表一 簡支梁挫屈彎矩M_{NB}的收斂分析

斷面 1：Ellipse(a:b=10:1,a=2.5(cm),L=25(cm),BC3)

λ	P/P_{cr}	N	$M_{NB}^{(P_r,\lambda)}/M_{cr}^{(0,-1)}$					
			m=0	m=1	m=2	m=3	m=4	m=5
−1	0	3	0.9823	0.9822	0.9822	0.9822	0.9822	0.9822
		10	0.9823	0.9823	0.9823	0.9823	0.9823	0.9823
		30	0.9823	0.9823	0.9823	0.9823	0.9823	0.9823
		50	0.9823	0.9823	0.9823	0.9823	0.9823	0.9823
		70	0.9823	0.9823	0.9823	0.9823	0.9823	0.9823
	0.9	3	0.2913	0.2907	0.2912	0.2912	0.2912	0.2912
		10	0.2917	0.2916	0.2916	0.2916	0.2916	0.2916
		30	0.2917	0.2916	0.2917	0.2917	0.2917	0.2917
		50	0.2917	0.2917	0.2917	0.2917	0.2917	0.2917
		70	0.2917	0.2917	0.2917	0.2917	0.2917	0.2917
1	0	3	1.9918	2.2562	2.2555	2.2555	2.2555	2.2555
		10	2.2409	2.2408	2.2407	2.2407	2.2407	2.2407
		30	2.2415	2.2415	2.2415	2.2415	2.2415	2.2415
		50	2.2415	2.2415	2.2415	2.2415	2.2415	2.2415
		70	2.2416	2.2416	2.2416	2.2416	2.2416	2.2416
	0.9	3	1.3985	1.3672	1.3692	1.3694	1.3694	1.3694
		10	1.3384	1.3445	1.3445	1.3445	1.3445	1.3445
		30	1.3455	1.3455	1.3456	1.3456	1.3456	1.3456
		50	1.3456	1.3456	1.3456	1.3456	1.3456	1.3456
		70	1.3456	1.3456	1.3456	1.3456	1.3456	1.3456
$P_{cr}(10^4\,N)$			3.8758					
$P_{\phi}(10^5\,N)$			6.1680					
$M_{cr}^{(0,-1)}(10^5\,N\cdot cm)$			1.9752					

表二 簡支梁挫屈彎矩M_{NB}的收斂分析

斷面 3：(W 14×159,L=300(in),BC3)

λ	P/P_{cr}	N	$M_{NB}^{(P_r,\lambda)}/M_{cr}^{(0,-1)}$					
			m=0	m=1	m=2	m=3	m=4	m=5
−1	0	3	0.9847	0.9847	0.9847	0.9847	0.9847	0.9847
		10	0.9323	0.9323	0.9323	0.9323	0.9323	0.9323
		30	0.9271	0.9271	0.9271	0.9271	0.9271	0.9271
		50	0.9267	0.9267	0.9267	0.9267	0.9267	0.9267
		70	0.9266	0.9266	0.9266	0.9266	0.9266	0.9266
	0.9	3	0.0505	0.0497	0.0509	0.0509	0.0509	0.0509
		10	0.0492	0.0490	0.0491	0.0491	0.0491	0.0491
		30	0.0489	0.0489	0.0489	0.0489	0.0489	0.0489
		50	0.0489	0.0489	0.0489	0.0489	0.0489	0.0489
		70	0.0489	0.0489	0.0489	0.0489	0.0489	0.0489
1	0	3	2.7907	2.7903	2.7874	2.7874	2.7874	2.7874
		10	2.7414	2.7294	2.7292	2.7292	2.7292	2.7292
		30	2.7303	2.7289	2.7289	2.7289	2.7289	2.7289
		50	2.7293	2.7288	2.7288	2.7288	2.7288	2.7288
		70	2.7291	2.7288	2.7288	2.7288	2.7288	2.7288
	0.9	3	1.5498	1.3427	1.3883	1.3931	1.3924	1.3924
		10	1.3644	1.3539	1.3575	1.3575	1.3575	1.3575
		30	1.3571	1.3559	1.3564	1.3564	1.3564	1.3564
		50	1.3565	1.3561	1.3563	1.3563	1.3563	1.3563
		70	1.3564	1.3561	1.3562	1.3562	1.3562	1.3562
$P_{cr}(10^6\,\mathrm{lb})$			6.0424					
$P_{\phi}(10^7\,\mathrm{lb})$			1.1898					
$M_{cr}^{(0,-1)}(10^7\,\mathrm{lb\cdot in})$			8.2313					

表三 懸臂梁挫屈彎矩M_{NB}的收斂分析

斷面 1：Ellipse(a:b=10:1,a=2.5(cm),L=25(cm),Warping restraint, ST)

P/P_{cr}	N	$M_{NB}^{(P_r,\lambda)}/M_{cr}^{(0,-1)}$					
		m=0	m=1	m=2	m=3	m=4	m=5
0	3	1.0022	0.9994	0.9994	0.9994	0.9994	0.9994
	10	0.9994	0.9989	0.9989	0.9989	0.9989	0.9989
	30	0.9989	0.9989	0.9989	0.9989	0.9989	0.9989
	50	0.9989	0.9989	0.9989	0.9989	0.9989	0.9989
	70	0.9989	0.9989	0.9989	0.9989	0.9989	0.9989
0.9	3	0.3321	0.3320	0.3320	0.3320	0.3320	0.3320
	10	0.3322	0.3322	0.3322	0.3322	0.3322	0.3322
	30	0.3322	0.3322	0.3322	0.3322	0.3322	0.3322
	50	0.3322	0.3322	0.3322	0.3322	0.3322	0.3322
	70	0.3322	0.3322	0.3322	0.3322	0.3322	0.3322
$P_{cr}(10^3\,N)$		2.4224					
$M_{cr}^{(0,-1)}(10^4\,N\cdot cm)$		9.5286					

表四 懸臂梁挫屈彎矩M_{NB}的收斂分析

斷面 3：(W 14×159,L=300(in), Warping restraint, ST)

P/P_{cr}	N	$M_{NB}^{(P_r,\lambda)}/M_{cr}^{(0,-1)}$					
		m=0	m=1	m=2	m=3	m=4	m=5
0	3	0.8535	0.8535	0.8535	0.8535	0.8535	0.8535
	10	0.8482	0.8482	0.8482	0.8482	0.8482	0.8482
	30	0.8477	0.8477	0.8477	0.8477	0.8477	0.8477
	50	0.8477	0.8477	0.8477	0.8477	0.8477	0.8477
	70	0.8477	0.8477	0.8477	0.8477	0.8477	0.8477
0.9	3	0.3402	0.3358	0.3360	0.3360	0.3360	0.3360
	10	0.3363	0.3360	0.3360	0.3360	0.3360	0.3360
	30	0.3360	0.3360	0.3360	0.3360	0.3360	0.3360
	50	0.3360	0.3360	0.3360	0.3360	0.3360	0.3360
	70	0.3360	0.3360	0.3360	0.3360	0.3360	0.3360
$P_{cr}(10^5 \text{lb})$		5.9470					
$M_{cr}^{(0,-1)}(10^7 \text{lb}\cdot\text{in})$		2.4390					

表五　簡支梁之挫屈彎矩 (斷面 3, W 14×159 , L = 300 in , BC1)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$ 0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	5.713E+07	0.8343	0.6713	0.5069	0.3298	0.2233	0.1544	0.09631	1.000	1.000	1.246
-0.75	6.519E+07	0.8346	0.6717	0.5074	0.3303	0.2236	0.1546	0.09645	1.141	1.131	1.421
-0.50	7.550E+07	0.8358	0.6738	0.5097	0.3321	0.2250	0.1556	0.09710	1.321	1.300	1.646
-0.25	8.887E+07	0.8390	0.6790	0.5155	0.3371	0.2287	0.1583	0.09881	1.556	1.506	1.938
0.00	1.063E+08	0.8456	0.6905	0.5288	0.3485	0.2373	0.1646	0.10284	1.860	1.750	2.317
0.25	1.283E+08	0.8583	0.7134	0.5564	0.3738	0.2569	0.1790	0.11217	2.246	2.031	2.798
0.50	1.545E+08	0.8793	0.7535	0.6095	0.4275	0.3011	0.2125	0.13422	2.704	2.350	3.369
0.60	1.655E+08	0.8903	0.7755	0.6408	0.4625	0.3317	0.2365	0.15038	2.896	2.488	3.608
0.70	1.759E+08	0.9031	0.8015	0.6795	0.5088	0.3742	0.2707	0.17381	3.078	2.560	3.835
0.75	1.806E+08	0.9101	0.8162	0.7022	0.5375	0.4012	0.2928	0.18906	3.160	2.560	3.937
0.80	1.845E+08	0.9176	0.8321	0.7277	0.5709	0.4330	0.3187	0.20685	3.230	2.560	4.023
0.85	1.874E+08	0.9254	0.8491	0.7564	0.6103	0.4703	0.3484	0.22665	3.281	2.560	4.087
0.90	1.887E+08	0.9329	0.8663	0.7880	0.6580	0.5134	0.3801	0.24655	3.303	2.560	4.115
0.95	1.879E+08	0.9386	0.8805	0.8183	0.7168	0.5592	0.4082	0.26232	3.288	2.560	4.096
1.00	1.845E+08	0.9407	0.8862	0.8326	0.7799	0.5851	0.4203	0.26839	3.229	2.560	4.023
$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.8412	0.6820	0.5185	0.3393	0.2301	0.1592	0.09938			

