
    -I- -I- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -59. 0. 0. -59.
   (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 439. 293. 270. As= 460. 216. 216. 216. 460.
   (0) (1) (1) (0) (1) (0) (0) (1)
```

2D18 Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43 V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15 T & V(6) = -0.1 & 71. Ast(0) = 0. OD 0 Asty = 0. OD 0  $Ast1 = 0. \quad 0D0$ 

N-B= 106 (1)B\*H(mm)= 240\* 450 Lb= 5.10(m) -I- -I- -2- -3- -J-+M= 0. 36. 54. 36. 0. -M= -59. 0. 0. -59. (1) (1) (1) (1) (5) (1) (1) (6) As= 270. 293. 439. 293. 270. As= 459. 216. 216. 216. 461. (0) (1) (1) (0) (1) (0) (0) (1) The state of the s 2D18 Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43 V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15 T & V(5) = 0.1 & 71. Ast(0) = 0. 0D0 Astv > 0. 0D0 $Ast1 = 0. \quad 0D0$ 

-432-

```
N-B= 107 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
-I- -1- -2- -3- -J- -I- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -59. 0. 0. 0. -58.
  (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 441. 293. 270. As= 461. 216. 216. 216. 455.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.42
V(1)= 72. Asv(0)= 36. 2D6 Rsv= 0.15
T \& V(6) = -0.1 \& 71. Ast(0) = 0. 0D 0  Astv = 0. 0D 0
                     Ast1 = 0. \quad 0D0
N-B=108(1)B*H(mm)=240*450 Lb= 5.10(m)
   -I- -1- -2- -3- -J-
+M= 0. 36. 52. 36. 0. -M= -57. 0. 0. 0. -62.
  (1) (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 425. 293. 270. As= 448. 216. 216. 216. 496.
   (0)(1)(1)(0)(0)(0)(0)(1)
   2D18
Rs= 0.25 0.27 0.39 0.27 0.25 Rs= 0.41 0.20 0.20 0.20 0.46
V(1)=73. Asv(0)=36. 2D 6 Rsv= 0.15
T & V( 5)= 0.1 & 70. Ast( 0)= 0. 0D 0 Asty = 0. 0D 0
                      Ast1 = 0. \quad 0D0
N-B= 109 (1)B*H(mm)= 240* 450  Lb= 5.10(m)
-I- -I- -2- -3- -J-
+M= 0. 36. 64. 45. 0. -M= -68. 0. 0. 0. -36.
 (1) (1) (5) (1) (5) (6)
As= 270. 293. 530. 341. 270. As= 536. 216. 216. 216. 270.
   (0) (1) (1) (0) (1) (0) (0) (0)
   2D18 2D18 3D18 2D18 2D18 - 3D18 1D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.49 0.32 0.25 Rs= 0.50 0.20 0.20 0.20 0.25
V(1)=80. Asy(0)=36. 2D6 Rsy= 0.15
T \& V(1) = 0.5 \& 80. \text{ Ast}(0) = 0. 0D 0 \text{ Ast}v = 0. 0D 0
     Ast1 = 0. \quad OD 0
N-B=110(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 -J. -1. -2- -3- -J- -1- -2- -3- -J-
+M= 0. 45. 64. 36. 0. -M= -36. 0. 0. 0. -68.
   (1) (6) (1) (1) (5) (1) (1) (6)
 As= 270. 342. 530. 293. 270. As= 270. 216. 216. 216. 537.
```

```
(0) (1) (1) (0) (0) (0) (0) (1) ...
    2D18 2D18 3D18 2D18 2D18 2D18
                                      1D18 1D18 1D18
3D18
 Rs= 0.25 0.32 0.49 0.27 0.25 Rs= 0.25 0.20 0.20 0.20 0.50
 V( 1)= 80. Asv( 0)= 36. 2D6 Rsv= 0.15
 T \& V(1) = -0.5 \& 80. \text{ Ast}(0) = 0. \text{ 0D 0 Ast} = 0. \text{ 0D 0}
                                   Asti = 0. \quad 0D0
 N-B=111 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
     -I- -I- -2- -3- -J-
                        -I- -}- -2- -3- -J-
      0. 36. 52. 36. 0. -M= -62.
                                  0.
                                      0.
    (1) (1) (1) (1) (5) (1) (1) (6)
 As= 270. 293. 425. 293. 270. As= 495. 216.
                                      216.
    (0) (1) (1) (0) (0) (0) (0) (1)
    2D18 2D18 2D18 2D18 2D18
                                2D18
                                      1D18 1D18 1D18
2D18
 Rs= 0.25 0.27 0.39 0.27 0.25 Rs= 0.46 0.20 0.20 0.20 0.42
 V(1)=73. Asv(0)=36. 2D 6 Rsv=0.15
 T \& V(6) = -0.1 \& 70. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                                  Ast1 = 0. \quad OD 0
 N-B= 112 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
    -l- -l- -2- -3- -J- -1- -1- -2- -3. -J-
 +M= 0. 36. 54. 36. 0. -M= -58.
                                  0.
                                      0.
                                            0. -59.
   (1) (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 441. 293. 270. As= 454. 216. 216. 216. 462.
    (0) (1) (1) (0) (0) (0) (0) (1)
    2D18 2D18 2D18 2D18 2D18 2D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.43
V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 71. \text{ Ast}(0) = 0. 0D0 \text{ Ast}v = 0. 0D0
                                  Ast1 = 0. \quad 0D0
N-B= 113 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
    -I- -1- -2- -3- -J- -1- -1- -2- -3. .j.
+M= 0. 36. 54. 36. 0. -M== -59.
                                  0.
                                       0. 0. -59.
   (1) (1) (1) (1) (1)
                         (5) (1) (1) (1) (6)
As= 270. 293. 439. 293. 270. As= 460. 216.
                                     216. 216. 460.
   (0) (1) (1) (0) (0) (0) (0) (1)
   2D18 2D18 2D18 2D18 2D18 2D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43
V(1)= 72. Asy(0)= 36. 2D6 Rsy= 0.15
```

```
T \& V(6) = -0.1 \& 71. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                      Ast1 = 0. \quad 0D0
N-B=114(1)B*H(mm)= 240* 450 Lb= 5.10(m)
 · -[- -1- -2- -3- -J-
                       -I- -1- -2- -3- -J-
+M= 0. 36. 54. 36. 0. -M= -59. 0. 0. -59.
  (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 439. 293. 270. As= 459. 216. 216. 216. 460.
  (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.43
V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 71. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
    Ast1 = 0. \quad 0D0
N-B=115 (1)B*H(mm)= 240* 450 Lb= 5.10(m)
   -1. -1. -2. -3. -J. -1. -1. -2. -3. -J.
+M= 0. 36. 54. 36. 0. -M= -59. 0. 0. -59.
  (1) (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 439. 293. 270. As= 459. 216. 216. 216. 461.
   (0) (1) (1) (0) (1) (0) (0) (0) (1)
   2D18
R_{S}{=}\quad 0.25 \quad 0.27 \quad 0.41 \ . \quad 0.27 \quad 0.25 \quad R_{S}{=} \quad 0.43 \quad 0.20 \quad 0.20 \quad 0.20 \quad 0.43
V(1)=72. Asv(0)=36. 2D6 Rsv=0.15
T \& V(5) = 0.1 \& 71. Ast(0) = 0. 0D 0  Astv = 0. 0D 0
          •
                              Ast1 = 0. \quad OD 0.
N-B=116(1)B+H(mm)=240+450 Lb=5.10(m)
 .I- -I- -2- -3- -J- -I- -1- -2- -3- -J·
+M= 0. 36. 54. 36. 0. +M= -59. 0. 0. 0. -58.
 (1) (1) (1) (1) (1) (5) (1) (1) (6)
As= 270. 293. 441. 293. 270. As= 461. 216. 216. 216. 455.
   (0) (1) (1) (0) (1) (0) (0) (1)
   2D18
Rs= 0.25 0.27 0.41 0.27 0.25 Rs= 0.43 0.20 0.20 0.20 0.42
V(1)=72. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -0.1 \& 71. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                              Ast1 = 0. \quad 0D0
N-B=117(1)B+H(mm)=240+450 Lb= 5.10(m)
-1. -1. -2- -3- -1- -1- -2- -3- -J-
```

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· : · 136
+M= 0, 36. 52, 36. 0, -M= -57. 0. 0. -62.
   (1) (1) (1) (1) (1) (5) (1) (1) (6)
As= 270, 293, 426, 293, 270, As= 449, 216,
                                    216.
                                        216. 492.
   (0) (1) (1) (0) (1) (0) (0) (1)
       2D18 2D18 2D18 2D18
                              2D18
                                   1D18 1D18 1D18
2D18
Rs= 0.25 0.27 0.39 0.27 0.25 Rs= 0.42 0.20 0.20 0.20 0.46
V(1)=73. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(5) = 0.1 \& 70. Ast(0) = 0. 0D0 Astv = 0. 0D0
                                Ast1 = 0. \quad 0D0
N-B=118(1)B+H(mm)=240+450 Lb= 5.10(m)
   -l- -l- -2- -3- -J-
                             -1- -2- -3- -J-
+M= 0. 36. 63. 43. 0. -M= -67. 0. 0. 0. -38.
   (1) (1) (5) (1) (5) (6)
As= 270. 293. 520. 323. 270. As= 528. 216.
                                    216.
   (0) (1) (1) (0) (0) (0) (0)
                                   1D18 1D18 1D18
       2D18 3D18 2D18 2D18
                              3D18
2D18
Rs= 0.25 0.27 0.48 0.30 0.25 Rs= 0.49
                               0.20 0.20 0.20 0.25
V(1)=79. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(1) = 0.5 \& 79. Ast(0) = 0. 0D O Astv = 0, 0D O
                                Ast1 = 0, \quad 0D0
.
N-B=119 (1)B*H(mm)= 240*3300 Lb= 1.50(m)
      -1-
          -2- -3- -J- ·I-
                             -1- -2- -3- -j-
+M= 176. 271. 325. 374. 347. -M= -181. -278. -344. -418. -416.
   (10) (10) (10) (10) (10) (5) (5) (5) (5)
As= 1980. 1584. 1584. 1584. 1980. As= 1980. 1584. 1584. 1584. 1980.
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V(5)=190. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = 0.6 \& 136. Ast(0) = 0.000 Asty = 0.
                                       0D 0
                            Ast1 = 0. \quad 0D0
N-B=120 (1)B+H(mm)= 240+3300 Lb= 1.50(m)
           -2-
       -1-
              -3-
                  -J-
                          -1-
                             -1- -2- -3. .j.
+M= 351. 320. 213. 156. 83. -M= -351. -305. -194. -146. -93.
   (6) (6) (6) (8) (9) (9) (7) (3)
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As= 1980. 1584. 1584. 1584. 1980. As= 1980. 1584. 1584. 1584. 1980.

-436-

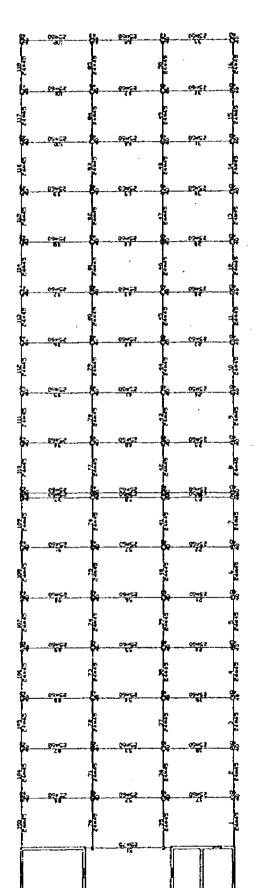
(0) (0) (0) (0) (0) (0) (0) (0) (0) 

