**Table 3: Numerical values for the skin friction coefficient and the Nusselt number For No Slip Condition**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | De | m. | M |  | B | γ | Skin Friction | Skin Friction (Predicted) | Nusselt Number | Nusselt Number (Predicted) |
| 0.1 | 0.5 | 0.5 | 10 | π/6 | 0.1 | 0.1 | 1.8013 | 1.80757 | 1.7251 | 1.72462 |
| 0.2 |  |  |  |  |  |  | 1.626 | 1.62237 | 1.7577 | 1.75797 |
| 0.3 |  |  |  |  |  |  | 1.4443 | 1.43717 | 1.7908 | 1.79134 |
| 0.5 |  |  |  |  |  |  | 1.0623 | 1.06676 | 1.8584 | 1.85806 |
| 0.1 | 1 |  |  |  |  |  | 1.8083 | 1.80833 | 1.7263 | 1.72632 |
|  | 1.5 |  |  |  |  |  | 1.815 | 1.81498 | 1.7275 | 1.72749 |
|  | 2 |  |  |  |  |  | 1.8217 | 1.82162 | 1.7287 | 1.72866 |
|  | 2.5 |  |  |  |  |  | 1.8282 | 1.82826 | 1.7298 | 1.72983 |
|  | 0.5 | 1 |  |  |  |  | 1.8083 | 1.80853 | 1.7263 | 1.72638 |
|  |  | 2 |  |  |  |  | 1.8217 | 1.82146 | 1.7287 | 1.72861 |
|  |  | 3 |  |  |  |  | 1.8346 | 1.83439 | 1.7309 | 1.73084 |
|  |  | 4 |  |  |  |  | 1.8471 | 1.84732 | 1.733 | 1.73307 |
|  |  | 0.5 | 12 |  |  |  | 1.9014 | 1.90383 | 1.7142 | 1.7138 |
|  |  |  | 15 |  |  |  | 2.045 | 2.04184 | 1.6991 | 1.69961 |
|  |  |  | 18 |  |  |  | 2.1817 | 2.17985 | 1.6851 | 1.68542 |
|  |  |  | 20 |  |  |  | 2.2693 | 2.27186 | 1.6764 | 1.67597 |
|  |  |  | 10 | π/12 |  |  | 1.3991 | 1.39224 | 1.7705 | 1.76939 |
|  |  |  |  | π/6 |  |  | 1.8013 | 1.82118 | 1.7251 | 1.72483 |
|  |  |  |  | π/4 |  |  | 2.2693 | 2.25012 | 1.6764 | 1.68027 |
|  |  |  |  | π/3 |  |  | 2.6729 | 2.67905 | 1.6382 | 1.63571 |
|  |  |  |  | π/6 | 0.1 |  | 1.8013 | 1.79952 | 1.7251 | 1.70484 |
|  |  |  |  |  | 0.3 |  | 1.7825 | 1.78441 | 1.5506 | 1.57263 |
|  |  |  |  |  | 0.6 |  | 1.7603 | 1.76173 | 1.3585 | 1.37431 |
|  |  |  |  |  | 0.8 |  | 1.7482 | 1.74662 | 1.2597 | 1.2421 |
|  |  |  |  |  | 0.1 | 0.15 | 1.8013 | 1.8013 | 1.7261 | 1.72573 |
|  |  |  |  |  |  | 0.2 | 1.8013 | 1.8013 | 1.7277 | 1.72806 |
|  |  |  |  |  |  | 0.25 | 1.8013 | 1.8013 | 1.73 | 1.73039 |
|  |  |  |  |  |  | 0.3 | 1.8013 | 1.8013 | 1.7331 | 1.73272 |

**Table 4: Numerical values for the skin friction coefficient and the Nusselt number For First Order Slip Condition**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | De | m. | M |  | B | γ | Skin Friction | Skin Friction (Predicted) | Nusselt Number | Nusselt Number (Predicted) |
| 0.1 | 0.5 | 0.5 | 10 | π/6 | 0.1 | 0.1 | 0.8765 | 0.87884 | 1.4015 | 1.40052 |
| 0.2 |  |  |  |  |  |  | 0.788 | 0.78664 | 1.4684 | 1.46899 |
| 0.3 |  |  |  |  |  |  | 0.6971 | 0.69445 | 1.5364 | 1.53746 |
| 0.5 |  |  |  |  |  |  | 0.5084 | 0.51006 | 1.6751 | 1.67441 |
| 0.1 | 1 |  |  |  |  |  | 0.8783 | 0.8783 | 1.402 | 1.402 |
|  | 1.5 |  |  |  |  |  | 0.8801 | 0.8801 | 1.4025 | 1.40249 |
|  | 2 |  |  |  |  |  | 0.8819 | 0.8819 | 1.403 | 1.40299 |
|  | 2.5 |  |  |  |  |  | 0.8837 | 0.8837 | 1.4035 | 1.40349 |
|  | 0.5 | 1 |  |  |  |  | 0.8783 | 0.87902 | 1.402 | 1.402 |
|  |  | 2 |  |  |  |  | 0.8819 | 0.88166 | 1.403 | 1.4029 |
|  |  | 3 |  |  |  |  | 0.8854 | 0.88431 | 1.404 | 1.404 |
|  |  | 4 |  |  |  |  | 0.889 | 0.8896 | 1.405 | 1.4049 |