$M_{cr}^{(0,-1)} = 4.586E+07\ (lb-in)$　　$P_{cr} = 2.379E+06\ (lb)$　　$P_{\phi} = 1.190E+07\ (lb)$　　$P_{cr} / P_{\phi} = 0.1999$

表六　簡支梁之挫屈彎矩 (斷面 3, W 14×159 , L = 300 in , BC2)

		$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$									
λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	3.606E+07		0.8182	0.6432	0.4724	0.2972	0.1973	0.1350	0.08368	1.000	1.000	1.278
-0.75	4.113E+07		0.8186	0.6438	0.4730	0.2977	0.1977	0.1353	0.08384	1.140	1.131	1.457
-0.50	4.755E+07		0.8203	0.6465	0.4758	0.3000	0.1993	0.1364	0.08458	1.318	1.300	1.684
-0.25	5.571E+07		0.8246	0.6531	0.4831	0.3058	0.2036	0.1395	0.08652	1.545	1.506	1.974
0.00	6.595E+07		0.8334	0.6676	0.4991	0.3193	0.2136	0.1467	0.09109	1.829	1.750	2.336
0.25	7.818E+07		0.8492	0.6950	0.5318	0.3485	0.2360	0.1630	0.10163	2.168	2.031	2.769
0.50	9.119E+07		0.8732	0.7404	0.5922	0.4101	0.2869	0.2018	0.1272	2.529	2.350	3.231
0.60	9.590E+07		0.8847	0.7639	0.6265	0.4504	0.3232	0.2308	0.1469	2.659	2.488	3.397
0.70	9.970E+07		0.8969	0.7897	0.6672	0.5035	0.3753	0.2746	0.1778	2.765	2.560	3.532
0.75	1.010E+08		0.9030	0.8032	0.6896	0.5359	0.4095	0.3047	0.1998	2.802	2.560	3.579
0.80	1.018E+08		0.9088	0.8164	0.7127	0.5723	0.4505	0.3423	0.2277	2.824	2.560	3.608
0.85	1.020E+08		0.9141	0.8286	0.7354	0.6122	0.4997	0.3892	0.2629	2.829	2.560	3.614
0.90	1.014E+08		0.9182	0.8387	0.7554	0.6530	0.5577	0.4471	0.3053	2.813	2.560	3.594
0.95	1.001E+08		0.9209	0.8453	0.7694	0.6876	0.6225	0.5165	0.3488	2.775	2.560	3.546
1.00	9.798E+07		0.9218	0.8476	0.7743	0.7019	0.6661	0.5745	0.3705	2.717	2.560	3.471
	$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.8232	0.6512	0.4814	0.3048	0.2029	0.1390	0.08623			

$M_{cr}^{(0,-1)} = 2.823E+07\ (lb-in)$　　$P_{cr} = 2.379E+06\ (lb)$　　$P_{\phi} = 5.908E+06\ (lb)$　　$P_{cr} / P_{\phi} = 0.4027$

表七　簡支梁之挫屈彎矩 (斷面 3, W 14×159 , L = 300 in , BC3)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$ 0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	7.628E+07	0.7152	0.4719	0.2714	0.1145	0.05274	0.02609	0.011475	1.000	1.000	0.9267
-0.75	8.703E+07	0.7156	0.4724	0.2718	0.1147	0.05283	0.02614	0.011494	1.141	1.131	1.057
-0.50	1.008E+08	0.7175	0.4747	0.2735	0.1155	0.05323	0.02633	0.011581	1.321	1.300	1.224
-0.25	1.186E+08	0.7223	0.4807	0.2781	0.1178	0.05428	0.02686	0.011813	1.554	1.506	1.440
0.00	1.415E+08	0.7329	0.4945	0.2890	0.1231	0.05681	0.02812	0.012370	1.855	1.750	1.719
0.25	1.702E+08	0.7538	0.5238	0.3137	0.1357	0.06291	0.03117	0.013716	2.231	2.031	2.067
0.50	2.024E+08	0.7896	0.5816	0.3702	0.1681	0.07894	0.03925	0.017288	2.654	2.350	2.459
0.60	2.147E+08	0.8083	0.6158	0.4094	0.1942	0.09252	0.04618	0.020364	2.815	2.488	2.609
0.70	2.251E+08	0.8289	0.6565	0.4633	0.2369	0.11625	0.05853	0.025878	2.951	2.560	2.735
0.75	2.291E+08	0.8395	0.6787	0.4965	0.2685	0.13543	0.06878	0.030496	3.003	2.560	2.783
0.80	2.317E+08	0.8497	0.7013	0.5335	0.3106	0.16364	0.08440	0.037619	3.038	2.560	2.815
0.85	2.328E+08	0.8591	0.7229	0.5728	0.3662	0.20747	0.11037	0.049745	3.053	2.560	2.829
0.90	2.321E+08	0.8667	0.7413	0.6103	0.4363	0.27956	0.15956	0.074108	3.043	2.560	2.820
0.95	2.293E+08	0.8716	0.7538	0.6385	0.5099	0.39687	0.27249	0.142522	3.007	2.560	2.786
1.00	2.246E+08	0.8733	0.7581	0.6490	0.5461	0.49701	0.47305	0.458857	2.945	2.560	2.729
$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.7921	0.5972	0.4149	0.2417	0.1525	0.10132	0.06160			

$M_{cr}^{(0,-1)} = 8.231E+07\ (lb-in)$　　$P_{cr} = 6.042E+06\ (lb)$　　$P_{\phi} = 1.190E+07\ (lb)$　　$P_{cr} / P_{\phi} = 0.5079$

表八　簡支梁之挫屈彎矩 (斷面 3, W 14×159 , L = 300 in , BC4)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$	0.2	0.4	0.6	0.8	0.853	0.906	0.959	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	5.083E+07		0.6798	0.4142	0.2077	0.06531	0.03930	0.01873	0.004259	1.000	1.000	0.7814
-0.75	5.796E+07		0.6804	0.4148	0.2081	0.06544	0.03938	0.01877	0.004269	1.140	1.131	0.8911
-0.50	6.698E+07		0.6827	0.4174	0.2097	0.06604	0.03975	0.01895	0.004309	1.318	1.300	1.030
-0.25	7.842E+07		0.6887	0.4241	0.2142	0.06763	0.04072	0.01942	0.004417	1.543	1.506	1.206
0.00	9.264E+07		0.7015	0.4391	0.2245	0.07140	0.04304	0.02054	0.004673	1.823	1.750	1.424
0.25	1.092E+08		0.7253	0.4700	0.2475	0.08024	0.04851	0.02320	0.005284	2.149	2.031	1.679
0.50	1.257E+08		0.7622	0.5270	0.2980	0.10234	0.06248	0.03009	0.006880	2.473	2.350	1.932
0.60	1.310E+08		0.7795	0.5582	0.3315	0.11991	0.07396	0.03589	0.008241	2.577	2.488	2.014
0.70	1.347E+08		0.7967	0.5923	0.3748	0.14800	0.09322	0.04597	0.010661	2.649	2.560	2.070
0.75	1.356E+08		0.8046	0.6093	0.3997	0.16824	0.10796	0.05408	0.012668	2.668	2.560	2.085
0.80	1.359E+08		0.8118	0.6252	0.4255	0.19413	0.12818	0.06592	0.015723	2.673	2.560	2.089
0.85	1.353E+08		0.8177	0.6391	0.4502	0.22621	0.15606	0.08410	0.020809	2.663	2.560	2.081
0.90	1.340E+08		0.8221	0.6498	0.4712	0.26236	0.19276	0.11314	0.030537	2.636	2.560	2.060
0.95	1.318E+08		0.8248	0.6564	0.4851	0.29407	0.23199	0.15613	0.053538	2.593	2.560	2.026
1.00	1.289E+08		0.8256	0.6586	0.4899	0.30704	0.25082	0.18536	0.092197	2.536	2.560	1.982
	$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.7453	0.5143	0.3093	0.1337	0.0927	0.0541	0.01751			