```
8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V( 6)= 276. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = 0.2 \& 276. Ast(0) = 0. 0D 0 AstV = 0. 0D 0
                           Ast1 = 0. \quad 0D0
N-B=121 (1)B*H(mm)= 240*3300 Lb= 1.50(m)
   -J. -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 117. 154. 163. 164. 132. •M= •121. •124. •108. •97. •77.
   (9) (5) (5) (5) (5) (6) (10) (10) (10)
As= 1980. 1584. 1584. 1584. 1980. As= 1980. 1584. 1584. 1584. 1980.
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V(3)=100. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -2.0 \& 61. Ast(0) = 0. 0D 0  Astv = 0. 0D 0
                                 Ast1 = 0. \quad 0D0
N-B= 122 (1)B*H(mm)= 240*3300 Lb= 1.50(m)
   .I. -1- -2- -3- -J- -1- -1- -2- -3- -J-
+M= 149. 180. 175. 163. 120. •M= -69. -66. -53. -47. -38.
   (3) (3) (3) (3) (3) (8) (8) (8) (8)
As= 1980, 1584, 1584, 1584, 1980, As= 1980, 1584, 1584, 1584, 1980,
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V(5)=55. Asy(0)=36. 2D 6 Rsy= 0.15
T & V( 6)= -1.5 & 52. Ast( 0)= 0. 0D 0 Astv = 0. 0D 0
                                Ast1 = 0. \quad 0D0
N-B=123 (1)B+H(mm)= 240+3300 Lb= 1.50(m)
  -i- -i- -2- -3- -j-
+M= 154. 239. 286. 328. 303. -M= -112. -201. -273. -355. -372.
   (5) (5) (9) (9) (10) (10) (6) (6)
As= 1980, 1584, 1584, 1584, 1980, As= 1980, 1584, 1584, 1584, 1980,
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V( 6)= 215. Asv( 0)= 36. 2D6 Rsv= 0.15
T & V(4) = -0.8 & 58. \text{ Ast}(0) = 0. \text{ 0D 0 Ast} = 0. \text{ 0D 0}
```

 $Ast1 = 0. \quad 0D0$ 

```
N-B= 124 (1)B*H(mm)= 240* 3600 Lb= 0.90(m)
 -[- -1- -2- -3- -J- -1- -2- -3- -J-
+M= 55. 84. 101. 118. 136. -M= -154. -218. -254. -296. -308.
   (7) (7) (10) (10) (4) (4) (5) (5)
As= 2160. 1728. 1728. 1728. 2160. As= 2160. 1728. 1728. 1728. 2160.
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   7D20 7D18 7D18 7D18 7D20 7D20 7D18 7D18 7D18
7D20
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V( 5)= 286. Asv( 0)= 36. 2D 6 Rsv= 0.15
T \& V(6) = 1.3 \& 183. Ast(0) = 0. 0D0 Astv = 0. 0D0
                          Ast1 = 0. \quad 0D0
N-B= 125 (1)B*H(mm)= 240* 3300 Lb= 2.10(m)
   -I- -I- -2- -3- -J- -I- -I-
                                 -2- -3- -J.
+M= 244. 198. 88. 81. 133. -M= -201. -123. -18. -39. -144.
   (5) (5) (6) (10) (10) (10) (9) (5)
As= 1980. 1584. 1584. 1584. 1980. As= 1980. 1584. 1584. 1584. 1980.
   (0)(0)(0)(0)(0)(0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V(5)=229. Asv(0)=36. 2D 6 Rsv=0.15
T \& V(6) = -1.2 \& 200. Ast(0) = 0. 0D 0 Astv = 0. 0D 0
                         Ast1 = 0, \quad 0D0
N-B= 126(1)B*H(mm)=240*3300 Lb= 2.10(m)
   ·1· -1- -2- -3- -J. .1.
                            -1- -2- -3- -J-
+M= 539. 368. 75. 312. 478. -M= -472. -264. 0. -238. -461.
   (6) (6) (6) (5) (5) (9) (9) (1) (10) (10)
As= 1980. 1584. 1584. 1584. 1980. As= 1980. 1584. 1584. 1584. 1980.
   (0) (0) (0) (0) (0) (0) (0) (0) (0)
   8D18
Rs= 0.25 0.20 0.20 0.20 0.25 Rs= 0.25 0.20 0.20 0.20 0.25
V( 6)= 520. Asv( 0)= 36. 2D6 Rsv= 0.15
T \& V(6) = -1.8 \& 520. Ast(0) = 0. OD 0 Astv = 0. OD 0
                          Ast1 = 0. \quad 0D0
A transfer of the contract
N-B= 127 (1)B*H(mm)= 240*3600 Lb= 0.90(m)
   -l- ·l- ·2- -3- -J- -1- -1- -2- -3- -J-
+M= 281. 398. 457. 513. 472. -M= -294. -404. -458. -515. -479.
   (9) (9) (9) (9) (9) (6) (6) (6) (6) (6)
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1st FLOOR STRUCURE PLAN(UNIT:CM)

TOTAL NUMBER OF COLUMNS=68 CONCRETE STRENGTH GRADE: BEAM Cb=25 COLUMN Cc=25THIS FLOOR: FLOOR HEIGHT=600(CMM) TOTAL NUMBER OF BEAMS=128

3.8 7.0	82.0 7.0	S.8			
88.70	80°6 60°6	ශීර්			
85.5	සුද	8,5			
8.5 0.7	2.5	5.8			
87	8.50	5.8			
5.6	85.8 7.0	8,5			
97.Cd	8.5 8.5	8 % d			
200	8.8 7.0	5.8			
8.8 7.0	5.8	8.20 7.0			
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8.8.9.7.0,	8.29 7.0	8.2.0 7.0			
87.4 87.4	82.9	S.2 0.7			
8.59	8,5	8 % %			
8.00 8.70	87.5 87.5	876			
82 7.0	82	ψ̈́G			
87.6	828	86			
8.5 7.0	36 36				

1st floor (floor load) 第1点平直(表面数)