|  |  | 0.5 | 12 |  |  |  | 0.9025 | 0.90391 | 1.386 | 1.38511 |
|  |  |  | 15 |  |  |  | 0.9374 | 0.93554 | 1.3656 | 1.36677 |
|  |  |  | 18 |  |  |  | 0.9682 | 0.96717 | 1.3478 | 1.34842 |
|  |  |  | 20 |  |  |  | 0.9868 | 0.98826 | 1.3371 | 1.33619 |
|  |  |  | 10 | π/12 |  |  | 0.7553 | 0.76543 | 1.4746 | 1.46759 |
|  |  |  |  | π/6 |  |  | 0.8765 | 0.86871 | 1.4015 | 1.40718 |
|  |  |  |  | π/4 |  |  | 0.9868 | 0.97199 | 1.3371 | 1.34677 |
|  |  |  |  | π/3 |  |  | 1.0628 | 1.07527 | 1.2947 | 1.28636 |
|  |  |  |  | π/6 | 0.1 |  | 0.8765 | 0.87616 | 1.4015 | 1.38709 |
|  |  |  |  |  | 0.3 |  | 0.8725 | 0.87285 | 1.2704 | 1.28597 |
|  |  |  |  |  | 0.6 |  | 0.8676 | 0.86789 | 1.1228 | 1.13427 |
|  |  |  |  |  | 0.8 |  | 0.8649 | 0.86458 | 1.0458 | 1.03315 |
|  |  |  |  |  | 0.1 | 0.15 | 0.8765 | 0.8765 | 1.3995 | 1.39948 |
|  |  |  |  |  |  | 0.2 | 0.8765 | 0.8765 | 1.3976 | 1.39761 |
|  |  |  |  |  |  | 0.25 | 0.8765 | 0.8765 | 1.3957 | 1.39574 |
|  |  |  |  |  |  | 0.3 | 0.8765 | 0.8765 | 1.3939 | 1.39387 |

**Table 5: Numerical values for the skin friction coefficient and the Nusselt number For Second Order Slip Condition**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | De | m. | M |  | B | γ | Skin Friction | Skin Friction (Predicted) | Nusselt Number | Nusselt Number (Predicted) |
| 0.1 | 0.5 | 0.5 | 10 | π/6 | 0.1 | 0.1 | 9.2077 | 9.52503 | -6.8364 | -10.289 |
| 0.2 |  |  |  |  |  |  | 9.9367 | 9.59586 | -14.375 | -10.621 |
| 0.3 |  |  |  |  |  |  | 9.7901 | 9.66668 | -12.229 | -10.954 |
| 0.5 |  |  |  |  |  |  | 9.6614 | 9.80831 | -10.042 | -11.618 |
| 0.1 | 1 |  |  |  |  |  | 5.1406 | 4.9623 | 2.6603 | 2.61785 |
|  | 1.5 |  |  |  |  |  | 4.1865 | 4.39385 | 2.4182 | 2.4671 |
|  | 2 |  |  |  |  |  | 3.7052 | 3.82539 | 2.2868 | 2.31635 |
|  | 2.5 |  |  |  |  |  | 3.4062 | 3.25695 | 2.2016 | 2.1656 |
|  | 0.5 | 1 |  |  |  |  | 5.1406 | 4.62156 | 2.6603 | 2.57949 |
|  |  | 2 |  |  |  |  | 3.7052 | 4.11884 | 2.2868 | 2.38407 |
|  |  | 3 |  |  |  |  | 3.1985 | 3.61612 | 2.1408 | 2.18866 |
|  |  | 4 |  |  |  |  | 2.9229 | 2.61068 | 2.0576 | 1.99325 |
|  |  | 0.5 | 12 |  |  |  | -0.3762 | -4.8332 | 1.6069 | 15.6837 |
|  |  |  | 15 |  |  |  | -1.3996 | 1.93254 | 0.8156 | -8.3056 |
|  |  |  | 18 |  |  |  | -0.7995 | 8.69833 | 1.2094 | -32.295 |
|  |  |  | 20 |  |  |  | 21.5818 | 13.2088 | -76.836 | -48.288 |
|  |  |  | 10 | π/12 |  |  | 1.5936 | 6.83034 | 1.8527 | 2.58483 |
|  |  |  |  | π/6 |  |  | 9.2077 | -2.7693 | -6.8364 | 14.4295 |
|  |  |  |  | π/4 |  |  | -20.613 | -12.369 | 71.0025 | 26.2742 |
|  |  |  |  | π/3 |  |  | -20.465 | -21.969 | 15.3887 | 38.1189 |
|  |  |  |  | π/6 | 0.1 |  | 9.2077 | 9.0769 | -6.8364 | -5.715 |
|  |  |  |  |  | 0.3 |  | 9.5639 | 9.6908 | -3.5954 | -4.9976 |
|  |  |  |  |  | 0.6 |  | 10.4711 | 10.6116 | -3.5025 | -3.9215 |
|  |  |  |  |  | 0.8 |  | 11.3622 | 11.2255 | -3.9042 | -3.2042 |
|  |  |  |  |  | 0.1 | 0.15 | 9.0302 | 9.00956 | -4.8846 | -4.6581 |
|  |  |  |  |  |  | 0.2 | 8.8974 | 8.94562 | -3.4325 | -3.9599 |
|  |  |  |  |  |  | 0.25 | 8.9162 | 8.88168 | -3.6372 | -3.2618 |
|  |  |  |  |  |  | 0.3 | 8.8108 | 8.81774 | -2.4891 | -2.5636 |