$M_{cr}^{(0,-1)} = 6.504E+07\,(lb-in)$　　$P_{cr} = 6.042E+06\,(lb)$　　$P_{\phi} = 5.908E+06\,(lb)$　　$P_{cr} / P_{\phi} = 1.023$

表九　簡支梁之挫屈彎矩 (斷面 7, W 10×30 , L = 300 in , BC1)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	9.439E+05		0.8771	0.7448	0.5963	0.4134	0.2894	0.2037	0.1284	1.000	1.000	1.028
-0.75	1.077E+06		0.8774	0.7453	0.5969	0.4139	0.2899	0.2040	0.1286	1.141	1.131	1.172
-0.50	1.246E+06		0.8786	0.7474	0.5993	0.4162	0.2917	0.2053	0.1295	1.320	1.300	1.357
-0.25	1.465E+06		0.8815	0.7525	0.6057	0.4223	0.2965	0.2089	0.1319	1.552	1.506	1.595
0.00	1.746E+06		0.8877	0.7636	0.6197	0.4359	0.3075	0.2172	0.1373	1.850	1.750	1.901
0.25	2.097E+06		0.8989	0.7846	0.6476	0.4647	0.3315	0.2356	0.1495	2.222	2.031	2.284
0.50	2.507E+06		0.9163	0.8191	0.6972	0.5213	0.3818	0.2754	0.1764	2.656	2.350	2.730
0.60	2.676E+06		0.9250	0.8373	0.7250	0.5557	0.4140	0.3017	0.1946	2.835	2.488	2.914
0.70	2.835E+06		0.9350	0.8584	0.7585	0.5992	0.4559	0.3364	0.2187	3.004	2.560	3.087
0.75	2.905E+06		0.9404	0.8704	0.7780	0.6254	0.4812	0.3572	0.2330	3.078	2.560	3.163
0.80	2.964E+06		0.9462	0.8834	0.8000	0.6556	0.5098	0.3800	0.2484	3.140	2.560	3.227
0.85	3.006E+06		0.9522	0.8975	0.8250	0.6910	0.5421	0.4043	0.2638	3.184	2.560	3.273
0.90	3.022E+06		0.9579	0.9116	0.8526	0.7340	0.5773	0.4278	0.2776	3.202	2.560	3.291
0.95	3.005E+06		0.9623	0.9232	0.8791	0.7872	0.6113	0.4464	0.2873	3.184	2.560	3.272
1.00	2.950E+06		0.9639	0.9278	0.8915	3.1954	0.6277	0.4536	0.2908	3.125	2.560	3.212
$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$			0.8774	0.7451	0.5964	0.4132	0.2892	0.2034	0.1282			

$M_{cr}^{(0,-1)} = 9.184E+05\,(lb-in)$　　$P_{cr} = 5.311E+04\,(lb)$　　$P_{\phi} = 5.781E+05\,(lb)$　　$P_{cr} / P_{\phi} = 0.09186$

表十　簡支梁之挫屈彎矩 (斷面 7, W 10×30 , L = 300 in , BC2)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} \big/ M_{NB}^{(0,\lambda)}$ $P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	6.966E+05		0.8722	0.7361	0.5854	0.4029	0.2810	0.1973	0.1243	1.000	1.000	1.052
-0.75	7.942E+05		0.8726	0.7368	0.5862	0.4036	0.2816	0.1977	0.1245	1.140	1.131	1.199
-0.50	9.169E+05		0.8743	0.7396	0.5896	0.4067	0.2840	0.1996	0.1257	1.316	1.300	1.384
-0.25	1.071E+06		0.8783	0.7466	0.5981	0.4147	0.2903	0.2043	0.1288	1.538	1.506	1.617
0.00	1.261E+06		0.8864	0.7610	0.6163	0.4324	0.3046	0.2150	0.1358	1.810	1.750	1.903
0.25	1.482E+06		0.8997	0.7863	0.6503	0.4680	0.3346	0.2380	0.1511	2.128	2.031	2.238
0.50	1.717E+06		0.9185	0.8245	0.7067	0.5346	0.3950	0.2866	0.1843	2.465	2.350	2.592
0.60	1.804E+06		0.9274	0.8434	0.7366	0.5738	0.4333	0.3186	0.2067	2.590	2.488	2.723
0.70	1.877E+06		0.9369	0.8644	0.7715	0.6228	0.4832	0.3613	0.2372	2.695	2.560	2.834
0.75	1.905E+06		0.9419	0.8757	0.7911	0.6520	0.5137	0.3876	0.2558	2.735	2.560	2.876
0.80	1.924E+06		0.9468	0.8873	0.8121	0.6851	0.5488	0.4173	0.2764	2.762	2.560	2.905
0.85	1.932E+06		0.9515	0.8987	0.8340	0.7229	0.5892	0.4500	0.2979	2.774	2.560	2.917
0.90	1.925E+06		0.9556	0.9089	0.8552	0.7657	0.6358	0.4840	0.3182	2.764	2.560	2.907
0.95	1.903E+06		0.9583	0.9160	0.8716	0.8109	0.6870	0.5132	0.3333	2.732	2.560	2.873
1.00	1.864E+06		0.9592	0.9186	0.8779	0.8372	0.7213	0.5256	0.3388	2.675	2.560	2.814
		$M_{cr}^{(P_r,\lambda)} \big/ M_{cr}^{(0,\lambda)}$	0.8735	0.7383	0.5880	0.4053	0.2829	0.1987	0.1252			

$M_{cr}^{(0,-1)} = 6.624E+05\,(lb-in)$　　$P_{cr} = 5.311E+04\ (lb)$　　$P_{\phi} = 3.911E+05\ (lb)$　　$P_{\phi} \big/ P_{cr} = 0.1358$

表十一　簡支梁之挫屈彎矩 (斷面 7, W 10×30 , L = 300 in , BC3)

λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.548E+06		0.7990	0.6118	0.4364	0.2657	0.1732	0.1174	0.07234	1.000	1.000	0.9391
-0.75	1.765E+06		0.7994	0.6124	0.4370	0.2662	0.1736	0.1176	0.07249	1.141	1.131	1.071
-0.50	2.041E+06		0.8012	0.6151	0.4397	0.2682	0.1750	0.1186	0.07311	1.319	1.300	1.239
-0.25	2.393E+06		0.8059	0.6219	0.4466	0.2735	0.1787	0.1213	0.07478	1.546	1.506	1.452
0.00	2.835E+06		0.8157	0.6369	0.4623	0.2859	0.1877	0.1276	0.07877	1.832	1.750	1.720
0.25	3.359E+06		0.8336	0.6663	0.4955	0.3138	0.2084	0.1424	0.08821	2.170	2.031	2.038
0.50	3.892E+06		0.8602	0.7152	0.5588	0.3758	0.2580	0.1794	0.1123	2.514	2.350	2.361
0.60	4.069E+06		0.8720	0.7392	0.5943	0.4173	0.2949	0.2085	0.1318	2.629	2.488	2.469
0.70	4.195E+06		0.8833	0.7634	0.6336	0.4714	0.3491	0.2543	0.1640	2.710	2.560	2.545
0.75	4.231E+06		0.8884	0.7748	0.6533	0.5027	0.3848	0.2869	0.1881	2.733	2.560	2.567
0.80	4.243E+06		0.8930	0.7851	0.6719	0.5354	0.4266	0.3285	0.2206	2.741	2.560	2.574
0.85	4.231E+06		0.8967	0.7936	0.6881	0.5671	0.4734	0.3808	0.2648	2.733	2.560	2.567
0.90	4.191E+06		0.8994	0.8000	0.7005	0.5941	0.5206	0.4442	0.3242	2.708	2.560	2.543
0.95	4.125E+06		0.9010	0.8039	0.7083	0.6122	0.5583	0.5120	0.4007	2.665	2.560	2.502
1.00	4.035E+06		0.9015	0.8052	0.7108	0.6184	0.5729	0.5503	0.4680	2.606	2.560	2.448
		$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$	0.8264	0.6568	0.4882	0.3112	0.2080	0.1428	0.08871			

$M_{cr}^{(0,-1)} = 1.648E+06\ (lb-in)$　　$P_{cr} = 2.124E+05\ (lb)$　　$P_{\phi} = 5.781E+05\ (lb)$　　$P_{cr} / P_{\phi} = 0.3674$

表十二　簡支梁之挫屈彎矩 (斷面 7, W 10×30 , L = 300 in , BC4)