-cu	38:11				5 2 41	
		1967	\$ <b>?</b> 3	11.27	ह्य	133
33.	8(1)	12.27	etal	1=27	6(=1	255
ž.	<b>8</b> €61	1427	85=1	1=2.7	BEST	153
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5.5 <u>.1</u>	SEAT	1221	8691	1=2.7	BE⊯T	555
XX	37.01	1.27	86-1	1.67	PERI	<u>%</u>
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152	9E41	1251	<del>8021</del>	1=27	80s 82s 88s	25
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<b>15.5</b>	9641	1-27	g (a)	1-27		183
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250	8511	1=2.7	BÇAT	342.7	<u></u>	1. 22.
353	BEAT		₹£#T	1.27	. 80	

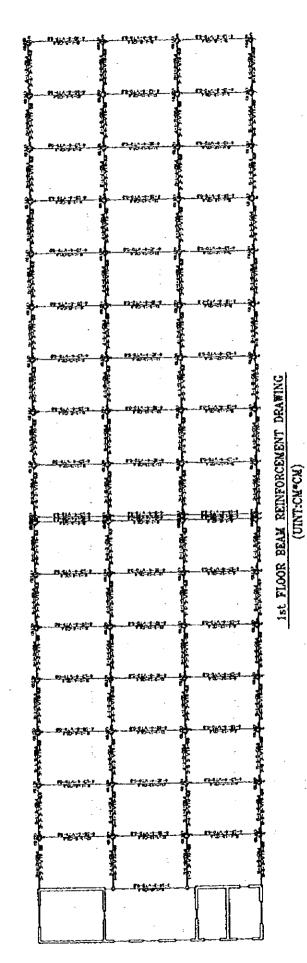
ist floor (beam and wall load)

32⊈ 25€ 32 C 32 € 8°E -38€ 85, 32€ 32€ 6.2 32C 262 250 0.0 ដូខខ 

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6	<b>E8E</b>		<u> </u>		tee	
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407	इ.स.	497	<u>ξ</u> ξεεε	497	हें हुं दर	497
497.	ë a≀ E®	497.	क्षे सर रहा	497.	सह श्रं कर	407
497.	ह्यं दर स्वर	497	हुह रह हुई सह	497	383 Signal	497.
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407	हुई कर हरू	497	सुः ऋः इक्ष्ट	427.	ર્સે કર દહ	266
327.	₹ 623 285	327	र्जे 825 28E	.55	₹ 85 568	S 222
2	देस: स	327.	₹.825 <b>{</b> {	327.	₹.8:	25.2
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. 67	सुः कर सहस्	497	हुत्यर सुरुवर	497	383 Sign	2
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CALCULATION REINFORCEMENT
CALCULATION REINFORCEMENT
(UNIT:mmm² / m;STEEL GRADE: 1,11; CONCRETE:C20)



Ć 14Tr 海海海海岛 . O CO 传。记传特传·特传·特传· 中心 自然の意 GROUND FLOOR MAXIMUM AXIAL FORCE COMBINATION INTERNAL FORCES DRAWING (UNIT:KN,KN-M) CROUND FLOOR MAXIMUM SHEARING FORCE COMBINATION INTERNAL FORCES DRAWING (UNITERN,KN-M) 意。意 海海海海路沿海海海河 (海·海·海) 源。源 源 源。源 每一场 话。话:话:话:话:话 動物 會藏 

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e∯s c©n	Mil.	83 <u>8</u> 12 <sup>6</sup> 1	Biiii A	15 (C)	1		<b>4</b>		KN.
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## **Calculation Book**

- I. Name of Project: Shanghai Pudong Airport Oil Depot Repair Shop
- II. Seismic intensity: 7
- III. Frame seismic grade: 3
- IV. Structure importance parameter: Ro=1.0
- V. Site soil type: IV
- VI, Soil endurance: R=110KPa
- VII. Foundation load-bearing layer elevation:
- VIII. Materials: column -- C25 beam board -- C25 wall: clay brick 240mm ( 5.40KN/m2 )
  - I. Load:
  - 1. Living load:

roof

- 0.7KN/m2

2. Static load:

roof

ceiling 0.50KN/m2

structure layer (120mm) 3.00KN/m2

roof (roof 1)

2.64KN/m2

total

6.14KN/m2

- 3. Wind load: 0.55 KN/m2
- X. Selection of main members
  - 1. Brick column 480x490mm

Main column 400x400

2. Main beam (L=6000mm)

bxh=300x600mm

bxh=200x400mm

3. Board thickness

h=120mm

- XI. Design basis
  - 1. Current national architecture & structure standards and codes;
  - Shanghai City's << Base Foundation Design Codes >> DBJ08--11--89;
  - Shanghai City's << Base Treatment Technical Codes >> DBJ08--40--94;
  - 4. Shanghai City's << Building Anti-seismic Design Standards >> DBJ08--09--92;

## XII. Computer programs

China Building Science Research Institue CAD Engineering Department

**PMCAD** 

August, 1996

PK

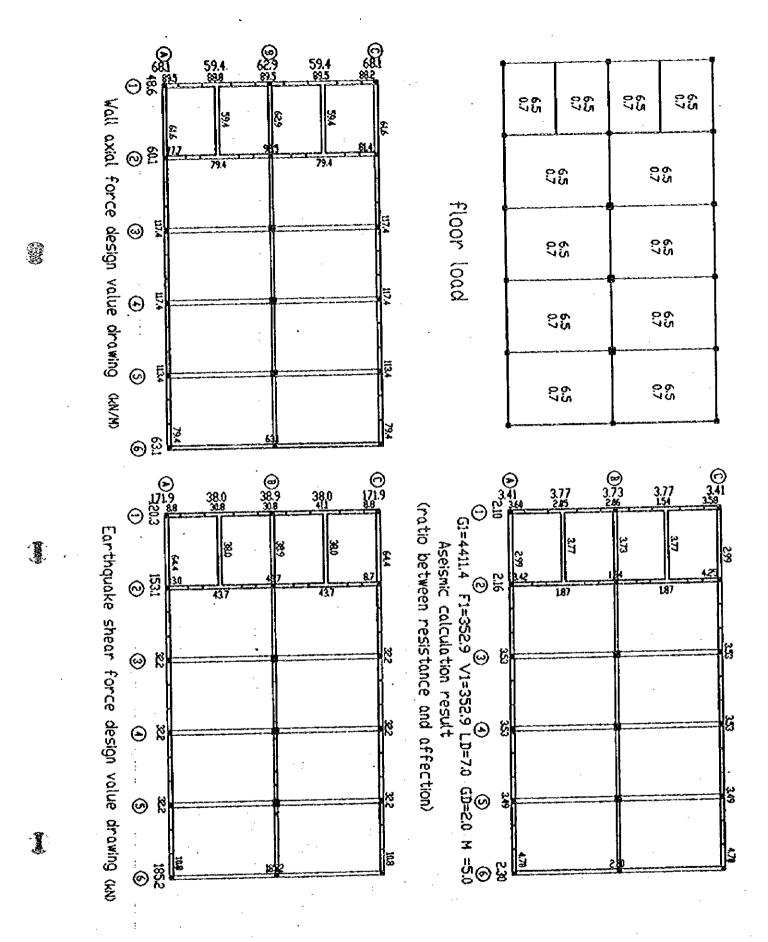
August, 1996

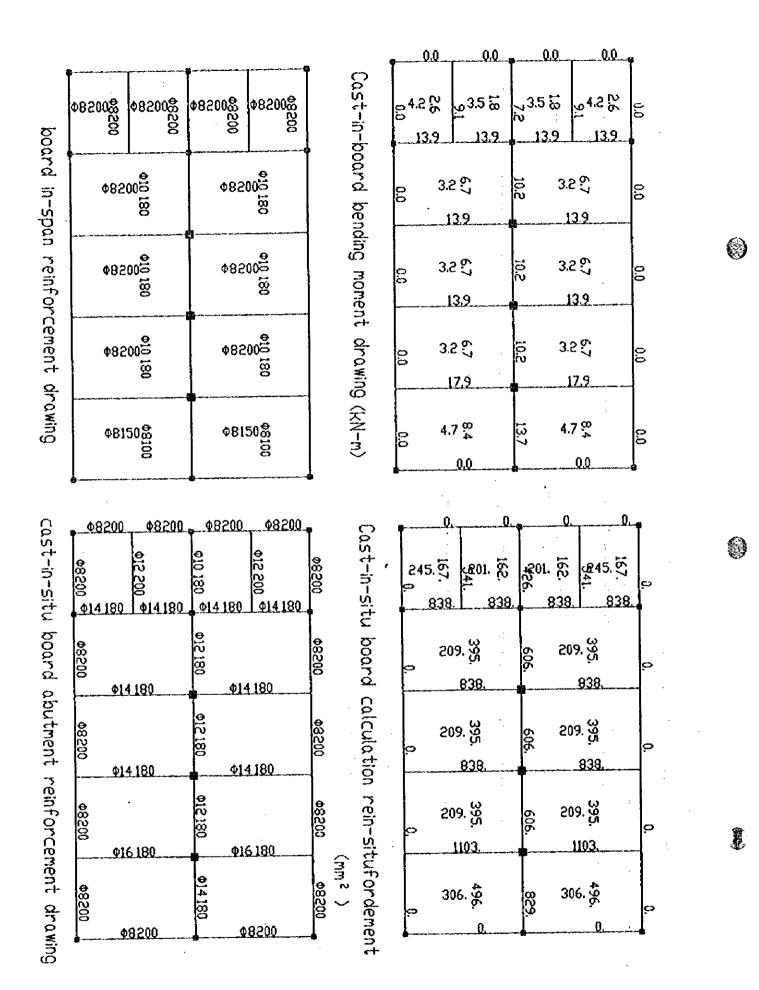
**JCCAD** 

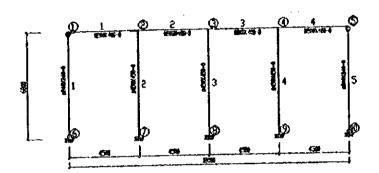
August, 1996

## XIII. Conclusion:

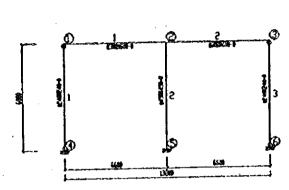
It is concluded from calculation above, the integral strength and deformation of structure meet the design requirements, the geometric dimensions also meet the requirements of strength and deformation regulated by Codes. The primary data of structural model, major calculation results, combining results of main internal forces of each member, structural layout, internal force drawing, reinforcing results of major members refer the next page, based on which construction drawings are made.



