

**Table II-** Coefficients for the Nusselt number equations (46) and (47).(a)  $\varepsilon We^2 = 0$ 

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	9.6	0	0
0.02	118.46	33.198	1.1002	11.573	-0.66396	-0.22520
0.05	64.509	17.199	1.0710	12.127	-0.85996	-0.28486
0.1	42.970	10.823	1.0349	12.717	-1.0823	-0.34967
0.2	30.329	7.0353	0.97749	13.541	-1.4071	-0.43788
0.3	25.506	5.5513	0.93044	14.189	-1.6654	-0.50176
0.4	22.883	4.7227	0.89022	14.755	-1.8891	-0.55224
0.5	21.210	4.1809	0.85517	15.273	-2.0904	-0.59382
0.6	20.039	3.7930	0.82423	15.757	-2.2758	-0.62893
0.7	19.168	3.4985	0.79667	16.218	-2.4489	-0.65912
0.8	18.491	3.2655	0.77191	16.659	-2.6124	-0.68542
0.9	17.947	3.0754	0.74953	17.086	-2.7678	-0.70858
1	17.5	2.9167	0.72917	17.5	-2.9167	-0.72917

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	9.6620	0	0
0.02	118.85	36.646	1.2096	11.971	-0.73292	-0.25321
0.05	65.340	18.552	1.1518	12.413	-0.92759	-0.31070
0.1	43.557	11.539	1.1007	12.949	-1.1539	-0.37543
0.2	30.735	7.4491	1.0331	13.747	-1.4898	-0.46550
0.3	25.841	5.8635	0.98135	14.390	-1.7590	-0.53140
0.4	23.182	4.9824	0.93808	14.957	-1.9930	-0.58371
0.5	21.485	4.4079	0.90076	15.477	-2.2039	-0.62690
0.6	20.299	3.9974	0.86802	15.965	-2.3984	-0.66344
0.7	19.416	3.6861	0.83896	16.430	-2.5803	-0.69491
0.8	18.730	3.4401	0.81293	16.876	-2.7521	-0.72236
0.9	18.179	3.2397	0.78944	17.308	-2.9157	-0.74657
1	17.727	3.0724	0.76811	17.727	-3.0724	-0.76811

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	10.036	0	0
0.02	111.73	46.743	1.5381	12.735	-0.93487	-0.32779
0.05	65.621	24.098	1.4896	13.300	-1.2049	-0.41021
0.1	45.023	15.032	1.4269	13.866	-1.5032	-0.49602
0.2	32.251	9.6854	1.3371	14.679	-1.9371	-0.61138
0.3	27.248	7.6111	1.2688	15.338	-2.2833	-0.69488
0.4	24.500	6.4607	1.2123	15.924	-2.5843	-0.76099
0.5	22.739	5.7119	1.1640	16.465	-2.8559	-0.81557
0.6	21.502	5.1777	1.1219	16.974	-3.1066	-0.86177
0.7	20.581	4.7734	1.0847	17.459	-3.3413	-0.90159
0.8	19.864	4.4542	1.0515	17.925	-3.5633	-0.93636
0.9	19.288	4.1943	1.0215	18.377	-3.7749	-0.96707
1	18.815	3.9777	0.99442	18.815	-3.9777	-0.99442

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	11.041	0	0
0.02	103.80	78.105	2.5776	14.031	-1.5621	-0.54024
0.05	64.878	41.354	2.5606	14.822	-2.0677	-0.69961
0.1	46.555	26.284	2.4963	15.556	-2.6284	-0.86605
0.2	34.536	17.167	2.3687	16.513	-3.4334	-1.0850
0.3	29.620	13.562	2.2587	17.250	-4.0685	-1.2402
0.4	26.858	11.542	2.1637	17.891	-4.6168	-1.3616
0.5	25.062	10.220	2.0808	18.477	-5.1098	-1.4610
0.6	23.788	9.2720	2.0076	19.024	-5.5632	-1.5447
0.7	22.832	8.5524	1.9424	19.543	-5.9867	-1.6164
0.8	22.084	7.9829	1.8838	20.040	-6.3863	-1.6789
0.9	21.480	7.5183	1.8308	20.518	-6.7665	-1.7338
1	20.981	7.1303	1.7826	20.981	-7.1303	-1.7826

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	12.138	0	0
0.02	99.990	156.50	5.1885	15.333	-3.1301	-1.0589
0.05	64.599	83.699	5.2056	16.274	-4.1849	-1.3928
0.1	47.719	53.718	5.1221	17.151	-5.3718	-1.7495
0.2	36.375	35.409	4.9011	18.253	-7.0817	-2.2224
0.3	31.620	28.092	4.6904	19.069	-8.4277	-2.5572
0.4	28.908	23.966	4.5016	19.763	-9.5863	-2.8183
0.5	27.124	21.250	4.3334	20.387	-10.625	-3.0312
0.6	25.847	19.296	4.1830	20.965	-11.578	-3.2097
0.7	24.882	17.808	4.0479	21.508	-12.466	-3.3624
0.8	24.123	16.627	3.9258	22.024	-13.302	-3.4947
0.9	23.507	15.662	3.8149	22.519	-14.096	-3.6108
1	22.996	14.854	3.7136	22.996	-14.854	-3.7136

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	12.890	0	0
0.02	98.294	331.76	11.032	16.204	-6.6351	-2.2113
0.05	64.566	178.01	11.107	17.228	-8.9004	-2.9267
0.1	48.432	114.70	10.970	18.191	-11.470	-3.7016
0.2	37.490	75.924	10.537	19.386	-15.185	-4.7372
0.3	32.853	60.366	10.102	20.254	-18.110	-5.4724
0.4	30.187	51.563	9.7033	20.982	-20.625	-6.0456
0.5	28.422	45.754	9.3444	21.630	-22.877	-6.5127
0.6	27.153	41.568	9.0215	22.225	-24.941	-6.9040
0.7	26.189	38.373	8.7299	22.781	-26.861	-7.2380
0.8	25.428	35.835	8.4655	23.308	-28.668	-7.5272
0.9	24.809	33.758	8.2248	23.810	-30.382	-7.7805
1	24.293	32.018	8.0044	24.293	-32.018	-8.0044

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

$\kappa$	$\chi_1$	$\chi_2$	$\chi_3$	$\varepsilon_1$	$\varepsilon_2$	$\varepsilon_2$
0	-	-	-	13.309	0	0
0.02	97.517	712.54	23.733	16.683	-14.251	-4.7110
0.05	64.578	382.78	23.925	17.749	-19.139	-6.2515
0.1	48.812	247.04	23.670	18.758	-24.704	-7.9318
0.2	38.080	163.84	22.774	20.004	-32.769	-10.188
0.3	33.509	130.40	21.851	20.900	-39.121	-11.793
0.4	30.871	111.45	20.997	21.647	-44.581	-13.045
0.5	29.119	98.934	20.223	22.308	-49.467	-14.065
0.6	27.856	89.904	19.525	22.912	-53.942	-14.919
0.7	26.895	83.006	18.893	23.475	-58.104	-15.647
0.8	26.134	77.523	18.320	24.006	-62.018	-16.278
0.9	25.514	73.032	17.796	24.512	-65.729	-16.830
1	24.996	69.268	17.317	24.996	-69.268	-17.317