		$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$									
λ	$M_{NB}^{(0,\lambda)}$ $(lb-in)$	$P_r=$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.314E+06		0.7896	0.5949	0.4151	0.2451	0.1567	0.1050	0.06420	1.000	1.000	0.8611
-0.75	1.498E+06		0.7901	0.5957	0.4158	0.2456	0.1570	0.1052	0.06435	1.140	1.131	0.9817
-0.50	1.729E+06		0.7923	0.5987	0.4188	0.2478	0.1585	0.1063	0.06501	1.316	1.300	1.133
-0.25	2.018E+06		0.7978	0.6066	0.4266	0.2536	0.1625	0.1091	0.06675	1.536	1.506	1.323
0.00	2.368E+06		0.8091	0.6236	0.4441	0.2669	0.1719	0.1156	0.07088	1.802	1.750	1.552
0.25	2.753E+06		0.8287	0.6557	0.4799	0.2964	0.1934	0.1309	0.08053	2.095	2.031	1.804
0.50	3.095E+06		0.8549	0.7048	0.5441	0.3588	0.2429	0.1675	0.1042	2.355	2.350	2.028
0.60	3.186E+06		0.8653	0.7265	0.5771	0.3983	0.2779	0.1949	0.1225	2.425	2.488	2.088
0.70	3.233E+06		0.8743	0.7466	0.6110	0.4468	0.3267	0.2356	0.1509	2.460	2.560	2.119
0.75	3.236E+06		0.8781	0.7552	0.6266	0.4732	0.3571	0.2629	0.1705	2.463	2.560	2.121
0.80	3.224E+06		0.8812	0.7625	0.6405	0.4995	0.3913	0.2958	0.1950	2.453	2.560	2.112
0.85	3.196E+06		0.8836	0.7683	0.6518	0.5236	0.4282	0.3347	0.2246	2.432	2.560	2.094
0.90	3.152E+06		0.8853	0.7724	0.6601	0.5430	0.4648	0.3791	0.2583	2.399	2.560	2.065
0.95	3.094E+06		0.8863	0.7748	0.6650	0.5555	0.4947	0.4274	0.2901	2.355	2.560	2.027
1.00	3.024E+06		0.8866	0.7756	0.6666	0.5597	0.5071	0.4732	0.3049	2.301	2.560	1.981
	$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$		0.8106	0.6291	0.4540	0.2785	0.1818	0.1232	0.07584			

$M_{cr}^{(0,-1)} = 1.526E+06\,(lb-in)$　　$P_{cr} = 2.124E+05\ (lb)$　　$P_{\phi} = 3.911E+05\,(lb)$　　$P_{cr}/P_{\phi} = 0.5431$

表十三　簡支梁之挫屈彎矩 (斷面 1, Ellipse Sec (a : b = 10 : 1 , a = 2.5 cm) , L = 25 cm , BC1)

		$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$									
λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$P_r=$ 0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.015E+05	0.8921	0.7706	0.6276	0.4426	0.3126	0.2209	0.1396	1.000	1.000	0.9219
-0.75	1.157E+05	0.8925	0.7713	0.6285	0.4435	0.3132	0.2214	0.1400	1.140	1.131	1.051
-0.50	1.334E+05	0.8942	0.7743	0.6322	0.4470	0.3161	0.2235	0.1414	1.314	1.300	1.212
-0.25	1.553E+05	0.8981	0.7815	0.6413	0.4559	0.3233	0.2289	0.1449	1.531	1.506	1.411
0.00	1.819E+05	0.9055	0.7956	0.6600	0.4749	0.3389	0.2408	0.1527	1.793	1.750	1.653
0.25	2.127E+05	0.9172	0.8187	0.6926	0.5104	0.3695	0.2645	0.1686	2.096	2.031	1.932
0.50	2.457E+05	0.9325	0.8508	0.7413	0.5694	0.4236	0.3081	0.1984	2.421	2.350	2.232
0.60	2.587E+05	0.9396	0.8660	0.7654	0.6006	0.4532	0.3324	0.2152	2.550	2.488	2.351
0.70	2.708E+05	0.9475	0.8831	0.7930	0.6366	0.4872	0.3600	0.2340	2.669	2.560	2.461
0.75	2.762E+05	0.9518	0.8927	0.8087	0.6568	0.5055	0.3741	0.2434	2.722	2.560	2.510
0.80	2.808E+05	0.9566	0.9033	0.8264	0.6790	0.5242	0.3878	0.2519	2.767	2.560	2.551
0.85	2.841E+05	0.9617	0.9153	0.8471	0.7041	0.5427	0.3999	0.2590	2.800	2.560	2.581
0.90	2.854E+05	0.9671	0.9284	0.8720	0.7328	0.5599	0.4095	0.2640	2.813	2.560	2.594
0.95	2.839E+05	0.9715	0.9407	0.9005	0.7646	0.5729	0.4156	0.2668	2.798	2.560	2.580
1.00	2.788E+05	0.9733	0.9461	0.9182	0.7840	0.5779	0.4176	0.2676	2.747	2.560	2.533
$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$		0.8921	0.7706	0.6276	0.4426	0.3126	0.2209	0.1396			

$M_{cr}^{(0,-1)} = 1.101E+05\,(N-cm)$　　$P_{cr} = 9.689E+03\,(N)$　　$P_{\phi} = 6.168E+05\,(N)$　　$P_{cr}/P_{\phi} = 0.01571$

表十四　簡支梁之挫屈彎矩 (斷面 1, Ellipse Sec (a : b = 10 : 1 , a = 2.5 cm) , L = 25 cm , BC2)

λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	9.503E+04		0.8919	0.7703	0.6272	0.4422	0.3123	0.2206	0.1395	1.000	1.000	0.9935
-0.75	1.083E+05		0.8924	0.7711	0.6282	0.4432	0.3130	0.2212	0.1399	1.139	1.131	1.132
-0.50	1.247E+05		0.8943	0.7746	0.6325	0.4473	0.3163	0.2236	0.1414	1.312	1.300	1.303
-0.25	1.447E+05		0.8989	0.7828	0.6429	0.4574	0.3245	0.2298	0.1455	1.523	1.506	1.513
0.00	1.685E+05		0.9072	0.7986	0.6639	0.4787	0.3420	0.2431	0.1543	1.773	1.750	1.761
0.25	1.951E+05		0.9197	0.8236	0.6993	0.5178	0.3758	0.2694	0.1719	2.053	2.031	2.040
0.50	2.226E+05		0.9355	0.8570	0.7508	0.5813	0.4347	0.3171	0.2046	2.343	2.350	2.327
0.60	2.331E+05		0.9426	0.8725	0.7758	0.6145	0.4669	0.3439	0.2232	2.453	2.488	2.437
0.70	2.425E+05		0.9503	0.8896	0.8041	0.6529	0.5040	0.3744	0.2443	2.552	2.560	2.536
0.75	2.466E+05		0.9545	0.8990	0.8201	0.6746	0.5243	0.3904	0.2549	2.595	2.560	2.578
0.80	2.498E+05		0.9590	0.9093	0.8380	0.6986	0.5454	0.4060	0.2649	2.629	2.560	2.611
0.85	2.518E+05		0.9638	0.9206	0.8584	0.7259	0.5669	0.4205	0.2734	2.650	2.560	2.633
0.90	2.522E+05		0.9684	0.9323	0.8819	0.7578	0.5875	0.4324	0.2797	2.654	2.560	2.637
0.95	2.502E+05		0.9721	0.9424	0.9063	0.7948	0.6039	0.4403	0.2835	2.633	2.560	2.616
1.00	2.454E+05		0.9735	0.9466	0.9191	0.8217	0.6104	0.4430	0.2847	2.583	2.560	2.566
	$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.8921	0.7705	0.6275	0.4425	0.3125	0.2208	0.1396			

$M_{cr}^{(0,-1)} = 9.566E+04\,(N-cm)$　　$P_{cr} = 9.689E+03\,(N)$　　$P_{\phi} = 5.984E+05\,(N)$　　$P_{cr} / P_{\phi} = 0.01619$

表十五　簡支梁之挫屈彎矩 (斷面 1, Ellipse Sec (a : b = 10 : 1 , a = 2.5 cm) , L = 25 cm , BC3)

λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$ $P_r =$ 0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.940E+05	0.8822	0.7535	0.6066	0.4229	0.2969	0.2092	0.1320	1.000	1.000	0.9823
-0.75	2.211E+05	0.8826	0.7542	0.6075	0.4238	0.2976	0.2097	0.1323	1.140	1.131	1.119
-0.50	2.547E+05	0.8845	0.7575	0.6115	0.4274	0.3005	0.2118	0.1337	1.313	1.300	1.289
-0.25	2.959E+05	0.8890	0.7653	0.6212	0.4367	0.3078	0.2173	0.1373	1.525	1.506	1.498
0.00	3.444E+05	0.8975	0.7809	0.6413	0.4565	0.3240	0.2295	0.1453	1.775	1.750	1.743
0.25	3.968E+05	0.9106	0.8067	0.6770	0.4946	0.3561	0.2542	0.1617	2.045	2.031	2.009
0.50	4.446E+05	0.9265	0.8409	0.7306	0.5599	0.4148	0.3006	0.1930	2.291	2.350	2.251
0.60	4.588E+05	0.9327	0.8552	0.7559	0.5953	0.4482	0.3274	0.2111	2.365	2.488	2.323
0.70	4.677E+05	0.9383	0.8686	0.7819	0.6363	0.4877	0.3585	0.2319	2.410	2.560	2.368
0.75	4.694E+05	0.9406	0.8746	0.7943	0.6590	0.5095	0.3751	0.2426	2.419	2.560	2.377
0.80	4.690E+05	0.9427	0.8798	0.8059	0.6830	0.5324	0.3916	0.2529	2.417	2.560	2.374
0.85	4.661E+05	0.9443	0.8840	0.8158	0.7079	0.5555	0.4070	0.2619	2.402	2.560	2.360
0.90	4.607E+05	0.9454	0.8870	0.8234	0.7329	0.5771	0.4196	0.2690	2.375	2.560	2.333
0.95	4.528E+05	0.9461	0.8888	0.8282	0.7555	0.5938	0.4280	0.2734	2.334	2.560	2.293
1.00	4.428E+05	0.9464	0.8894	0.8297	0.7666	0.6003	0.4308	0.2749	2.282	2.560	2.242
	$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$	0.8852	0.7587	0.6129	0.4288	0.3016	0.2127	0.1343			

$M_{cr}^{(0,-1)} = 1.975E+05\ (N-cm)$　　$P_{cr} = 3.876E+04\,(N)$　　$P_{\phi} = 6.168E+05\,(N)$　　$P_{cr} / P_{\phi} = 0.06283$

表十六　簡支梁之挫屈彎矩 (斷面 1, Ellipse Sec (a : b = 10 : 1 , a = 2.5 cm) , L = 25 cm , BC4)

		$M_{NB}^{(P_r,\lambda)} / M_{NB}^{(0,\lambda)}$									
λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$P_r =$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.934E+05		0.8822	0.7534	0.6066	0.4229	0.2969	0.2092	0.1320	1.000	1.000	0.8774
-0.75	2.203E+05		0.8826	0.7542	0.6075	0.4237	0.2975	0.2096	0.1323	1.139	1.131	1.000
-0.50	2.536E+05		0.8844	0.7573	0.6113	0.4272	0.3003	0.2117	0.1337	1.311	1.300	1.151
-0.25	2.941E+05		0.8887	0.7648	0.6205	0.4359	0.3073	0.2169	0.1370	1.521	1.506	1.334
0.00	3.413E+05		0.8967	0.7793	0.6391	0.4541	0.3219	0.2280	0.1443	1.765	1.750	1.549
0.25	3.920E+05		0.9088	0.8027	0.6707	0.4870	0.3494	0.2489	0.1581	2.027	2.031	1.779
0.50	4.379E+05		0.9240	0.8340	0.7169	0.5388	0.3938	0.2832	0.1810	2.265	2.350	1.987
0.60	4.515E+05		0.9303	0.8481	0.7395	0.5651	0.4161	0.3002	0.1921	2.335	2.488	2.049
0.70	4.599E+05		0.9365	0.8626	0.7645	0.5946	0.4397	0.3174	0.2032	2.378	2.560	2.087
0.75	4.614E+05		0.9393	0.8696	0.7779	0.6105	0.4513	0.3255	0.2081	2.386	2.560	2.094
0.80	4.609E+05		0.9418	0.8761	0.7917	0.6269	0.4624	0.3327	0.2125	2.383	2.560	2.091
0.85	4.579E+05		0.9438	0.8819	0.8054	0.6435	0.4721	0.3387	0.2159	2.368	2.560	2.078
0.90	4.526E+05		0.9454	0.8863	0.8179	0.6593	0.4798	0.3432	0.2184	2.340	2.560	2.053
0.95	4.448E+05		0.9463	0.8891	0.8272	0.6716	0.4847	0.3458	0.2199	2.300	2.560	2.018
1.00	4.348E+05		0.9466	0.8900	0.8306	0.6765	0.4863	0.3467	0.2204	2.249	2.560	1.973
	$M_{cr}^{(P_r,\lambda)} / M_{cr}^{(0,\lambda)}$		0.8851	0.7584	0.6126	0.4284	0.3013	0.2125	0.1342			

$M_{cr}^{(0,-1)} = 2.204E+05\,(N-cm)$　　$P_{cr} = 3.876E+04\,(N)$　　$P_{\phi} = 5.984E+05\,(N)$　　$P_{\phi} / P_{cr} = 0.06477$

表十七　簡支梁之挫屈彎矩 (斷面 2, Ellipse Sec (a : b = 30 : 1 , a = 3 cm) , L = 25 cm , BC1)

λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$ $P_r=$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	8.023E+03		0.8927	0.7717	0.6289	0.4438	0.3135	0.2216	0.1401	1.000	1.000	0.9359
-0.75	9.146E+03		0.8931	0.7723	0.6297	0.4446	0.3142	0.2221	0.1404	1.140	1.131	1.067
-0.50	1.055E+04		0.8947	0.7752	0.6333	0.4480	0.3169	0.2241	0.1418	1.315	1.300	1.231
-0.25	1.231E+04		0.8986	0.7822	0.6422	0.4567	0.3239	0.2294	0.1452	1.534	1.506	1.436
0.00	1.445E+04		0.9061	0.7961	0.6605	0.4753	0.3393	0.2411	0.1529	1.801	1.750	1.685
0.25	1.695E+04		0.9179	0.8193	0.6930	0.5108	0.3699	0.2649	0.1688	2.112	2.031	1.977
0.50	1.965E+04		0.9335	0.8519	0.7427	0.5714	0.4257	0.3100	0.1998	2.449	2.350	2.292
0.60	2.072E+04		0.9407	0.8675	0.7677	0.6043	0.4574	0.3362	0.2181	2.583	2.488	2.417
0.70	2.171E+04		0.9486	0.8850	0.7965	0.6429	0.4949	0.3672	0.2395	2.706	2.560	2.532
0.75	2.214E+04		0.9530	0.8948	0.8129	0.6651	0.5158	0.3838	0.2507	2.760	2.560	2.583
0.80	2.250E+04		0.9576	0.9055	0.8313	0.6898	0.5378	0.4005	0.2614	2.805	2.560	2.625
0.85	2.276E+04		0.9626	0.9174	0.8526	0.7181	0.5608	0.4164	0.2709	2.836	2.560	2.654
0.90	2.284E+04		0.9675	0.9299	0.8772	0.7516	0.5833	0.4298	0.2782	2.847	2.560	2.665
0.95	2.270E+04		0.9714	0.9408	0.9033	0.7913	0.6018	0.4389	0.2827	2.829	2.560	2.648
1.00	2.228E+04		0.9730	0.9454	0.9172	0.8216	0.6094	0.4421	0.2841	2.777	2.560	2.599
		$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$	0.8923	0.7709	0.6279	0.4429	0.3128	0.2211	0.1398			

$M_{cr}^{(0,-1)} = 8.573E+03\,(N-cm)$　　$P_{cr} = 7.442E+02\,(N)$　　$P_{\phi} = 3.412E+04\,(N)$　　$P_{cr}/P_{\phi} = 0.02181$

表十八　簡支梁之挫屈彎矩 (斷面 2, Ellipse Sec (a : b = 30 : 1 , a = 3 cm) , L = 25 cm , BC2)

λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$ $P_r=$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	7.392E+03		0.8922	0.7707	0.6277	0.4427	0.3126	0.2209	0.1397	1.000	1.000	0.9993
-0.75	8.422E+03		0.8927	0.7715	0.6287	0.4437	0.3134	0.2215	0.1400	1.139	1.131	1.139
-0.50	9.700E+03		0.8946	0.7750	0.6329	0.4477	0.3166	0.2239	0.1416	1.312	1.300	1.311
-0.25	1.127E+04		0.8992	0.7832	0.6434	0.4579	0.3248	0.2301	0.1457	1.524	1.506	1.523
0.00	1.313E+04		0.9077	0.7991	0.6643	0.4792	0.3424	0.2435	0.1545	1.776	1.750	1.775
0.25	1.522E+04		0.9205	0.8244	0.7002	0.5188	0.3767	0.2702	0.1724	2.059	2.031	2.057
0.50	1.738E+04		0.9366	0.8584	0.7527	0.5842	0.4378	0.3199	0.2066	2.351	2.350	2.350
0.60	1.820E+04		0.9437	0.8741	0.7785	0.6189	0.4720	0.3486	0.2268	2.462	2.488	2.460
0.70	1.893E+04		0.9514	0.8914	0.8076	0.6596	0.5125	0.3824	0.2504	2.561	2.560	2.559
0.75	1.923E+04		0.9556	0.9009	0.8241	0.6829	0.5351	0.4007	0.2628	2.602	2.560	2.600
0.80	1.947E+04		0.9599	0.9112	0.8423	0.7088	0.5592	0.4193	0.2748	2.634	2.560	2.632
0.85	1.961E+04		0.9644	0.9221	0.8627	0.7386	0.5846	0.4372	0.2856	2.653	2.560	2.651
0.90	1.962E+04		0.9686	0.9331	0.8854	0.7739	0.6102	0.4527	0.2942	2.654	2.560	2.652
0.95	1.944E+04		0.9719	0.9421	0.9072	0.8166	0.6319	0.4635	0.2995	2.631	2.560	2.629
1.00	1.907E+04		0.9731	0.9457	0.9176	0.8568	0.6411	0.4674	0.3013	2.580	2.560	2.578
		$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$	0.8922	0.7707	0.6277	0.4428	0.3127	0.2210	0.1397			