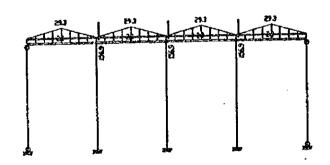




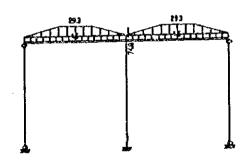
Freme elevation drawing



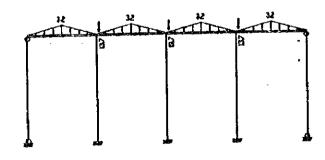
Frame elevation drawing



Coastant load greeks



Constant load graving



Living load drawing

Living load drawing

LL-1 Drawing

TT-Sprazed

\*\*\*\*\*\* LL-2 calculation result \*\*\*\*\*\*

OUTPUT	DATA		Zhong xir	າ <b>xi</b>	. =					
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OUTPUT	DATA									
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STIF COMPUTE DEAD COMPUTE

Calculation	book		Oil	Depo	t Repair	Shop			<del> </del>
JOINT	LOAD:	JR 2 0	XM 0.00		XN 74.80				
COLUM	IN LOAD:	0 JC	KL		P	x	K)	ζ	
BEAM KL	P	NE X	LI P1		KL X1 4,50	P 0.00	x	P1	X1 6
29.30 29.30	2.25 2.25	1	2	1	4.50	0.00			6
			**D	EAD	LOAD**				
JOINT	STIF CO LIVE CO LOAD:				XN 7.10	·			
COLUN	IN LOAD:	0 IC	KI	, ·	P	х	K	x	
BEAM KL	LOAD:	NE X 1		IVE 6 6	LOAD** KL X1 3.20 3.20	P 2.25 2.25	x	Pl	X1
	EART (	COMPU 7		0	1	1.00	0		
÷	1 433.584								
	1 T 1.000 34.687	`= 0.78	34						-
( 1	) 0.012 (	2) 0.01	**I 2 ( 3)	OISPL 0.012	ACEMENT ( 4) 0.	** 000 ( 5)	0.000 (	6) 0.000	
	3 433.584		.i.,						
-	1 7 1.000 34.687	r= 0.78					-		
( 1	1)-0.012 ( COMB	2)-0.0 SI COMF	12 ( 3)	DISPL -0.012	ACEMENT	r** ).000 ( 5)	0.000 (	( 6) 0.000	

\*\*COMBINATION AND REINFORCEMENT\*\*

Concrete COLUMN 1( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 ) Section property: B= 240, H= 240

	IUMBER	М	N		V.	М	N		V NU	MBER
M	N 1	-0.01	78.18	4 0.00	N -0.02	V -66.43	0.00	2	-0.01	65.15
0.00	-0.01	-55.36	0.00	0.00	-0.02	-00.43	0.00	2	-0.01	03.13
0.00	3	-0.01	78.18	0.00	-0.02	-66.43	0.00	4	-0.01	65.15
0.00	-0.01	-55.36	0.00					•		
	5	-0.01	76.83	0.00	-0.01	-65.08	0.00	6	0.00	63.80
0.00	-0.01	-54.01	0.00							-
	7	-0.01	86.31	0.00	-0.02	-74.56	0.00	8	-0.01	73.28
0.00	-0.02	-63.49	0.00							
	9	-0.01	86.31	0.00	-0.02	-74.56	0.00	10	-0.01	73.28
0.00	-0.02	-63.49	0.00							
	11	-0.01	76.83	0.00	-0.01	-65.08	0.00	12	0.00	63.80
0.00	-0.01	-54.01	0.00			<i></i>		• •		
0.00	13	-0.01	77.03	0.00	-0.01	-65.28	0.00	14	-0.01	64.00
0.00	-0.01	-54.21 -0.01	0.00 85.09	0.00	-0.02	72.24	0.00	16		30.06
0.00	-0.02		0.00	0.00	-0.02	-73.34	0.00	16	-0.01	72.06
0.00	17	-0.01	85.09	0.00	-0.02	-73.34	0.00	18	-0.01	72.06
0.00	-0.02	-62.27	0.00	0.00	-0.02	-13.34	0.00	10	-0.01	12.00
0.00	19	-0.01	77.03	0.00	-0.01	-65.28	0.00	20	-0.01	64.00
0.00	-0.01	-54.21	0.00	0.00	0.01	05.20	0.00	20	0.01	04.00
	21	-0.01	77.03	0.00	-0.01	-65.28	0.00	22	-0.01	64.00
0.00	-0.01	-54.21	0.00							
	23	-0.01	85.09	0.00	-0.02	-73.34	0.00	24	-0.01	72.06
0.00	-0.02	-62.27	0.00							
	25	-0.01	85.09	0.00	-0.02	-73.34	0.00	26	-0.01	72.06
0.00	-0.02	-62.27	0.00							
	27	-0.01	77.03	0.00	-0.01	-65.28	0.00	28	-0.01	64.00
0.00	-0.01	-54.21	0.00							
	29	0.04	67.07	0.01	0.03	-55.32	-0.01	30	0.04	54.14
0.01	0.03		-0.01		0.06	00.44				<b>50.40</b>
0.00	31	-0.05	92.19	-0.02	-0.06	-80.44	0.02	32	-0.05	78.58
-0.02	-0.06 33	-68.79 -0.05	0.02 92.19	-0.02	-0.06	-80.44	0.00	3.6	0.06	70.60
-0.02			0.02	-0.02	-0.00	-80.44	0.02	34	-0.05	78.58
-0.02	35	0.04	67.07	0.01	0.03	-55.32	-0.01	36	0.04	54.14
0.01	0.03	-44.34	-0.01	0.01	0.03	-33.32	-0.01	30	V.U4	J4. 14
0.01	0.03	17.54	-0.01			-				
	NO 7	As=	46.	- M=	-0.01	N=	86.31		NO 7	As=
40.	M:		N=	-74.56			-			
		GG≔	173.							

Concrete COLUMN 2( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 ) Section property: B= 450, H= 450

N	UMBER	M	N	V	M	N	V	N	UMBER
M	N	V	M	N	V				
	1	0.00 375.39	0.00	0.00	-334.08	0.00	2	0.00	312.82
0.00	0.00	-278.40	0.00	-	-				
	3	0.00 375.39	0.00	0.00	-334.08	0.00	4	0.00	312.82
0.00	0.00	-278.40	0.00						
	5	1.86 398.01	0.00	1.87	-356.70	0.00	6	1.86	335.45
0.00	1.87	-301.02	0.00						

