

Table I- Coefficients for the Nusselt number equations (28-a) and (28-b).(a) $\varepsilon We^2 = 0$

κ	α_1	α_2	α_3	β_1	β_2	β_3
0.02	59.211	-7.5757	1.8104	59.211	12.507	-0.15151
0.05	25.078	-3.0737	1.4080	25.078	5.2333	-0.15369
0.1	13.463	-1.5645	1.1308	13.463	2.7849	-0.15645
0.2	7.5287	-0.80097	0.88584	7.5287	1.5419	-0.16019
0.3	5.5087	-0.54185	0.76075	5.5087	1.1178	-0.16256
0.4	4.4840	-0.41026	0.68112	4.4840	0.90055	-0.16411
0.5	3.8622	-0.33027	0.62485	3.8622	0.76683	-0.16513
0.6	3.4437	-0.27635	0.58252	3.4437	0.67534	-0.16581
0.7	3.1423	-0.23749	0.54931	3.1423	0.60824	-0.16624
0.8	2.9145	-0.20812	0.52246	2.9145	0.55657	-0.16650
0.9	2.7362	-0.18514	0.50021	2.7362	0.51533	-0.16663
1	2.5926	-0.16667	0.48148	2.5926	0.48148	-0.16667

(b) $\varepsilon We^2 = 0.001$

κ	α_1	α_2	α_3	β_1	β_2	β_3
0.02	71.796	-9.4265	2.1814	59.585	12.763	-0.15647
0.05	27.849	-3.4703	1.5556	25.509	5.3659	-0.15894
0.1	14.483	-1.7019	1.2113	13.769	2.8615	-0.16180
0.2	7.9534	-0.85238	0.93258	7.7306	1.5869	-0.16570
0.3	5.7788	-0.57170	0.79566	5.6681	1.1515	-0.16823
0.4	4.6855	-0.43082	0.70985	4.6205	0.92842	-0.16994
0.5	4.0255	-0.34576	0.64973	3.9844	0.79110	-0.17112
0.6	3.5827	-0.28870	0.60476	3.5563	0.69715	-0.17194
0.7	3.2646	-0.24771	0.56962	3.2479	0.62826	-0.17251
0.8	3.0246	-0.21682	0.54128	3.0150	0.57523	-0.17290
0.9	2.8369	-0.19269	0.51787	2.8327	0.53290	-0.17316
1	2.6860	-0.17332	0.49817	2.6860	0.49817	-0.17332

(c) $\varepsilon We^2 = 0.01$

κ	α_1	α_2	α_3	β_1	β_2	β_3
0.02	146.00	-19.749	4.4094	66.063	14.228	-0.17872
0.05	43.275	-5.5705	2.3964	28.626	6.0611	-0.18424
0.1	20.149	-2.4396	1.6687	15.652	3.2697	-0.18952
0.2	10.336	-1.1355	1.1998	8.9143	1.8341	-0.19587
0.3	7.3044	-0.73849	0.99607	6.5932	1.3399	-0.19998
0.4	5.8292	-0.54667	0.87513	5.4095	1.0856	-0.20292
0.5	4.9552	-0.43357	0.79303	4.6895	0.92886	-0.20516
0.6	4.3762	-0.35894	0.73288	4.2047	0.82150	-0.20692
0.7	3.9639	-0.30599	0.68657	3.8558	0.74276	-0.20835
0.8	3.6549	-0.26647	0.64962	3.5926	0.68213	-0.20954
0.9	3.4145	-0.23584	0.61937	3.3870	0.63376	-0.21054
1	3.2220	-0.21141	0.59407	3.2220	0.59407	-0.21141