$M_{cr}^{(0,-1)} = 7.397E+03\,(N-cm)$　　$P_{cr} = 7.442E+02\,(N)$　　$P_{\phi} = 3.264E+04\,(N)$　　$P_{cr}/P_{\phi} = 0.02280$

表十九　簡支梁之挫屈彎矩 (斷面 2, Ellipse Sec (a : b = 30 : 1 , a = 3 cm) , L = 25 cm , BC3)

λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$ $P_r=$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.512E+04		0.8855	0.7592	0.6135	0.4293	0.3019	0.2129	0.1344	1.000	1.000	0.9829
-0.75	1.724E+04		0.8860	0.7599	0.6143	0.4301	0.3026	0.2134	0.1348	1.140	1.131	1.120
-0.50	1.987E+04		0.8877	0.7629	0.6181	0.4336	0.3054	0.2155	0.1361	1.314	1.300	1.291
-0.25	2.311E+04		0.8919	0.7704	0.6275	0.4427	0.3127	0.2210	0.1397	1.528	1.506	1.502
0.00	2.697E+04		0.9000	0.7854	0.6471	0.4624	0.3288	0.2332	0.1478	1.783	1.750	1.753
0.25	3.117E+04		0.9126	0.8104	0.6826	0.5011	0.3619	0.2588	0.1648	2.061	2.031	2.026
0.50	3.498E+04		0.9277	0.8436	0.7362	0.5693	0.4248	0.3092	0.1991	2.313	2.350	2.274
0.60	3.609E+04		0.9333	0.8571	0.7610	0.6066	0.4619	0.3396	0.2200	2.387	2.488	2.346
0.70	3.676E+04		0.9380	0.8692	0.7854	0.6496	0.5069	0.3767	0.2452	2.431	2.560	2.389
0.75	3.688E+04		0.9400	0.8743	0.7966	0.6727	0.5324	0.3973	0.2589	2.438	2.560	2.397
0.80	3.682E+04		0.9416	0.8786	0.8066	0.6963	0.5598	0.4185	0.2724	2.435	2.560	2.393
0.85	3.657E+04		0.9428	0.8821	0.8148	0.7196	0.5885	0.4390	0.2849	2.418	2.560	2.377
0.90	3.613E+04		0.9437	0.8845	0.8209	0.7405	0.6174	0.4570	0.2949	2.389	2.560	2.348
0.95	3.550E+04		0.9442	0.8859	0.8246	0.7560	0.6434	0.4695	0.3014	2.348	2.560	2.308
1.00	3.471E+04		0.9443	0.8864	0.8258	0.7618	0.6559	0.4739	0.3036	2.295	2.560	2.256
	$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$		0.8859	0.7597	0.6142	0.4299	0.3024	0.2133	0.1347			

$M_{cr}^{(0,-1)} = 1.539E+04\ (N-cm)$　　$P_{cr} = 2.977E+03\,(N)$　　$P_{\phi} = 3.412E+04\,(N)$　　$P_{cr}/P_{\phi} = 0.08723$

表二十　簡支梁之挫屈彎矩 (斷面 2, Ellipse Sec (a : b = 30 : 1 , a = 3 cm) , L = 25 cm , BC4)

		$M_{NB}^{(P_r,\lambda)}/M_{NB}^{(0,\lambda)}$									
λ	$M_{NB}^{(0,\lambda)}$ $(N-cm)$	$P_r=$	0.2	0.4	0.6	0.8	0.9	0.95	0.98	$\frac{M_{NB}^{(0,\lambda)}}{M_{NB}^{(0,-1)}}$	C_b	$\frac{M_{NB}^{(0,\lambda)}}{M_{cr}^{(0,-1)}}$
-1.00	1.505E+04		0.8854	0.7590	0.6133	0.4291	0.3018	0.2128	0.1344	1.000	1.000	0.8831
-0.75	1.715E+04		0.8858	0.7597	0.6141	0.4298	0.3024	0.2133	0.1347	1.139	1.131	1.006
-0.50	1.975E+04		0.8875	0.7626	0.6177	0.4332	0.3051	0.2153	0.1360	1.312	1.300	1.159
-0.25	2.293E+04		0.8915	0.7696	0.6265	0.4416	0.3118	0.2203	0.1393	1.524	1.506	1.346
0.00	2.667E+04		0.8990	0.7834	0.6443	0.4594	0.3263	0.2312	0.1465	1.772	1.750	1.565
0.25	3.069E+04		0.9106	0.8059	0.6753	0.4921	0.3537	0.2523	0.1604	2.039	2.031	1.801
0.50	3.430E+04		0.9250	0.8365	0.7215	0.5450	0.3997	0.2879	0.1842	2.279	2.350	2.012
0.60	3.533E+04		0.9309	0.8501	0.7441	0.5726	0.4234	0.3061	0.1962	2.347	2.488	2.073
0.70	3.592E+04		0.9363	0.8636	0.7688	0.6039	0.4491	0.3251	0.2084	2.386	2.560	2.108
0.75	3.600E+04		0.9387	0.8699	0.7816	0.6210	0.4621	0.3341	0.2140	2.392	2.560	2.112
0.80	3.592E+04		0.9408	0.8755	0.7944	0.6389	0.4746	0.3424	0.2190	2.386	2.560	2.108
0.85	3.565E+04		0.9424	0.8803	0.8065	0.6572	0.4858	0.3494	0.2230	2.369	2.560	2.092
0.90	3.521E+04		0.9436	0.8839	0.8169	0.6752	0.4948	0.3547	0.2260	2.339	2.560	2.066
0.95	3.458E+04		0.9443	0.8861	0.8239	0.6904	0.5006	0.3579	0.2278	2.298	2.560	2.029
1.00	3.380E+04		0.9446	0.8868	0.8264	0.6971	0.5026	0.3589	0.2283	2.246	2.560	1.983
	$M_{cr}^{(P_r,\lambda)}/M_{cr}^{(0,\lambda)}$		0.8855	0.7591	0.6134	0.4291	0.3018	0.2128	0.1344			

$M_{cr}^{(0,-1)} = 1.704E+04\,(N-cm)$　　$P_{cr} = 2.977E+03\,(N)$　　$P_{\phi} = 3.264E+04\,(N)$　　$P_{cr}/P_{\phi} = 0.09119$

表二十一(a) 懸臂梁之挫屈彎矩M_B(橢圓斷面,WR,QT-1)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	0.9901	0.9989	0.9901	0.9989
0.1	0.9386	0.9474	0.9387	0.9476
0.2	0.8843	0.8930	0.8845	0.8933
0.3	0.8266	0.8350	0.8269	0.8355
0.4	0.7648	0.7729	0.7651	0.7734
0.5	0.6977	0.7053	0.6981	0.7059
0.6	0.6236	0.6307	0.6240	0.6313
0.7	0.5397	0.5460	0.5401	0.5467
0.8	0.4404	0.4457	0.4407	0.4463
0.9	0.3113	0.3151	0.3115	0.3156
0.98	0.1396	0.1410	0.1393	0.1411
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
$M_{CR}(10^1 N\cdot cm)$	2.7153	0.2096	1.3566	0.1047

表二十一(b) 懸臂梁之挫屈彎矩M_B(橢圓斷面,WF,QT-1)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	0.9900	0.9988	0.9901	0.9989
0.1	0.9386	0.9473	0.9387	0.9476
0.2	0.8843	0.8929	0.8845	0.8933
0.3	0.8266	0.8350	0.8269	0.8355
0.4	0.7648	0.7728	0.7651	0.7734
0.5	0.6976	0.7053	0.6981	0.7059
0.6	0.6236	0.6306	0.6240	0.6313
0.7	0.5397	0.5460	0.5401	0.5467
0.8	0.4404	0.4457	0.4407	0.4463
0.9	0.3113	0.3151	0.3115	0.3156
0.98	0.1396	0.1409	0.1393	0.1411
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
$M^{+}_{CR}(10^1 N\cdot cm)$	2.7153	0.2096	1.3566	0.1047