Calculation book	Oil D	epot Rep	air Shop				<del></del>
7 -1.86 388.11	0.00	-1.87	-346.80	0.00	8	-1.86	325.55
0.00 -1.87 -291.12 0. 9 0.00 410.74	0.00	0.00	-369.43	0.00	10	0.00	348.17
0.00 0.00 -313.75 0. 11 0.00 375.39	0.00	0.00	-334.08	0.00	12	0.00	312.82
	.00	1.59	-353.31	0.00	14	1.58	332.05
•••	.00	-1.59	-344.89	0.00	16	-1.58	323.64
	0.00	0.00	-364.12	0.00	18	0.00	342.87
0.00 0.00 -308.44 0	.00	0.00	-334.08	0.00	20	0.00	312.82
0.00 0.00 -278.40 0	.00 :	1.59	-353.31	0.00	22	1.58	332.05
0.00 1.59 -297.63 0	.00	-1.59	-344.89	0.00	24	-1.58	323.64
0.00	.00		-364.12	0.00	26	0.00	342.87
0.00	00,00	0.00			28	0.00	312.82
0.00	00.0	0.00	-334.08	0.00			320.90
29 168.34 385.08 45.07 139.59 -286.48 -4	5.07	139.72	-343.77	-45.07	30	168.21	
31 -168.34 380.84	-45.07 45.07	-139.72	-339.53	45.07	32	-168.21	317.37
33 167.54 390.54 45.07 138.92 -291.02 -4		138.92	-349.23	-45.07 -	34	167.54	325.45
35 -167.54 375.39		-138.92	-334.08	45.07	36	-167.54	312.82
NO 31 As= 860.  694. M=-139.59 R GG= 608.	M	(= -168.34 1	. N=	380.84	•	NO 32	As=
Concrete COLUMN	3( SEC	CTION TY	PE= 1, /	ANG= 0, L	x= 6.80	0, Ly= 6.8	0)
Section property: B= 2  NUMBER M	40, H= 240 N	v	М	N		v N	IUMBER
M N V	M	N 0.02	V -66.43	0.00	2	0.01	65.15
0.00 0.01 -55.36	0.00	0.02	-66.43	0.00	4	0.01	65.15
0.00	0.00		-74.56	0.00	6	0.01	73.28
5 0.01 86.3 0.00 0.02 -63.49	0.00	0.02		0.00	8	0.00	63.80
0.00	0.00	0.01	-65.08				73.28
9 0.01 86.3	0.00	0.02	-74.56	0.00	10		
11 0.01 76.8	0.00 0.00	0.01	-65.08	0.00	12	0.00	63.80
13 0.01 85.0		0.02	-73.34		14	0.01	72.00
15 0.01 77.0		0.01	-65.28	0.00	16	0.01	64.00
0.00 0.01 -54.21		0.02	-73.34	0.00	18	0.01	72.06

金

=	-62.27		^ ^^	0.01	-65.28	0.00	20	0.01	64.00	
19 0.00 0.01	0.01 -54.21	77.03 0.00	0.00	0.01	-03.20	0.00			04.00	
21		85.09	0.00	0.02	-73.34	0.00	22	0.01	72.06	
0.00 0.02		0.00		,	<i>((</i> 00	0.00	24		64.00	
0.00 0.01	0.01 -54.21	77.03 0.00	0.00	0.01	-65.28	0.00	24	0.01	64.00	
0.00 0.01		85.09	0.00	0.02	-73.34	0.00	26	0.01	72.06	
		0.00								
27		77.03	0.00	0.01	-65.28	0.00	28	0.01	64.00	
0.00 0.01		92.19	0.02	0.06	-80.44	-0.02	30	0.05	78.58	
0.02 0.06		-0.02	0.02	0.00	00.44					
31		67.07	-0.01	-0.03	-55.32	0.01	32	-0.04	54.14	
-0.01 -0.03			0.00	0.06	00.44	0.00	:	0.05	78.58	
0.02 0.06		92.19	0.02	0.06	-80.44	-0.02	34	0.03	16.56	
35		67.07	-0.01	-0.03	-55.32	0.01	36	-0.04	54.14	
-0.01 -0.03		0.01								
				0.01	NT.,	07.11		NO 5	As=	
NO 5 40. M			M= -74.56	0.01	N=	86.31		NO 3	No-	
40. W	- 0.02 GG=	173.	-14.50							
				ON TYP	E= 1 A	NG= 0, L	,= 6.60)			
		B = 300, 1	I= 600							•
BOTTO SECTION	ОМ 1	2	3		4	5	6	7	8	
9 10	'n		: 13		7	,	v	•	_	
M=	-0.03			-112.98	-134.60	-143.96	-140.47	-124.13	-94.94	
-53.50 -11.4				<b>430</b>	710	746	606	550	A10	
As(1)=	450. 0.	230. 450.	440.	610.	718.	745.	686.	552.	418.	
233. 49. As(2)=	450.	0.	0.	0.	0.	0.	0.	0.	0.	
0. 0.	0.	450.	•							
TOP						,				
SECTION	1,,	2	3		4	5	6	7	. 8	
9 10	11	12	13	00	0.00	0.00	0.00	0.00	0.00	
11.73 56.30					0,00	0.00				
As(1)=	450.	0.	0.		0.	0.	0.	· 0.	50.	
		1272.		•		0.				
, ,	450.		0.	0.	U.	0.	<b>0.</b>	0.	0.	
0. 0.	0.	1272.			-	•				
V]= 80.	44 NO	13	Vr= 138	3.14 N	10 15	Asv/s=	0.36	As(3)=	450.	
Umaxb= 0.00										
<b>Q</b>	1919 4.3		4/ 0F/YEL	AN TYD	E= 1 A	NC= 0 I	= 660)			
		л В= 300, I		ONTIF	E- I A	110 0, 1	, 0.00)	· · · · · · · · · · · · · · · · · · ·		
BOTT								:		
SECTION	1	2	3		4	5	6	7 :	8	
9 10	11	12	13	<b>62 6</b> 0	0/ 04	124 12	-140 47	-143.96	-134 60	
M= -112.98 -81.	50 -42	υ.υυ 91 -Ω1	-13.47 03	0,5,5€	-34.34	-124.13	-140.41	· 170.70	25 1.00	
As(1)=		0.		233.	418.	552.	686.	745.	718.	
610. 440.		450.						•	•	

Calculat	ion bo	юk		Oil Depo	t Repair	Shop	)			
As(	(2)=	450.	<b>Q</b> .	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	450.							
SEC	TOP TION	1	2	3	4		5	6	7	8
9	10 M=	11 261.82	12 185.15	13 117.34	56.36	•	11.73	0.00	0.00	0.00
0.00	0.00		0.00	0.06					•	•
As(	(1)=	1272.	841.	<b>521</b> .	245.	50.	0.	0.	0.	0.
0.	0.	0.	450.			_		•	•	^
As(	(2)= 0.	1272. 0.	0. 450.	0.	0.	0.	0.	0.	0.	0.
VI	= 138.	14 NO	13	V1= 80.	44 NO	15	Asy/s=	0.36	As(3)=	450.
Umaxt	o= 0.00	04 U OMPUTE		0.007						

(Valence)

Oil Depot Repair Shop Calculation book Calculation Result \*\*\*\*\*\* \*\*\*\*\* <u>L</u>L-1 OUTPUT DATA ---- Zhong xin xi -----0 0 0 5 3 1 0 3 0 5 10 1.00 1.00 0 OUTPUT DATA Jiao Dian Zuo Biao -----( 2) 4.50 6.80 ( 3) 9.00 6.80 ( 4) 13.50 6.80 (1) 0.00 6.80 5) 18.00 6.80 (6) 0.00 0.00 (7) 4.50 0.00 (8) 9.00 0.00 (9) 13.50 0.00 (10) 18.00 0.00 OUTPUT DATA Zhu Guan Lian Hao -----(1) 6 1 (2) 7 2 (3) 8 3 (4) 9 4 (5) 10 5 ----- Liang Guan Lian Hao ------(2) 2 3 (3) 3 4 (4) 4 5 (1)OUTPUT DATA Zhi Zuo Yue Shu Xin Xi -----(2) 7111 (3) 8111 (4) 9111 (5) 10111 (1) OUTPUT DATA ----- Shang Xia Zhu Jian Dian Pian Xin ------(1)0.00 (2)0.00 (3)0.00 (4)0.00 (5)0.00 (6)0.00 (7)0.00 (8) 0.00 (9) 0.00 (10) 0.00 OUTPUT DATA Biao Zhun Jie Mian Xin Xi 1) l, 240, 240, 6 450, 450, . 6 2) 1, 200, 400, 6 3) 1, OUTPUT DATA ---- Zhu Ji Suan Chang Du(After consider steel) -----

```
(1) 1.00 (2) 1.00 (3) 1.00 (4) 1.00 (5) 1.00
OUTPUT DATA
          ---- Zhu Bu Zhi(Hao)Jie Mian Hao, Jiao Jie, Jiao Du ----
       1 3 0 (2) 2 0 0 (3) 2 0 0
2 0 0 (5) 1 3 0
(1)
(4)
         --- Liang Bu Zhi(Hao) lie Mian Hao, liao lie, liao Du ----
        3 0 0 (2) 3 0 0 (3) 3 0 0
( 1)
( 4)
        3 0
                0
                    51
        IIQQ=
        STIF COMPUTE

    DEAD COMPUTE

                                   XN
                        XM
               JR
JOINT LOAD:
                               156.90
```

0.00

2

Calculation	book	· · · · · · · · · · · · · · · · · · ·	Oil	Depol	Repair S	hop			·
		3	0.00		156.90				
		4 0	0.00	,	156.90				
COLUMN	I LOAD:	JC	KL	•	P	х	кх		
BEAM KL	LOAD: P	NE X	LI P1		KL X1	P	x	Pì	Χl
1777		1	2	1	2.00	0.00			6
29.30	2.25	1	2	1	2.00	0.00			6
29.30	2.25	1	2	1	2.00	0.00			6
29.30	2.25	1	2 .	1	2.00	0.00			6
29.30	2.25								
	` -		**D	EAD	LOAD**				
		OMPUTE OMPUT							
TOINT	LOAD:	JR	XM	-	XN				
-		2 3 4	0.00 0.00 0.00	÷.	13.70 13.70 13.70		,		
	÷	0	0.00	. :					
COLUM	N LOAD:	O JC	KI	. ·	. <b>P</b>	x	KX		
	\$ **·	-			LOADIA	: **	•		
BEAM	LOAD: P	NE X	LI Pl	IVE	LOAD** KL X1	<b>P</b>	x	Pl	XI
KL	. r	1	1	6	3.20	2.25			