(d) $\varepsilon We^2 = 0.1$

κ	α_1	α_2	α_3	β_1	β_2	β_3
0.02	686.53	-93.522	20.786	95.892	20.100	-0.26125
0.05	105.37	-13.809	5.8340	41.556	8.6148	-0.27228
0.1	40.478	-5.0222	3.3421	22.859	4.6958	-0.28361
0.2	18.507	-2.0906	2.1355	13.177	2.6755	-0.29770
0.3	12.479	-1.2978	1.6890	9.8451	1.9771	-0.30717
0.4	9.6938	-0.93506	1.4432	8.1475	1.6169	-0.31436
0.5	8.0933	-0.72822	1.2838	7.1171	1.3946	-0.32019
0.6	7.0547	-0.59493	1.1705	6.4254	1.2422	-0.32512
0.7	6.3259	-0.50202	1.0853	5.9297	1.1305	-0.32940
0.8	5.7861	-0.43363	1.0185	5.5577	1.0445	-0.33321
0.9	5.3698	-0.38123	0.96448	5.2689	0.97599	-0.33666
1	5.0387	-0.33984	0.91983	5.0387	0.91983	-0.33984

(e) $\varepsilon We^2 = 1$

κ	α_1	α_2	α_3	β_1	β_2	β_3
0.02	-10226	1384.2	-311.34	173.05	35.122	-0.46848
0.05	303.02	-39.779	16.857	74.672	15.049	-0.49014
0.1	93.737	-11.731	7.7649	41.031	8.2283	-0.51351
0.2	38.558	-4.4200	4.4530	23.720	4.7249	-0.54382
0.3	24.967	-2.6419	3.3761	17.798	3.5172	-0.56500
0.4	18.960	-1.8633	2.8160	14.796	2.8958	-0.58165
0.5	15.596	-1.4309	2.4651	12.983	2.5129	-0.59557
0.6	13.452	-1.1572	2.2217	11.773	2.2511	-0.60767
0.7	11.966	-0.96895	2.0417	10.911	2.0596	-0.61847
0.8	10.876	-0.83185	1.9025	10.269	1.9125	-0.62832
0.9	10.043	-0.72768	1.7912	9.7745	1.7956	-0.63743
1	9.3839	-0.64597	1.7000	9.3839	1.7000	-0.64597

(f) $\varepsilon We^2 = 10$

κ	α_1	α_2	α_3	β_1	β_2	β_2
0.02	-3868.4	520.16	-118.23	345.12	68.611	-0.92813
0.05	845.48	-110.77	47.214	148.47	29.369	-0.97256
0.1	217.13	-27.235	18.045	81.446	16.069	-1.0216
0.2	83.196	-9.5981	9.6268	47.088	9.2575	-1.0865
0.3	52.535	-5.6060	7.1094	35.383	6.9163	-1.1327
0.4	39.352	-3.9046	5.8437	29.472	5.7144	-1.1697
0.5	32.088	-2.9742	5.0663	25.915	4.9755	-1.2010
0.6	27.505	-2.3915	4.5345	23.550	4.4714	-1.2286
0.7	24.355	-1.9938	4.1451	21.874	4.1034	-1.2535
0.8	22.058	-1.7059	3.8463	20.631	3.8215	-1.2764
0.9	20.310	-1.4881	3.6089	19.680	3.5978	-1.2978
1	18.934	-1.3180	3.4154	18.934	3.4154	-1.3180

(g) $\varepsilon We^2 = 100$

κ	α_1	α_2	α_3	β_1	β_2	β_2
0.02	-5862.0	785.06	-179.55	718.27	141.25	-1.9239
0.05	2165.1	-283.16	121.17	308.51	60.424	-2.0174
0.1	489.36	-61.411	40.747	169.07	33.066	-2.1217
0.2	180.15	-20.841	20.872	97.721	19.076	-2.2610
0.3	112.24	-12.024	15.200	73.469	14.276	-2.3612
0.4	83.479	-8.3208	12.398	61.244	11.816	-2.4418
0.5	67.761	-6.3120	10.695	53.904	10.305	-2.5106
0.6	57.899	-5.0606	9.5381	49.035	9.2756	-2.5715
0.7	51.148	-4.2099	8.6952	45.592	8.5252	-2.6268
0.8	46.241	-3.5957	8.0508	43.047	7.9512	-2.6779
0.9	42.515	-3.1324	7.5408	41.106	7.4964	-2.7258
1	39.589	-2.7711	7.1260	39.589	7.1260	-2.7711