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十二(a) 懸臂梁之挫屈彎矩M_B(橢圓斷面,WR,QT-2)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	1.0323	1.0361	1.0174	1.0179
0.1	1.0085	1.0124	0.9934	0.9941
0.2	0.9813	0.9853	0.9660	0.9667
0.3	0.9496	0.9537	0.9340	0.9350
0.4	0.9119	0.9162	0.8961	0.8972
0.5	0.8661	0.8706	0.8501	0.8515
0.6	0.8087	0.8134	0.7926	0.7942
0.7	0.7338	0.7388	0.7180	0.7198
0.8	0.6303	0.6354	0.6153	0.6174
0.9	0.4709	0.4754	0.4583	0.4605
0.98	0.2213	0.2233	0.2143	0.2155
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
M_{CR} $(10^1 N\cdot cm)$	2.7153	0.2096	1.3566	1.0466

表二十二(b) 懸臂梁之挫屈彎矩M_B(橢圓斷面,WF,QT-2)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	1.0027	1.0002	1.0028	1.0003
0.1	0.9783	0.9758	0.9785	0.9761
0.2	0.9504	0.9480	0.9507	0.9483
0.3	0.9181	0.9156	0.9184	0.9161
0.4	0.8798	0.8774	0.8802	0.8780
0.5	0.8335	0.8313	0.8339	0.8319
0.6	0.7759	0.7739	0.7763	0.7745
0.7	0.7015	0.6997	0.7018	0.7004
0.8	0.5999	0.5986	0.6001	0.5991
0.9	0.4458	0.4449	0.4458	0.4453
0.98	0.2084	0.2077	0.2080	0.2077
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
M^+_{CR} $(10^1 N\cdot cm)$	2.7153	0.2096	1.3566	0.1047

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十三(a) 懸臂梁之挫屈彎矩 M_B (橢圓斷面,WR,ST)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	0.9965	1.0034	0.9901	1.0009
0.1	0.9528	0.9728	0.9431	0.9637
0.2	0.9025	0.9254	0.8926	0.9138
0.3	0.8478	0.8711	0.8382	0.8593
0.4	0.7882	0.8111	0.7790	0.7997
0.5	0.7225	0.7446	0.7139	0.7338
0.6	0.6488	0.6696	0.6411	0.6597
0.7	0.5642	0.5831	0.5574	0.5743
0.8	0.4626	0.4787	0.4569	0.4713
0.9	0.3286	0.3404	0.3244	0.3350
0.98	0.1479	0.1530	0.1456	0.1505
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
M_{CR} $(10^1 N\cdot cm)$	5.4305	0.4191	2.7132	0.2093

表二十三(b) 懸臂梁之挫屈彎矩 M_B (橢圓斷面,WF,ST)

	M_B/M_{CR}			
	L=25cm		L=50cm	
	a:b=10:1	a:b=30:1	a:b=10:1	a:b=30:1
P/P_{CR}	a=2.5cm	a=3cm	a=2.5cm	a=3cm
10^{-6}	0.9814	1.0019	0.9794	0.9988
0.1	0.9345	0.9547	0.9328	0.9519
0.2	0.8842	0.9041	0.8826	0.9016
0.3	0.8300	0.8495	0.8286	0.8473
0.4	0.7711	0.7901	0.7699	0.7881
0.5	0.7064	0.7245	0.7054	0.7228
0.6	0.6341	0.6510	0.6332	0.6496
0.7	0.5511	0.5664	0.5503	0.5652
0.8	0.4516	0.4646	0.4510	0.4637
0.9	0.3206	0.3301	0.3201	0.3295
0.98	0.1442	0.1482	0.1437	0.1479
P_{CR} (N)	1.2112	0.0930	0.3028	0.0233
M^+_{CR} $(10^1 N\cdot cm)$	5.4305	0.4191	2.7132	0.2093

+ Warping free 的 M_{CR} 是取 Warping restraint 的挫屈負荷

表二十四(a)懸臂梁之挫屈彎矩M_B(W 斷面,WR,QT-1,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	1.2761	1.2489	1.2137	1.2265	1.0518
0.1	1.1756	1.1455	1.1276	1.1364	0.9903
0.2	1.0752	1.0430	1.0404	1.0456	0.9265
0.3	0.9746	0.9411	0.9518	0.9538	0.8601
0.4	0.8734	0.8395	0.8612	0.8605	0.7901
0.5	0.7709	0.7374	0.7677	0.7648	0.7157
0.6	0.6658	0.6338	0.6700	0.6655	0.6351
0.7	0.5561	0.5268	0.5658	0.5602	0.5457
0.8	0.4374	0.4123	0.4501	0.4442	0.4421
0.9	0.2981	0.2794	0.3100	0.3050	0.3102
0.98	0.1318	0.1226	0.1369	0.1342	0.1382
P_{CR} (10^5lb)	5.9470	2.8781	1.6458	0.9223	0.1328
M_{CR} $(10^7 \text{lb}\cdot\text{in})$	1.2195	0.4093	0.4557	0.1660	0.0311

表二十四(b)懸臂梁之挫屈彎矩M_B(W 斷面,WR,QT-1,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	1.2771	1.2496	1.2141	1.2269	1.0518
0.1	1.1821	1.1564	1.1294	1.1400	0.9917
0.2	1.0864	1.0627	1.0435	1.0520	0.9292
0.3	0.9896	0.9681	0.9558	0.9625	0.8638
0.4	0.8913	0.8721	0.8660	0.8709	0.7947
0.5	0.7906	0.7739	0.7730	0.7764	0.7209
0.6	0.6863	0.6722	0.6755	0.6776	0.6407
0.7	0.5761	0.5648	0.5710	0.5721	0.5513
0.8	0.4554	0.4469	0.4548	0.4550	0.4472
0.9	0.3114	0.3060	0.3134	0.3131	0.3142
0.98	0.1361	0.1338	0.1375	0.1372	0.1399
P_{CR} (10^5lb)	1.4867	0.7195	0.4114	0.2306	0.0332
M_{CR} $(10^6 \text{lb}\cdot\text{in})$	5.8328	1.8710	2.2505	0.8078	0.1527

表二十五(a)懸臂梁之挫屈彎矩M_B(W 斷面,WR,QT-2,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.9104	0.9483	0.9069	0.9249	1.0701
0.1	0.8868	0.9198	0.8876	0.9040	1.0494
0.2	0.8623	0.8906	0.8669	0.8819	1.0262
0.3	0.8366	0.8603	0.8443	0.8583	0.9997
0.4	0.8092	0.8287	0.8193	0.8325	0.9685
0.5	0.7795	0.7951	0.7906	0.8037	0.9307
0.6	0.7461	0.7583	0.7561	0.7698	0.8826
0.7	0.7062	0.7157	0.7113	0.7271	0.8177
0.8	0.6519	0.6603	0.6454	0.6655	0.7223
0.9	0.5539	0.5652	0.5237	0.5509	0.5601
0.98	0.3146	0.3303	0.2706	0.2938	0.2732
P_{CR} (10^5lb)	5.9470	2.8781	1.6458	0.9223	0.1328
M_{CR} (10^7lb·in)	1.2195	0.4093	0.4557	0.1660	0.0311

表二十五(b)懸臂梁之挫屈彎矩M_B(W 斷面,WR,QT-2,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.8728	0.9093	0.8767	0.8867	1.0117
0.1	0.8530	0.8883	0.8581	0.8678	0.9912
0.2	0.8319	0.8662	0.8379	0.8474	0.9680
0.3	0.8092	0.8426	0.8156	0.8251	0.9413
0.4	0.7843	0.8170	0.7905	0.8001	0.9096
0.5	0.7563	0.7884	0.7612	0.7714	0.8709
0.6	0.7234	0.7550	0.7254	0.7366	0.8216
0.7	0.6818	0.7133	0.6782	0.6912	0.7557
0.8	0.6219	0.6536	0.6086	0.6244	0.6605
0.9	0.5115	0.5427	0.4836	0.5024	0.5044
0.98	0.2687	0.2901	0.2415	0.2551	0.2415
P_{CR} (10^5lb)	1.4867	0.7195	0.4114	0.2306	0.0332
M_{CR} (10^6lb·in)	5.8328	1.8710	2.2505	0.8078	0.1527