	1	1	6	3.20	2.25			
	1	1	6	3.20	2.25			
	1	i	6	3.20	2.25			
EART	COM	PUTE			2			
1	7		0	1	1.00	0		
1 866.779								
1 1.000 69.342	T= 0.	.7062			٠			
		*	*DISPLA	CEMENT*	*			
( 1) 0.010 000 ( 8) 0.00 ( 10) 0.000	( 2)	0.010 (				5) 0.010	( 6) 0.000	( 7)
5 866.779								
1	T= 0	.7062						

Oil Depot Repair Shop Calculation

> 1.000 69.342

0.000

\*\*DISPLACEMENT\*\*

( 1)-0.010 ( 2)-0.010 ( 3)-0.010 ( 4)-0.010 ( 5)-0.010 ( 6) 0.000 ( 7)

0.000 ( 8) 0.000 ( 9) 0.000

( 10) 0.000

COMBI COMPUTE

## \*\*COMBINATION AND REINFORCEMENT\*\*

1( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 ) Concrete COLUMN Section property: B= 240, H= 240

Ν	UMBER	M	N		V	M	N		V - N	NUMBER
M	N	V	N	1	N	V		٠.		
	1	-0.01	43.89	0.00	-0.02	-32.14	0.00	2	-0.01	36.57
0.00	-0.02	-26.78	0.00			•	-			
	3	-0.01	43.89	0.00	-0.02	-32.14	0.00	4	-0.01	36.57
0.00	-0.02	-26.78	0.00				:			
	5	-0.01	43.60	0.00	-0.02	-31.85	0.00	6	-0.01	36.28
0.00	-0.02	-26.49	0.00				-			
	7	-0.01	47.77	0.00	-0.02	-36.02	0.00	8	-0.01	40.45
0.00	-0.02	-30.66	0.00					٠.		
	9	-0.01	47.77	0.00	-0.02	-36.02	0.00	10	-0.01	40.45
0.00	-0.02	-30.66	0.00			•	-			
	11	-0.01	43.60	0.00	-0.02	-31.85	0.00	12	-0.01	36.28
0.00	-0.02	-26.49	0.00				-		÷	
	13	-0.01	43.64	0.00	-0.02	-31.89	0.00	14	-0.01	36.33
0.00	-0.02	-26 53	0.00	-						

4.40	15	-0.01	47.19	0.00	-0.02	-35.43	0.00	16	-0.01	39.87
0.00				0.00	-U.UZ	*32.73	<b>V.</b> 00		0,01	53.41
0.00		-30.08		0.00	-0.02	-35.43	0.00	18	-0.01	39.87
			47.19	0.00	-0.02	-33.43	0.00	10	-0.01	37.01
0.00		-30.08		0.00	0.00	21.00	0.00	20	-0.01	36.33
			43.64	0.00	-0.02	-31.89	0.00	20	-0.01	30.33
0.00		-26.53			0.00	21.00	0.00	00	0.01	26.22
-			43.64	0.00	-0.02	-31.89	0.00	22	-0.01	36.33
0.00		-26.53				-			0.01	20.07
			47.19	0.00	-0.02	-35.43	0.00	24	-0.01	39.87
0.00		-30.08								40.05
			47.19	0.00	-0.02	-35.43	0.00	26	-0.01	39.87
0.00	-0.02	-30.08	0.00							
	27	-0.01	43.64	0.00	-0.02	-31.89	0.00	28	-0.01	36.33
0.00	-0.02	-26.53	0.00							
	29	0.03	37.63	0.01	0.02	-25.88	-0.01	30	0.03	30.34
0.01	0.02	-20.55	-0.01							
	31	-0.05	51.68	-0.02	-0.06	-39.93	0.02	. 32	-0.04	44.09
-0.01	-0.06	-34.30	0.01				•			
	33	-0.05	51.68	-0.02	-0.06	-39.93	0.02	34	-0.04	44.09
-0.01	-0.06	-34.30	0.01							
	35	0.03	37.63	0.01	0.02	-25.88	-0.01	36	0.03	30.34
0.01		-20.55								
	NO 7	As=	26.	M=	-0.01	N≃	47.77		NO 7	As=
20.		= -0.02		-36.02						
	•••	GG≔								
					•					

Concrete COLUMN 2( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80)

Calculation	book	Oil Depot	Repair	Shop	 

Section property: B= 450, H= 450

NUMBER M N

N M

NUMBER	M	N		M		V	N	UMBER
M N	V	M	N	V				
1	5,59 334.09	2.47	11.23	-292.78	-2.47	2	4.65	278.41
2.06 9.36	-243.99 -2.0	06						
. 3	5.59 334.09	2.47	11.23	-292.78	-2.47	4	4.65	278.41
2.06 9.36	-243.99 -2.0	06				_		20102
5	7.59 340.61	3.38	15.42	-299.30	-3.38	6	6.66	284.93
2.97 13.55	-250.50 -2.5	97				_		202.00
	4.21 358.48		8.29	-317.17	-1.84	8	3.28	302.80
1.43 6.42	-268.37 -1.·	43				••		200 27
	5.16 365.45		11.60	-324.14	-2.46	10	4.23	309.11
2.05 9.72	-275.34 -2.0	05		:		10	£ 70	227.06
	6.63 333.64		12.12	-292.33	-2.76	12	5.70	277.96
2.35 10.25	<b>-243.53 -2.</b>	35		400.44	0.05	1.4	626	101.05
	7.29 339.63		14.80	-298.32	-3.25	14	0.30	203.93
2.84 12.92	-249.52 -2.	84		414 51	1.02	16	2.40	200.14
	4.41 354.82		8.73	-313.51	-1.93	16	3.40	299.14
	-264.71 -1.	52		010.42	0.47	. 10	4.20	205.06
17			11.54	-319.43	-2.47	10	4.30	303.00
2.05 9.67	-270.64 -2.	05		000 10	0.71	20	5 54	278.03
	6.47 333.71		11.99	-292.40	-2.71		5.54	. 210.03
2.30 10.11	<b>-243.60 -2</b> .	30				* -		

21	7.29 339.63	3.25	14.80	-298.32	-3.25	22	6.36	283.95
2.84 12.92	-249.52 -2.84						5.5.5	
23	4.41 354.82	1.93	8.73	-313.51	-1.93	24	3.48	299.14
1.52 6.86	-264.71 -1.52							-
25	5.23 360.74	2.47	11.54	-319.43	-2.47	. 26	4.30	305.06
2.05 9.67	-270.64 -2.05				-	-		
27	6.47 333.71	2.71	11.99	-292.40	-2.71	28	5.54	278.03
2.30 10.11	-243.60 -2.30							
29 1	24.08 321.13	31.73	91.71	-279.82	-31.73	30	123.00	264.99
31.26 89.54	-230.56 -31.2	6						
31 -1	12.64 360.29	-26.67	-68.71	-318.98	26.67	32	-113.47	302.87
	7 -268.45 27.0					-		
33 -1	12.23 363.28	-26.40	-67.30	-321.97	26.40	34	-113.13	305.36
-26.81 -69.19	-270.93 26.8	31						
35 1	23.67 318.15	31.47	90.30	-276.84	-31.47	36	122.66	262.50
31.03 88.36	-228.07 -31.0	3						
NO 30	As= 599.	M≂	= 123.00	N=	264 99		NO 30	Δο=
407. M	= 89.54 N=	-230.56	5	••			30	110
	GG= 608.							

Concrete COLUMN 3( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 ) Section property: B= 450, H= 450

N	UMBER	M	N	V	M	N	,	7 · N	UMBER
M	N	V	M	N	V				
	1	0.00 315.95	0.00	0.00	-274.64	0.00	2	0.00	263.29
0.00	0.00	-228.87	0.00				•		
	3	0.00 315.95	0.00	0.00	-274.64	0.00	4	0.00	263.29
0.00	0.00	-228.87	0.00						
	5	2.90 339.99	1.05	4.26	-298.68	-1.05	6	2.90	287.33
1.05	4.26	-252.91 -1	.05						
	7	-2.90 320.79	-1.05	-4.26	-279.48	1.05	8	-2.90	268.13
-1.05	-4.26	-233.71	1.05						

Calculation book	Oil Dep	ot Rep	air Shop				
9 0.00 346.0	00.00	0.00	-304.69	0.00	10	0.00	293.34
0.00 0.00 -258.92					••	. 0.00	
11 0.00 314.7	78 0.00	0.00	-273.47	0.00	12	0.00	262.12
0.00 0.00 -227.70	0.00						
13 2.46 336.3		3.62	-295.07	-0.89	14	2.46	283.72
0.89 3.62 -249.30 -	-0.89			•			
15 -2.46 320.0	07 -0.89	-3.62	-278.76	0.89	16	-2.46	267.41
-0.89 -3.62 -232.98	0.89						
17 0.00 341.4		0.00	-300.18	0.00	18	0.00	288.84
0.00 0.00 -254.41				e .			
19 0.00 314.9		0.00	-273.64	0.00	20	0.00	262.30
0.00 0.00 -227.87							
21 2.46 336.3		3.62	-295.07	-0.89	22	2.46	283.72
0.89 3.62 -249.30 -							
23 -2.46 320.0		-3.62	-278.76	0.89	24	-2.46	267.41
-0.89 -3.62 -232.98				•		-	
25 0.00 341,4		0.00	-300.18	0.00	26	0.00	288.84
0.00 -254,41							
27 0.00 2140	K 0.00	A 00	777 64	V VV	70	Λ ΛΛ	262 20

41	0.00	314.93	<b>v.</b> 00	<b>v.</b> .vv	+213.04	v.vv	40	υ.υυ	202.30
0.00	0.00 -227.8	7 0.0	0						
29	126.77	326.25	32.83	96.48	-284.94	-32.83	30	126.57	271.88
	96.18 -237.							10667	066.00
31	-126.77	318.02	-32.83	-96.48	-276.71	32.83	32	-126.57	265.02
	-96.18 -230						24	105 50	274.02
	-125.53			-94.66	-287.52	32.38	34	-125.53	274.02
-32.38	-94.66 -239				07114	22.20	36	125.53	262.87
35				94.66	-214.14	-34.30	30	123.33	202.07
32.38	94.66 -228.	45 -32.3	88						
3.10	222 4	622		(= <b>-126</b> .57	N≔	265.02		NO 32	As≔
		623. .18 N=			11	203.02			• • •
451.	m∞ GG=		230.0	•					
	00-	ovo.							

Concrete COLUMN 4( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 ) Section property: B= 450, H= 450

N	JMBER	М .	N		$\mathbf{v}$	M	N	,	V N	UMBER
1.7	NΙ	V	λ/	{	N	V				
	1	-5.59 334	1.09	-2.47	-11.23	-292.78	2.47	2	-4.65	278.41
-2.06	-9.36	-243.99	2.06							
		-5.59 - 33			-11.23	-292.78	2.47	4	-4.65	278.41
-2.06	-9.36	-243.99	2.06	-	-					
	5	-4.21 35	8.48	-1.84	-8.29	-317.17	1.84	6	-3.28	302.80
-1.43	-6.42	-268.37	1.43							
-	7	-7.59 349	0.61	-3.38	-15.42	-299.30	3.38	8	-6.66	284.93
		-250.50								
	9	-5.16 36	5.45	-2.46	-11.60	-324.14	2.46	10	-4.23	309.77
		-275.34								
_,	11	-6.63 33	3.64	-2.76	-12.12	-292.33	2.76	12	-5.70	277.96
		-243.53								
		-4.41 35		-1.93	-8.73	-313.51	1.93	14	-3.48	299.14
		-264.71				-				
		-7.29 33			-14.80	-298.32	3.25	16	-6.36	283.95
		-249.52	_							
		-5.23 36			-11.54	-319.43	2.47	18	-4.30	305.06
		-270.64								
	19	-6.47 33	3.71	-2.71	-11.99	-292.40	2.71	20	-5.54	278.03
		-243.60								

Calculation book	Oil Dep	ot Repa	ш энор				<del></del>
21 -4.41 354.82	-1.93	-8.73	-313.51	1.93	22	-3.48	299.14
-1.52		-14.80	-298.32	3.25	24	-6.36	283.95
-2.84 -12.92 -249.52 2.84 25 -5.23 360.74	-	-11.54	-319.43	2.47	26	-4.30	305.06
-2.05 -9.67 -270.64 2.05 27 -6.47 333.71	-2.71	-11.99	-292.40	2.71	28	-5.54	278.03
-2.30 -10.11 -243.60 2.30 29 112.64 360.29	26.67	68.71	-318.98	-26.67	30	113.47	302.87
27.04 70.37 -268.45 -27.04 31 -124.08 321.13	<b>-31.73</b> .	-91.71	-279.82	31.73	32	-123.00	264.99
-31.26 -89.54 -230.56 31.26 33 112.23 363.28		67.30	-321.97	-26.40	34	113.13	305.36

26.81 69.19 -270.93 -26.81 35 -123.67 318.15 -31.47 -90.30 -276.84 31.47 36 -122.66 262.50 -31.03 -88.36 -228.07 31.03

NO 32 As= 599. M= -123.00 N= 264.99 NO 32 As= 407. M= -89.54 N= -230.56 GG= 608.

Concrete COLUMN 5( SECTION TYPE= 1, ANG= 0, Lx= 6.80, Ly= 6.80 )
Section property: B= 240, H= 240

N	IUM	BER	М	N		V	M	N		v	NUMBER
M		N	V	V	.1	N	V				
	1		0.01	43.89	0.00	0.02	-32.14	0.00	2	0.01	36.57
0.00		0.02	-26.78	0.00							
	3		0.01	43.89	0.00	0.02	-32.14	0.00	4	0.01	36.57
0.00		0.02	-26.78	0.00							
	5	-	0.01	47.77	0.00	0.02	-36.02	0.00	6	0.01	40.45
0.00		0.02	-30.66	0.00							-
	7		0.01	43.60	0.00	0.02	-31.85	0.00	8	0.01	36.28
0.00		0.02	-26.49	0.00						-	
	9		0.01	47.77	0.00	0.02	-36.02	0.00	10	0.03	40.45
0.00		0.02	-30.66	0.00			•			-	
	11		0.01	43.60	0.00	0.02	-31.85	0.00	12	0.01	36.28
0.00		0.02	-26.49	0.00				-		•	•
	13		0.01	47.19	0.00	0.02	-35.43	0.00	14	0.01	39.87
0.00		0.02	-30.08	0.00						•	
	15		0.01	43.64	0.00	0.02	-31.89	0.00	16	0.01	36.33
0.00		0.02	-26.53	0.00							
	17		0.01	47.19	0.00	0.02	-35.43	0.00	. 18	0.01	39.87
0.00		0.02	-30.08	0.00							
	19		0.01	43.64	0.00	0.02	-31.89	0.00	20	0.01	36.33
0.00		0.02	-26.53	0.00							
	21		0.01	47.19	0.00	0.02	-35.43	0.00	22	0.01	39.87
0.00		0.02	-30.08	0.00					_		
	23		0.01	43.64	0.00	0.02	-31.89	0.00	24	0.01	36.33
0.00		0.02	-26.53	0.00							** **
	25		0.01	47.19	0.00	0.02	-35.43	0.00	26	0.01	39.87
0.00		0.02	-30.08	0.00							
	27		0.01	43.64	0.00	0.02	-31.89	0.00	28	0.01	36.33
0.00		0.02	-26.53	0.00							
	29		0.05	51.68	0.02	0.06	-39.93	-0.02	30	0.04	44.09
0.01		0.06	-34.30	-0.01		2.25	05.00		22	0.00	20.24
	31		-0.03	37.63	-0.01	-0.02	-25.88	0.01	32	-0.03	30.34
-0.01		-0.02	-20.55	0.01							

Calcu	lation by	∞ <b>k</b>		Oil Depo	t Repai	r Shop			• .	
0.01			51.68	0.02	0.06	-39.93	-0.02	34	0.04	44.09
0.01 -0.01	35		37.63 0.01		-0.02	-25.88	0.01	36	-0.03	30.34
20.		= 0.02	26. N=		0.01	N=	47.77		NO 5	As=