表二十六(a)懸臂梁之挫屈彎矩M_B(W 斷面,WR,ST,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.8477	0.8654	0.8595	0.8636	0.9715
0.1	0.8162	0.8277	0.8342	0.8352	0.9441
0.2	0.7825	0.7881	0.8062	0.8043	0.9116
0.3	0.7461	0.7460	0.7748	0.7703	0.8725
0.4	0.7060	0.7004	0.7385	0.7318	0.8249
0.5	0.6607	0.6503	0.6948	0.6871	0.7671
0.6	0.6077	0.5934	0.6405	0.6333	0.6971
0.7	0.5430	0.5263	0.5702	0.5655	0.6118
0.8	0.4586	0.4421	0.4763	0.4756	0.5052
0.9	0.3360	0.3232	0.3427	0.3454	0.3608
0.98	0.1573	0.1513	0.1560	0.1585	0.1628
P_{CR} $(10^5 lb)$	5.9470	2.8781	1.6458	0.9223	0.1328
M_{CR} $(10^7 lb \cdot in)$	2.4390	0.8185	0.9114	0.3320	0.0622

表二十六(b)懸臂梁之挫屈彎矩M_B(W 斷面,WR,ST,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.8349	0.8541	0.8502	0.8515	0.9597
0.1	0.8095	0.8261	0.8278	0.8278	0.9373
0.2	0.7820	0.7957	0.8030	0.8017	0.9080
0.3	0.7514	0.7623	0.7746	0.7723	0.8691
0.4	0.7168	0.7247	0.7407	0.7379	0.8189
0.5	0.6759	0.6811	0.6983	0.6960	0.7574
0.6	0.6256	0.6286	0.6430	0.6428	0.6840
0.7	0.5604	0.5624	0.5696	0.5725	0.5969
0.8	0.4713	0.4739	0.4717	0.4776	0.4904
0.9	0.3408	0.3446	0.3358	0.3424	0.3487
0.98	0.1549	0.1576	0.1506	0.1544	0.1566
P_{CR} $(10^5 lb)$	1.4867	0.7195	0.4114	0.2306	0.0332
M_{CR} $(10^6 lb \cdot in)$	1.1666	0.3742	0.4501	0.1616	0.0305

表二十七(a)懸臂梁之挫屈彎矩M_B(W 斷面,WF,QT-1,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	1.2442	1.1643	1.2091	1.2116	1.0452
0.1	1.1452	1.0643	1.1233	1.1222	0.9840
0.2	1.0465	0.9657	1.0363	1.0322	0.9206
0.3	0.9478	0.8682	0.9480	0.9413	0.8545
0.4	0.8487	0.7714	0.8577	0.8490	0.7850
0.5	0.7484	0.6749	0.7645	0.7544	0.7110
0.6	0.6459	0.5776	0.6672	0.6562	0.6309
0.7	0.5391	0.4779	0.5634	0.5523	0.5421
0.8	0.4238	0.3723	0.4482	0.4379	0.4391
0.9	0.2886	0.2510	0.3087	0.3006	0.3081
0.98	0.1275	0.1097	0.1363	0.1323	0.1373
P_{CR} (10^5lb)	5.9470	2.8781	1.6458	0.9223	0.1328
M^+_{CR} (10^7lb·in)	1.2195	0.4093	0.4557	0.1660	0.0311

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十七(b)懸臂梁之挫屈彎矩M_B(W 斷面,WF,QT-1,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	1.2726	1.2359	1.2135	1.2249	1.0510
0.1	1.1778	1.1434	1.1289	1.1381	0.9909
0.2	1.0824	1.0504	1.0429	1.0502	0.9285
0.3	0.9859	0.9566	0.9553	0.9608	0.8631
0.4	0.8879	0.8615	0.8655	0.8694	0.7940
0.5	0.7875	0.7643	0.7725	0.7750	0.7203
0.6	0.6836	0.6638	0.6751	0.6764	0.6401
0.7	0.5738	0.5576	0.5707	0.5710	0.5508
0.8	0.4535	0.4411	0.4545	0.4541	0.4468
0.9	0.3101	0.3020	0.3132	0.3125	0.3139
0.98	0.1355	0.1320	0.1374	0.1369	0.1397
P_{CR} (10^5lb)	1.4867	0.7195	0.4114	0.2306	0.0332
M^+_{CR} (10^6lb·in)	5.8328	1.8710	2.2505	0.8078	0.1527

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十八(a)懸臂梁之挫屈彎矩M_B(W 斷面,WF,QT-2,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.7721	0.7380	0.8308	0.8114	0.9392
0.1	0.7489	0.7102	0.8110	0.7902	0.9169
0.2	0.7245	0.6814	0.7896	0.7675	0.8918
0.3	0.6987	0.6515	0.7660	0.7430	0.8632
0.4	0.6707	0.6198	0.7395	0.7158	0.8299
0.5	0.6398	0.5857	0.7087	0.6849	0.7898
0.6	0.6043	0.5478	0.6714	0.6480	0.7399
0.7	0.5607	0.5034	0.6228	0.6010	0.6748
0.8	0.5011	0.4457	0.5526	0.5344	0.5838
0.9	0.4005	0.3542	0.4324	0.4208	0.4404
0.98	0.2073	0.1839	0.2139	0.2103	0.2089
P_{CR} (10^5lb)	5.9470	2.8781	1.6458	0.9223	0.1328
M^+_{CR} (10^7lb·in)	1.2195	0.4093	0.4557	0.1660	0.0311

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十八(b)懸臂梁之挫屈彎矩M_B(W 斷面,WF,QT-2,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.8048	0.8035	0.8396	0.8312	0.9485
0.1	0.7848	0.7824	0.8207	0.8118	0.9269
0.2	0.7633	0.7599	0.7999	0.7908	0.9024
0.3	0.7400	0.7355	0.7770	0.7676	0.8742
0.4	0.7141	0.7087	0.7509	0.7415	0.8410
0.5	0.6846	0.6782	0.7202	0.7110	0.8007
0.6	0.6493	0.6420	0.6826	0.6739	0.7501
0.7	0.6041	0.5962	0.6331	0.6254	0.6836
0.8	0.5395	0.5312	0.5610	0.5550	0.5905
0.9	0.4271	0.4197	0.4370	0.4339	0.4441
0.98	0.2135	0.2098	0.2134	0.2129	0.2095
P_{CR} (10^5lb)	1.4867	0.7195	0.4114	0.2306	0.0332
M^+_{CR} (10^6lb·in)	5.8328	1.8710	2.2505	0.8078	0.1527

+ Warping free 的M_{CR}是取 Warping restraint 的挫屈負荷

表二十九(a)懸臂梁之挫屈彎矩 M_B (W 斷面,WF,ST,L=300in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.7743	0.7406	0.8328	0.8150	0.9545
0.1	0.7498	0.7117	0.8121	0.7929	0.9357
0.2	0.7241	0.6819	0.7893	0.7693	0.9099
0.3	0.6967	0.6508	0.7636	0.7433	0.8722
0.4	0.6668	0.6181	0.7330	0.7137	0.8199
0.5	0.6330	0.5827	0.6938	0.6780	0.7549
0.6	0.5922	0.5427	0.6402	0.6311	0.6785
0.7	0.5380	0.4943	0.5659	0.5654	0.5894
0.8	0.4585	0.4280	0.4662	0.4716	0.4822
0.9	0.3335	0.3211	0.3298	0.3365	0.3415
0.98	0.1534	0.1513	0.1482	0.1517	0.1533
P_{CR} (10^5lb)	5.9470	2.8781	1.6458	0.9223	0.1328
M^+_{CR} (10^7 lb·in)	2.4390	0.8185	0.9114	0.3320	0.0622

+ Warping free 的 M_{CR} 是取 Warping restraint 的挫屈負荷

表二十九(b)懸臂梁之挫屈彎矩 M_B (W 斷面,WF,ST,L=600in)

P/P_{CR}	M_B/M_{CR}				
	W14×159	W14×90	W10×100	W10×60	W10×30
10^{-6}	0.8063	0.8068	0.8396	0.8330	0.9553
0.1	0.7849	0.7847	0.8196	0.8127	0.9366
0.2	0.7619	0.7610	0.7973	0.7905	0.9071
0.3	0.7365	0.7352	0.7716	0.7652	0.8620
0.4	0.7074	0.7060	0.7400	0.7348	0.8045
0.5	0.6720	0.6711	0.6983	0.6958	0.7377
0.6	0.6253	0.6258	0.6406	0.6419	0.6617
0.7	0.5591	0.5623	0.5626	0.5670	0.5743
0.8	0.4645	0.4704	0.4610	0.4665	0.4697
0.9	0.3296	0.3358	0.3249	0.3296	0.3327
0.98	0.1474	0.1508	0.1447	0.1470	0.1490
P_{CR} (10^5lb)	1.4867	0.7195	0.4114	0.2306	0.0332
M^+_{CR} (10^7 lb·in)	1.1666	0.3742	0.4501	0.1616	0.0305

+ Warping free 的 M_{CR} 是取 Warping restraint 的挫屈負荷