Cond Section BOT1	crete BEAM property: OM	B= 200, H	( SECTION = 400	N TYP	E= 1 A)	NG≃ 0, L			
SECTION	1	2	3		4	5	6	7	8
9 10	11	12							45.00
M≖		-14.60		-39.43	-47.87	-52.49	-52.42	-47.10	-37.09
-23.27 -9.5 As(1)=	200.	119.		324.	390.	415.	391.	329.	256.
158. 62	. <b>0.</b>	200.			_		^	^	^
As(2)=	200.	= -	0.	0.	0.	0.	0.	0.	0.
0. 0.	0.	200.							
TOP	•	2	3		4	5	6	7	8
SECTION	1,,	2 12	13		4	,	•	•	J
9 10 M=	11 0.06			)	0.00	0.00	0.00	0.00	0.00
4.10 19.23			88.14		0.00	••••			
As(1)=		0.		0.	0.	0.	0.	0.	27.
130. 274	442.	651.							
As(2)=		0.	0.	0.	0.	0.	0.	0.	0.
0. 0.	0.	651.							
Umaxb= 0.0							-		
Section	n property:	[ 2 B= 200, H	2( SECTIO  = 400	n typ	E= 1 A	NG= 0, I	<b>= 4.50)</b>		
Section BOT SECTION	n property: TOM	B= 200, H	= 400 3	n typ	PE= 1 A	NG= 0, I 5	(= 4.50) 6	7	8
Section BOT	n property: FOM l	B= 200, H  2 12 -17.94	3 13 -23.73		4	5	6		8 -29.04
Section BOT SECTION 9 10 M= -27.38 -24. As(1)=	n property: TOM 1 -12.71 24 -20.23	B= 200, H  2 12 -17.94 2 -15.65 121.	3 13 -23.73	-28.03	-31.59	5 -31.33	6	7	
Section BOT' SECTION 9 10 M= -27.38 -24. As(1)= 187. 165	n property: TOM  11  -12.71  24  -20.22  200.  137.	B= 200, H  2 12 -17.94 2 -15.65 121. 200.	3 13 -23.73	-28.03 192.	4 -31.59 217.	5 -31.33 215.	6 -26.55 244.	7 -27.07 223.	-29.04 199
Section BOT SECTION 9 10 M= -27.38 -24 As(1)= 187. 165 As(2)= 0. 0.	n property: TOM  11  -12.71  24  -20.22  200.  137.	B= 200, H  2 12 -17.94 2 -15.65 121.	3 13 -23.73	-28.03	-31.59	5 -31.33	6 -26.55	7	-29.04
Section BOT SECTION 9 10 M= -27.38 -24. As(1)= 187. 165 As(2)= 0. 0. TOP	n property: TOM  11 -12.71 24 -20.22 200. i. 137. 200. 0.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200.	3 13 -23.73 161. 0.	-28.03 192.	4 -31.59 217.	5 -31.33 215.	6 -26.55 244.	7 -27.07 223.	-29.04 199
Section BOT SECTION 9 10 M= -27.38 -24. As(1)= 187. 165 As(2)= 0. 0. TOP SECTION	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200.	13 -23.73 161. 0. 3	-28.03 192. 0.	4 -31.59 217. 0.	5 -31.33 215. 0.	6 -26.55 244. 0.	7 -27.07 223. 0.	-29.04 199 0.
Section BOT SECTION 9 10 M= -27.38 -24 As(1)= 187. 165 As(2)= 0. 0. TOP SECTION	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200.	13 -23.73 161. 0. 3	-28.03 192. 0.	4 -31.59 217. 0.	5 -31.33 215. 0.	6 -26.55 244. 0.	7 -27.07 223. 0.	-29.04 199 0.
Section BOT SECTION 9 10 M= -27.38 -24. As(1)= 187. 165 As(2)= 0. 0. TOP SECTION 9 10 M= 1.32 18.2 As(1)=	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.  1 100.21 7 39.03 754.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200. 2 12 72.87 62.74 527.	3 13 -23.73 161. 0. 3 13 48.55 88.16 340.	-28.03 192. 0.	4 -31.59 217. 0. 4 26.26	5 -31.33 215. 0. 5 8.62	6 -26.55 244. 0.	7 -27.07 223. 0.	-29.04 199 0.
Section BOT SECTION 9 10 M= -27.38 -24. As(1)= 187. 165 As(2)= 0. 0. TOP SECTION 9 10 M= 1.32 18.2 As(1)= 124. 270	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.  1 100.21 7 39.03 754. 0. 447.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200. 2 12 72.87 62.74 527.	3 13 -23.73 161. 0. 3 13 48.55 88.16 340.	-28.03 192. 0.	4 -31.59 217. 0. 4 26.26 58.	5 -31.33 215. 0. 5 8.62 0.	6 -26.55 244. 0. 6 0.00 0.	7 -27.07 223. 0. 7 0.00 0.	-29.04 199. 0. 8 0.00 9.
Section BOT SECTION 9 10 M= -27.38 -24 As(1)= 187. 165 As(2)= 0. 0. TOP SECTION 9 10 M= 1.32 18.2 As(1)= 124. 270 As(2)=	n property: TOM  1 -12.71 24 -20.22 200. 137. 200. 0.  1 11 100.21 7 39.03 754. 0. 447. 829.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200. 2 12 72.87 62.74 527. 651. 0.	3 13 -23.73 161. 0. 3 13 48.55 88.16 340.	-28.03 192. 0.	4 -31.59 217. 0. 4 26.26	5 -31.33 215. 0. 5 8.62	6 -26.55 244. 0. 6 0.00	7 -27.07 223. 0. 7 0.00	-29.04 199. 0. 8
Section BOT SECTION 9 10 M= -27.38 -24 As(1)= 187. 165 As(2)= 0. 0. TOP SECTION 9 10 M= 1.32 18.2 As(1)= 124. 270 As(2)= 0. 0. VI= 7	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.  1 11 100.21 7 39.03 754. 0. 447. 829. 0.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200. 2 12 72.87 62.74 527. 651. 0. 651.	3 13 -23.73 161. 0. 3 13 48.55 88.16 340. 0.	-28.03 192 0. 5 2 179.	4 -31.59 217. 0. 4 26.26 58. 0.	5 -31.33 215. 0. 5 8.62 0. 0.	6 -26.55 244. 0. 6 0.00 0. 0.	7 -27.07 223. 0. 7 0.00 0.	-29.04 199. 0. 8 0.00 9. 0.
Section BOT SECTION 9 10 M= -27.38 -24. As(1)= 187. 165. As(2)= 0. 0. TOP SECTION 9 10 M= 1.32 18.2 As(1)= 124. 270 As(2)= 0. 0.	n property: TOM  1 -12.71 24 -20.2: 200. i. 137. 200. 0.  1 11 100.21 7 39.03 754. 0. 447. 829. 0.	B= 200, H  2 12 -17.94 2 -15.65 121. 200. 0. 200. 2 12 72.87 62.74 527. 651. 0. 651.	3 13 -23.73 161. 0. 3 13 48.55 88.16 340. 0.	-28.03 192 0. 5 2 179.	4 -31.59 217. 0. 4 26.26 58. 0.	5 -31.33 215. 0. 5 8.62 0. 0.	6 -26.55 244. 0. 6 0.00 0. 0.	7 -27.07 223. 0. 7 0.00 0.	-29.04 199. 0. 8 0.00 9. 0.

Calculation book Oil Depot Repair Shop

SECTION 1	2	3		4	5	6	7	8
9 10 1	11 12	13	07.00	20.04	22.07	20.56	21.22	21.50
M= -15.6 -28.03 -23.73 -1	i5 -20.22 17.94 -12.71		-27.38	-29.04	-27.07	-26.55	-31.33	-31.59
As(1)= 200.	137.	165.	187.	199.	223.	244.	215.	217.
= :	121. 200.	0.	0.	0.	0.	0.	0.	0.
As(2) <sup>22</sup> 200. 0. 0. 0	0. ), 200.	0.	U.	0.	V.	, <b>v.</b>	v.	0,
TOP								
SECTION 1		3		4	5	6	7	8
9 10 1	11 12 3.16 62.74	13 39.0	2 11	8.27	1.32	0.00	0.00	0.00
	3.10 02.74 3.55 <b>72.</b> 87	100.21	3 (4	3.41	1.32	0.00	0.00	0.00
As(1)= 651.		270.	124.	9.	0.	0.	0.	58.
	527. 754.	•	•	•		•		0
As(2)= 651.	0. 0. <b>829</b> .	0.	0.	0.	0.	0.	0.	0.
0. 0.	0. 629.							÷
VI= 67.45	NO 13	Vr= 71.	.06 N	10 15	Asv/s=	0.24	As(3)=	200.
Umaxb= 0.003	Umaxt= 0	.009			-			
Concrete B	EAM	4/ SECTIO	N TYPI	G= 1 A	NG = 0.1	= 450 \		
			/14 4 4 4 4	נונו	140 O'I	, 4.50 )		
Section proper	rty: B= 200, I			i i a	140 0,1	, 4.50 )		-
Section proper BOTTOM	rty: B= 200, F		,,, , , , , , , , , , , , , , , , , ,	4	5	6	7	8
Section proper BOTTOM SECTION 1 9 10	rty: B= 200, F 2 11 12	4= 400 3 13	•	4	5	6		
Section proper BOTTOM SECTION 1 9 10 1 M= 0.0	rty: B= 200, F 2 11 12 00 0.00	3 13 -9.24	-23.27	4	5	6	7 -52 49	
Section proper BOTTOM SECTION 1 9 10 1 M= 0.0 -39.43 -28.05 -	rty: B= 200, F 2 11 12 00 0.00 14.60 -0.02	3 13 -9.24	-23.27	4 -37.09	5 -47.10	6 -52.42	-52.49	-47.87
Section proper BOTTOM SECTION 1 9 10 1 M= 0.0 -39.43 -28.05 - As(1)= 200.	rty: B= 200, F 2 11 12 00 0.00 14.60 -0.02 0.	3 13 -9.24	•	4	5	6 -52.42		
Section proper BOTTOM SECTION 1 9 10 1 M= 0.0 -39.43 -28.05 - As(1)= 200.	rty: B= 200, F 2 11 12 00 0.00 14.60 -0.02	3 13 -9.24	-23.27	4 -37.09	5 -47.10	6 -52.42	-52.49	-47.87
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